



Evolution of Traditional Indian Architectural knowledge systems or **STHAPATYA VASTU VIDYA**



REALITY OF COSMIC PRECESSION ON HELIOCENTRIC GEOCENTRICISM EVOLUTION OF MANDALA

- CONSTRUCT
- Domains of IKS
- Convergence
- **EXPERIENCE**
- **DEEP EXPERIENCE**
- Evolution and passage to greater truth

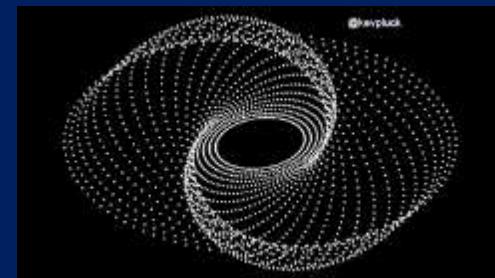
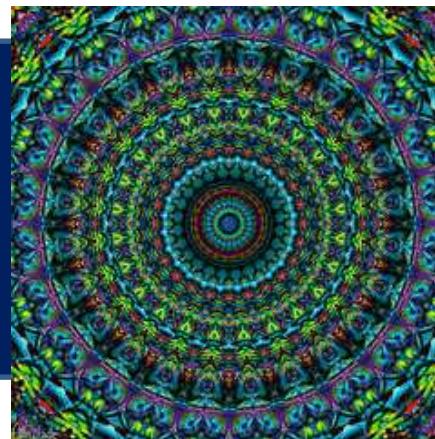
PART 1



JOY SEN | PROFESSOR | INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
AUGUST 17 2022

THE DEEP ECOSYSTEM OF VASTU VIDYA

THE MANDALA



PART 1

Joy Sen

Professor

Department of Architecture & Regional Planning

Indian Institute of Technology Kharagpur

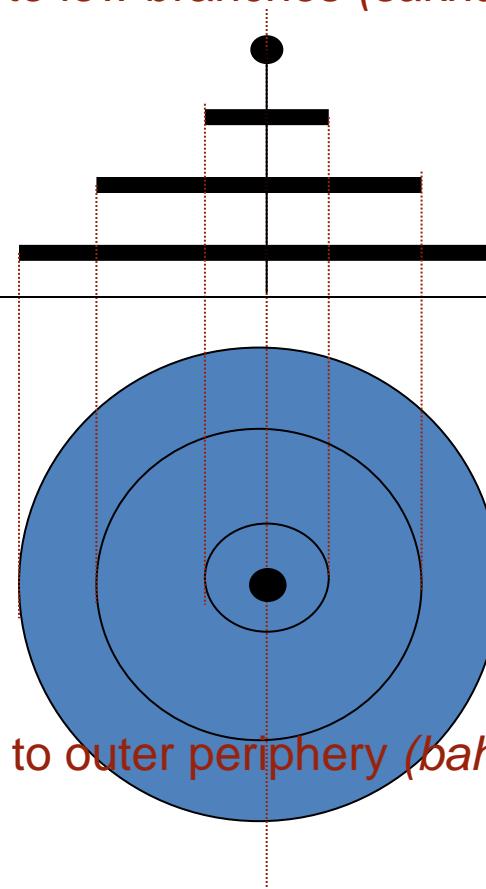
Shape grammar

Sarada Yantra and the evolution of Mandala

High Root (*mulam*) to low branches (*sakham*)

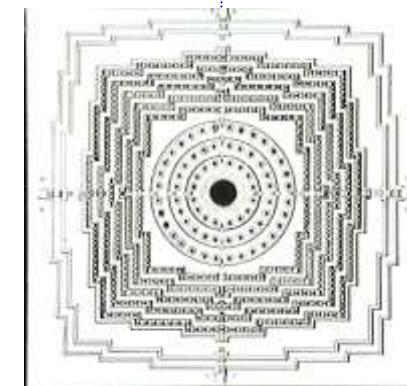


Latent heat of transformation



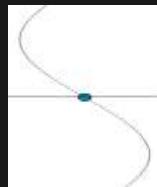
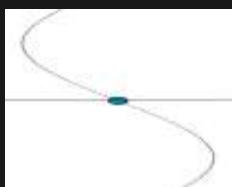
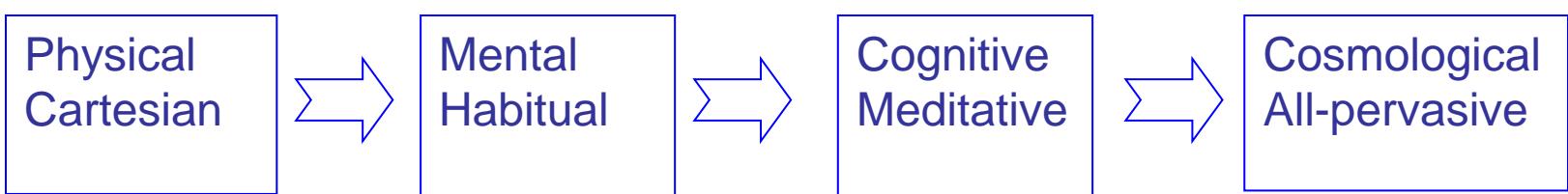
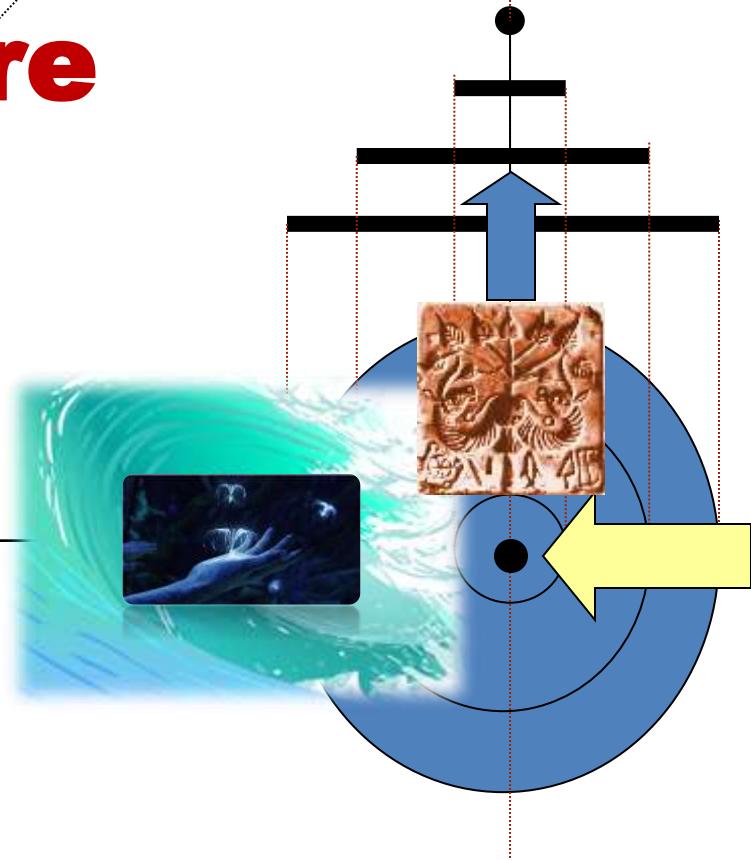
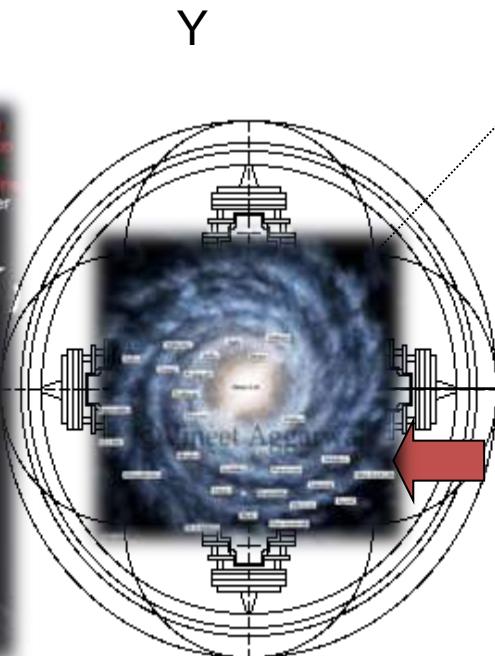
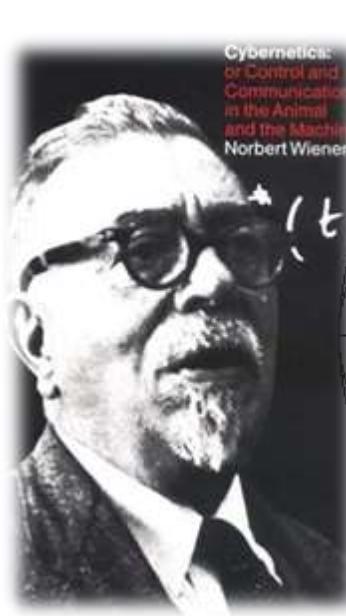
Inner Core (*antara*) to outer periphery (*bahir*)

*Savita Yantra-i prithiviiomnadh-skhamvhone
sabita dyamduanhhat.....*



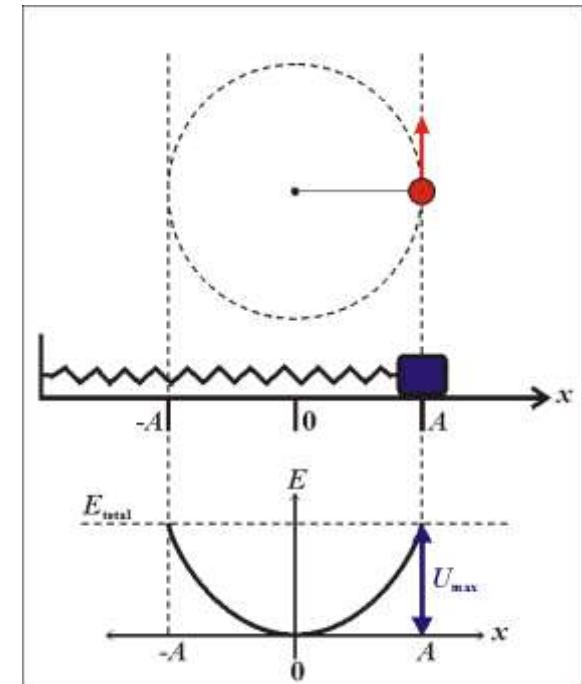
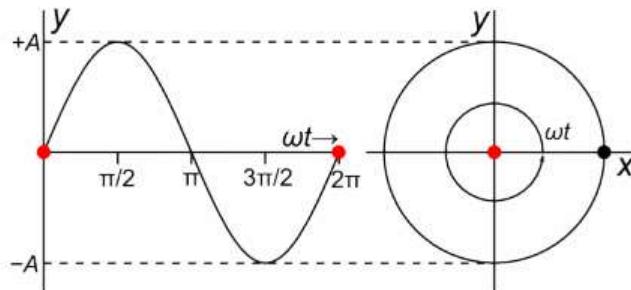
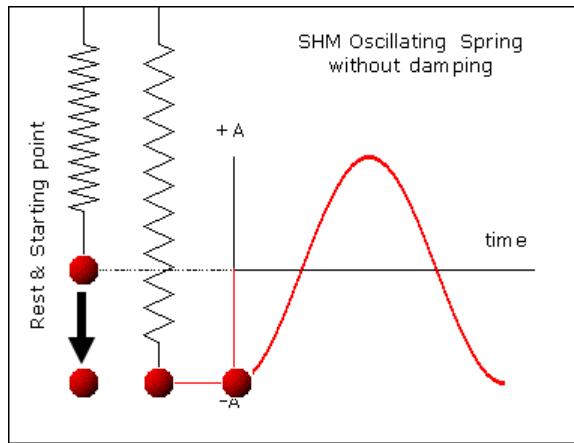
Rig Veda:10.149.1

The evolution of Creative Culture



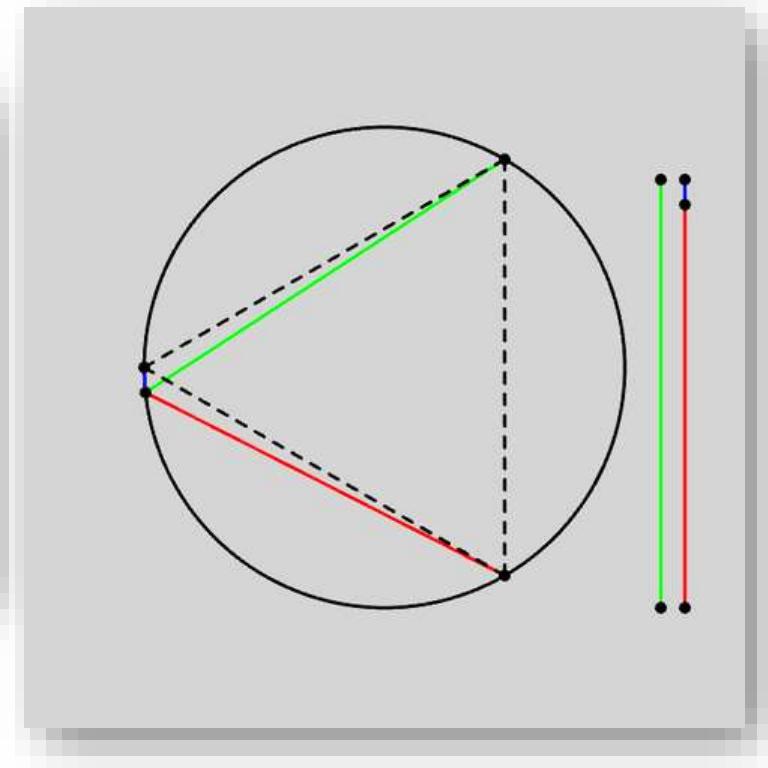
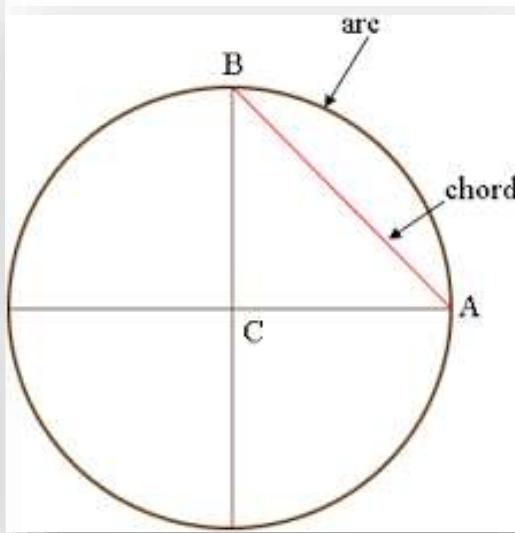
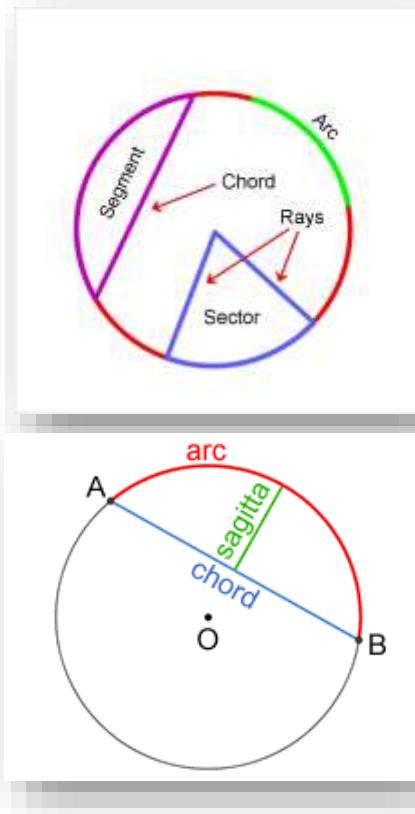
ITERATION & COMPLEMENTARITY

Potential and Kinetic Energy (s) states:
Reciprocity and WAVE SYSTEMS



https://math-physics-problems.fandom.com/wiki/Simple_Harmonic_Oscillator
https://commons.wikimedia.org/wiki/File:Simple_Harmonic_Motion_Orbit.gif

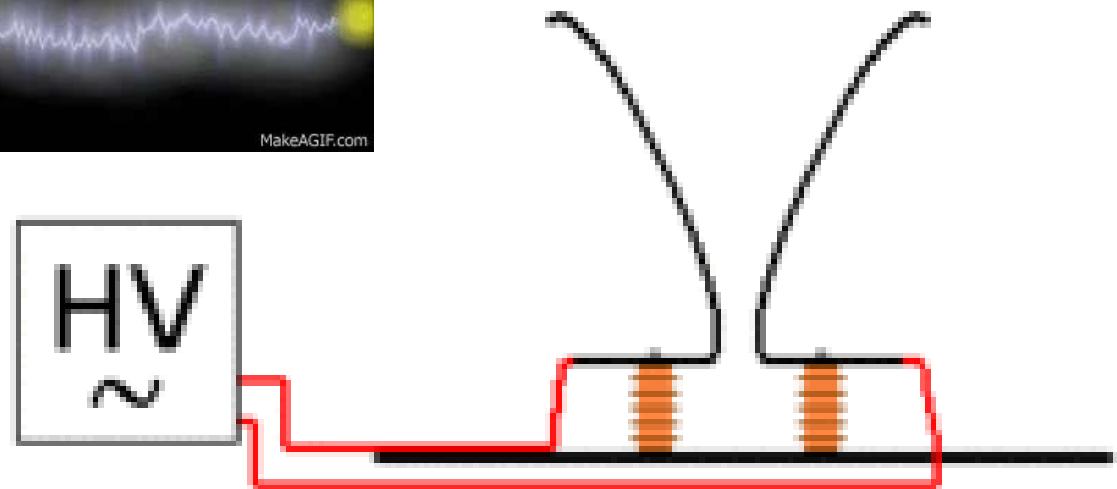
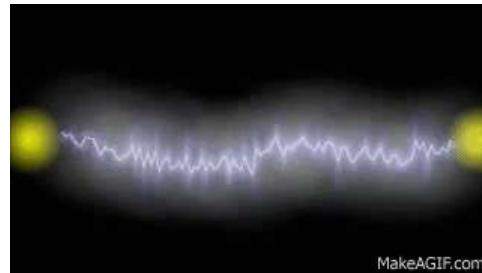
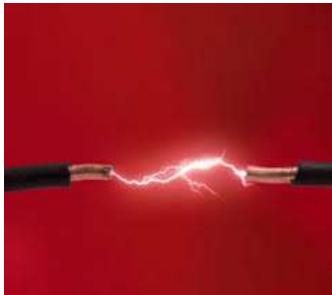
DEEP SEMANTICS of Geometric ARC



<http://www.mathguide.com/lessons2/CentralAngles.html>

Semantics of an Electrical ARC

A Jacob's ladder (more formally, a high voltage traveling arc): based on Old Testament

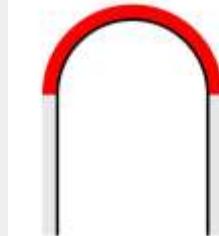
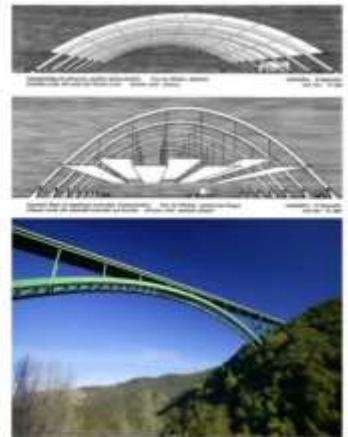


https://en.wikipedia.org/wiki/Electric_

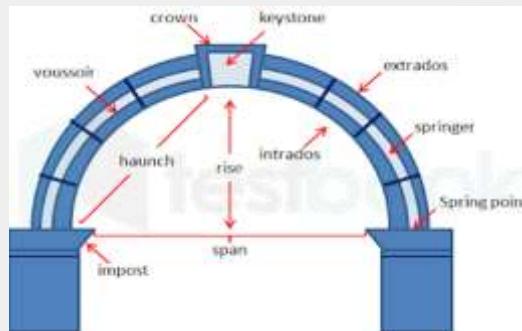
[https://commons.wikimedia.org/wiki/Category:Jacob%27s_ladder_\(electrical\)](https://commons.wikimedia.org/wiki/Category:Jacob%27s_ladder_(electrical))

Semantics of Built-environmental ARC

- Inverse of Cable: FORM ACTIVE STRUCTURES

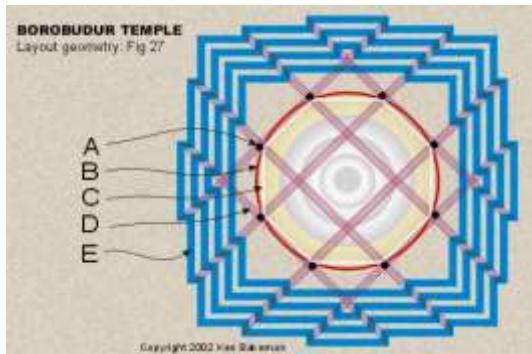


Round Arch



The unfolding Journey

hierarchy – Building level

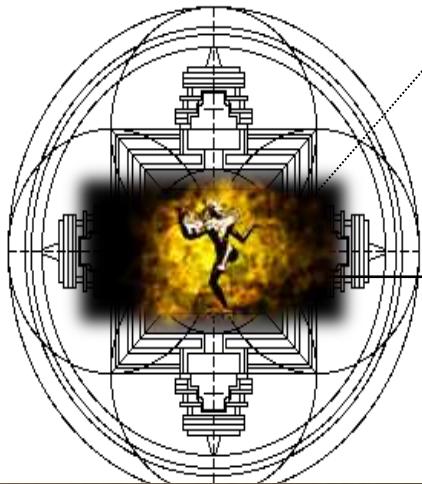


Hierarchy of Human habits represented by spatial progression as seen in this pattern of the plan of ancient temple of Borobudur.

- First, space is physical and Cartesian.
- Second, space is mental, habitual, ritual (mono-mythical) and repetitive.
- Third, space is cognitive and pan-mythical.
- Finally, space becomes all pervasive and cosmological.



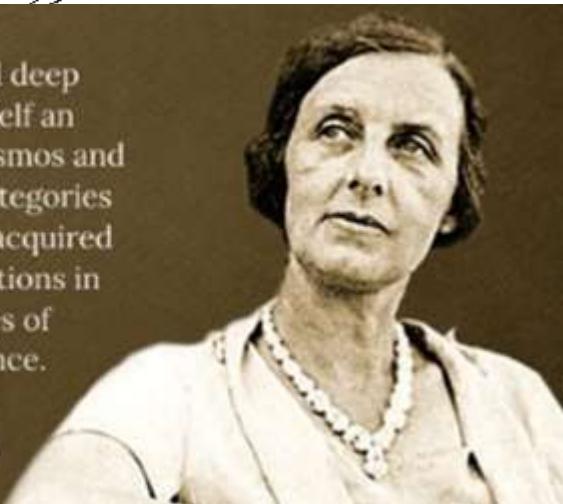
Evolution of Cosmic Mandala



Greater
TIME X

The ancient artist had deep feeling of being himself an integrated part of the cosmos and participating in all its categories and elements, a feeling acquired by innumerable generations in uncounted centuries of meditative experience.

– Alice Boner
Swiss Art Historian



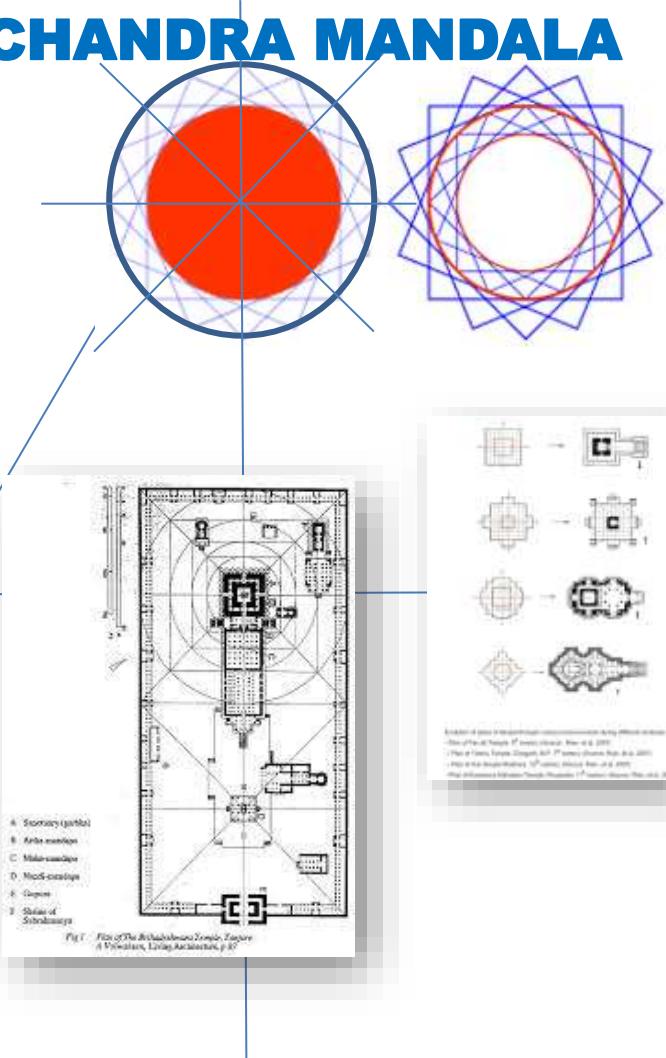
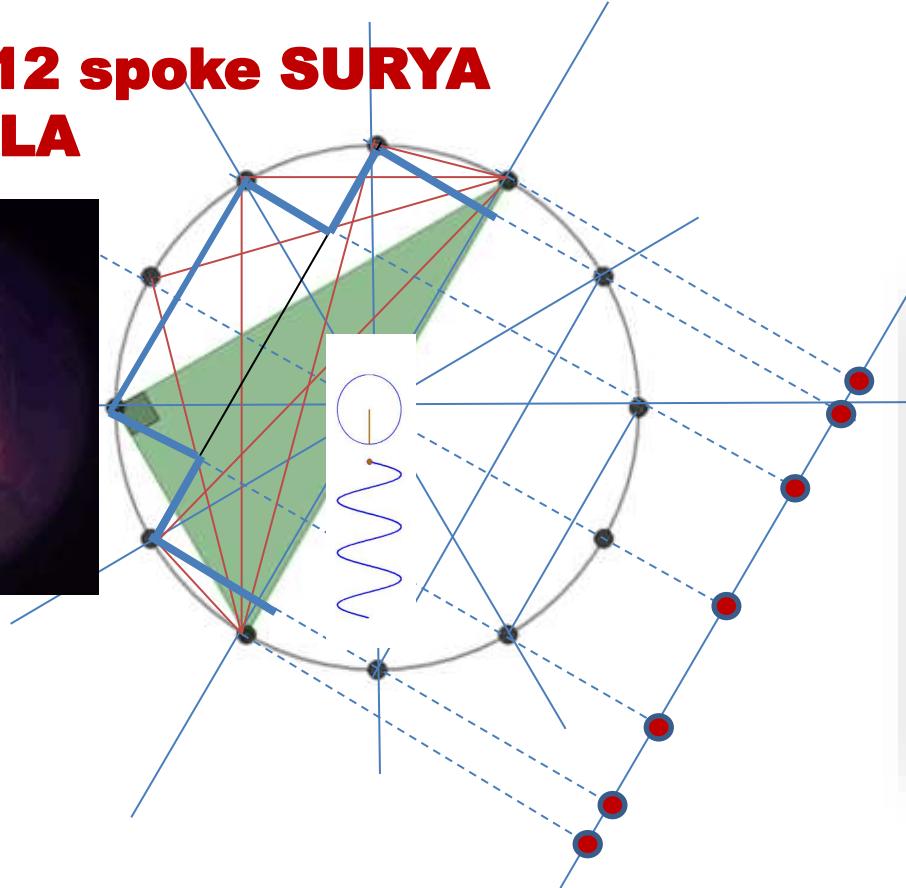
Strictly speaking, the word *Mandala* means ‘Circle’. It is generally represented as a complex pattern of drawing. Throughout ancient Asiatic civilizations like India, China and the ancient Near east (mainly Persia), *Mandala* has been depicted as an ideal concept of Order, both at the Universal (also known as macrocosm) and the individual (also known as the microcosm) planes and also in terms of the inter-relationship between the two.

the Penguin Dictionary of Symbols,
Paris, 1969

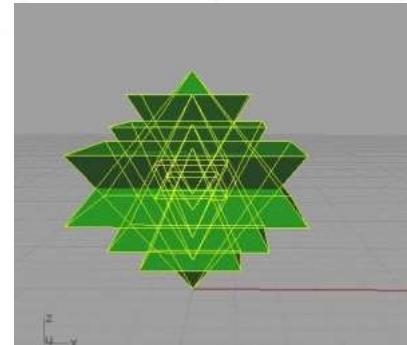
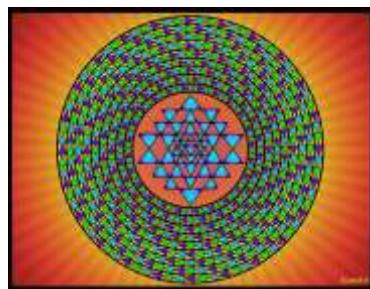
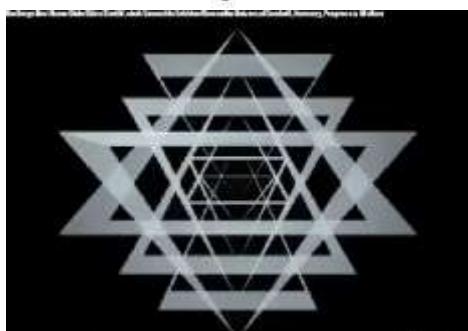
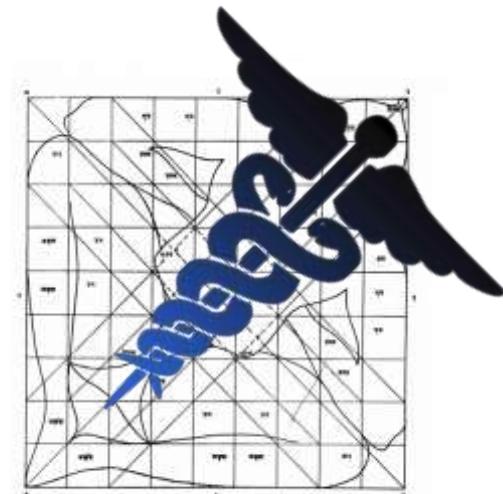
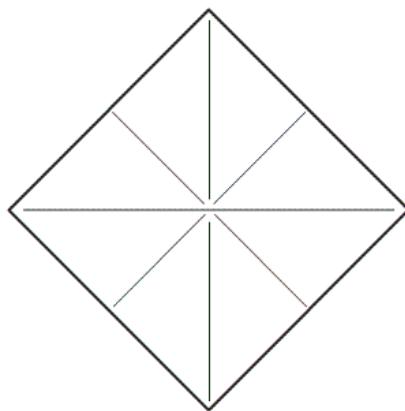
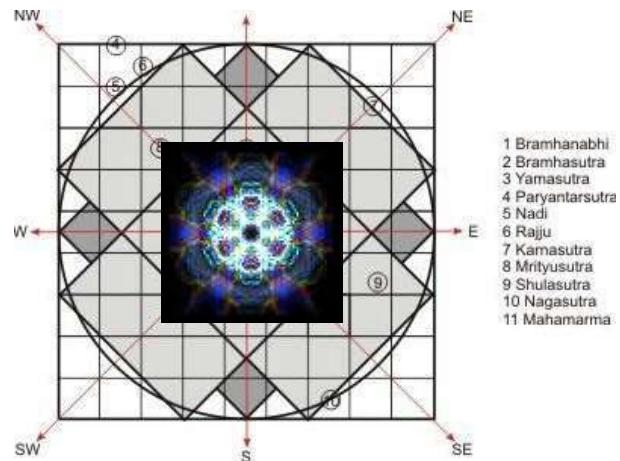
As per 16 spoke CHANDRA MANDALA

ALTARS & TEMPLES

**As per 12 spoke SURYA
MANDALA**



A living parable of the diagonals: *Mandala* Deep ecosystem of YOGA (India)



FOUNDATION IN THE APEX / ZENITH: RITASYA BUDHNA

ऋतस्य बुध्नं उषसामिष्ण्यन् वृषा मही रोदसी आ विवेश ।
मही भित्रस्य वरुणस्य माया चन्द्रेवं भानुं वि दधे पुरुत्रा ॥७॥

RIG VEDA 3.61.7

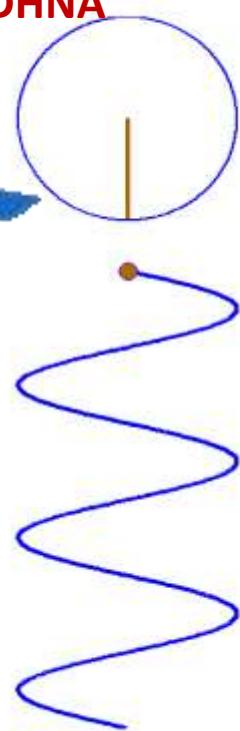
Realization CYCLIC TIME & Propagation of REINCARNATION

FOUNDATION IN THE TAIL/ NADIR : AHI.r BUDHNA

शं नौ अज एकपादद्वेषो अस्तु शं नोऽहिर्बुध्न्यः । शं समुद्रः ।
शं नौ अपां नपात्पेरुरस्तु शं नः पृश्नेभवतु देवगौपा ॥१३॥

RIG VEDA 7.35.13

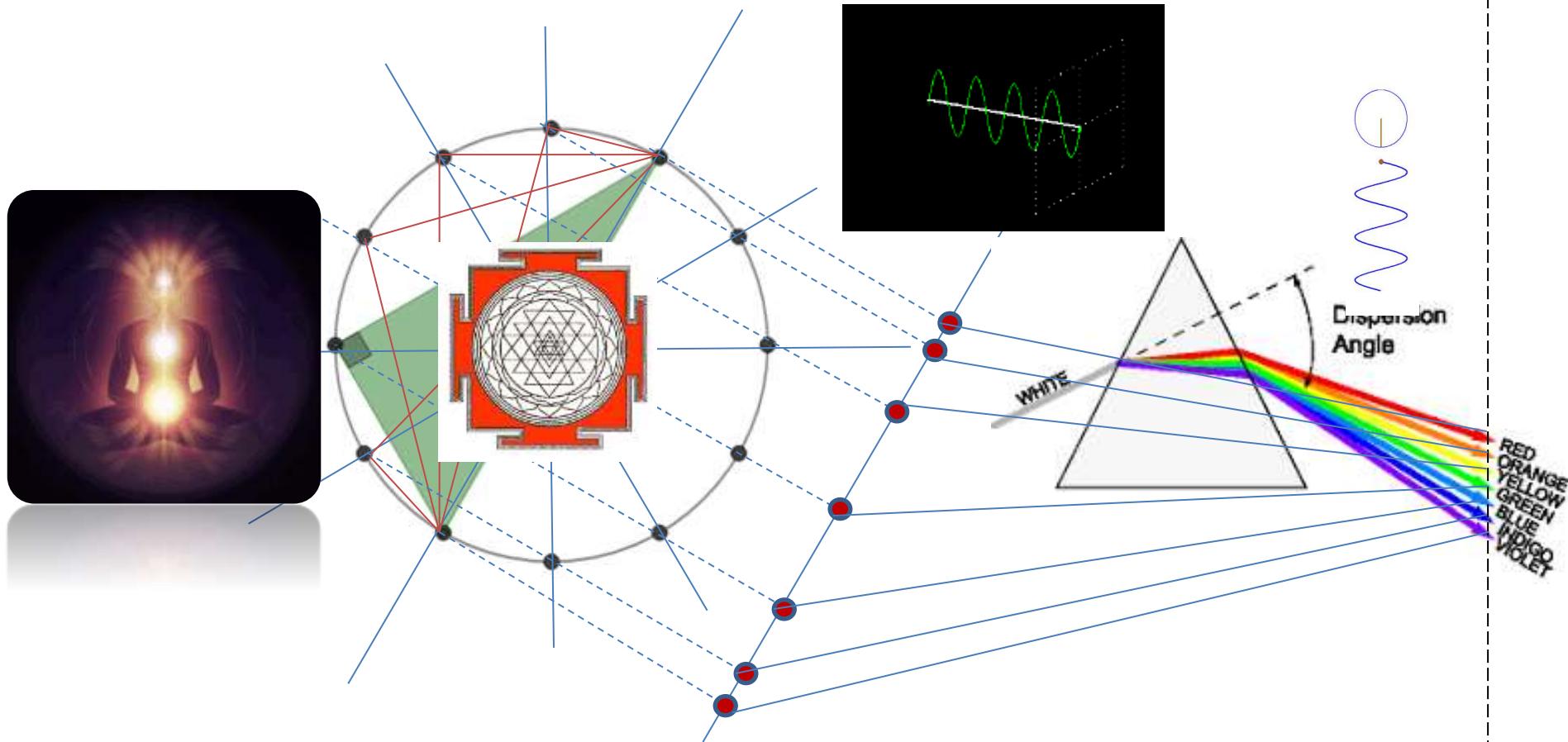
UPPER: RITASYA BUDHNA



LOWER: AHI.R BUDHNA

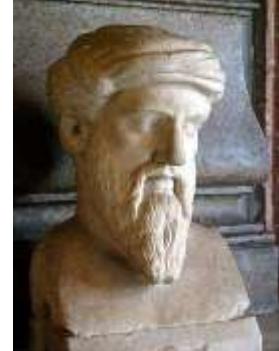
MANDALA & THE ORB OF LIGHT

Diffraction and Polarization



The legend of PYTHAGORAS, DELPHI ..

Sourced to Orphism: Gnostic, Celibate, Meditative

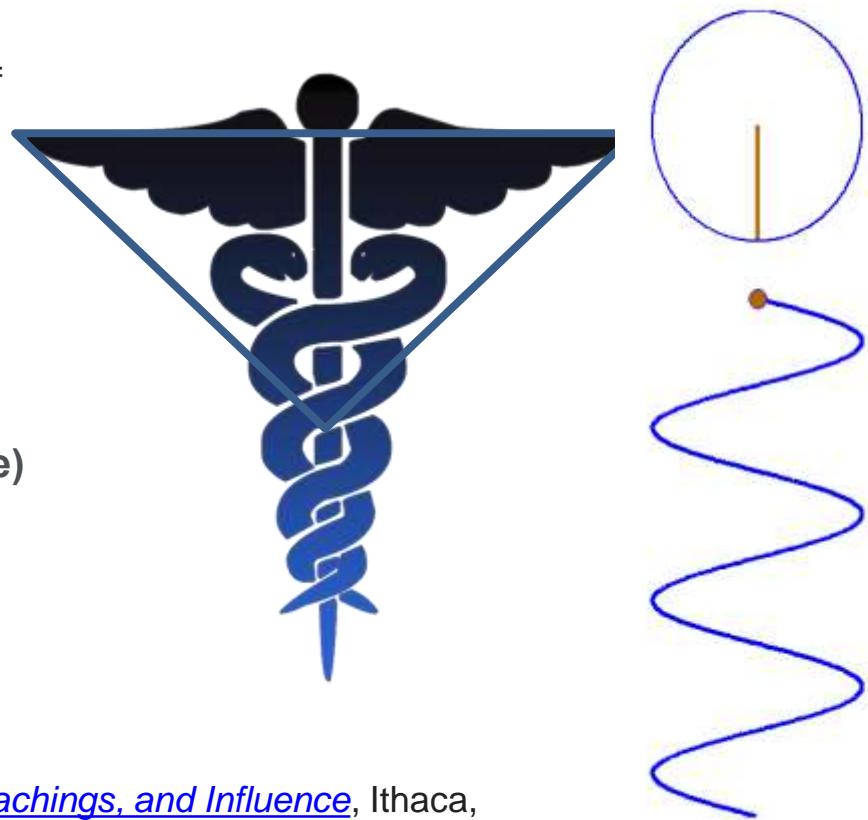


Pythagoras is traditionally thought to have received most of his education in the Near East. Modern scholarship has shown that the culture of Archaic Greece was heavily influenced by those of Levantine and Mesopotamian cultures.

The third-century AD Sophist Philostratus claims that, in addition to the Egyptians, Pythagoras also studied under Hindu sages or gymnosophists in India.

“peíthō (πείθω)” (convince, persuade, make aware)
plus “agora (assembly)

Pythagoras, whose name means “Place of the Serpent,” is recognized as an incarnation of the Primal Serpent.



Riedweg, Christoph (2005) [2002], [*Pythagoras: His Life, Teachings, and Influence*](#), Ithaca, New York: Cornell University Press: pp 7-8

Pothayanar/ Baudhyanar in 800 BCE

The Tamilian land, centuries before the dawn of the common era had built dams and dikes, palaces and great cities during the Sangam era, ... then, an ancient Tamil mathematician/poet Pothayanar, who had lived 800 years before the common era, has given a quatrain of four lines articulating the method of finding the length of the hypotenuse of a right-angle triangle without the need to find the square or the square-root, only using the length of the sides, and simple fraction. Here is the English translation of the quatrain:

*Divide the horizontal to eight,
Delete one portion, and add the remaining,
To half of vertical to result you've got'
Available would-be hypotenuse of the triangle.*

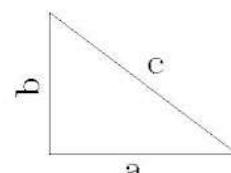
The Tamil poem by poet Pothayanar goes as follows

ஓடும் நீளம் தனை ஓரேஷ்டுக்
கூறு ஆக்கி கூறிலே ஒன்றைத்
தன்னி குன்றத்தில் பாதியாய்ச் சேர்த்தால்
வருவது கர்ணம் தானே. - போதையனார்

"Odiya Neelamthannai Orettu Koorathakki" - Divide greater length by 8.
"Koorilae Onru thalli" - Multiply by one less than 8, which is 7.
"Kunrathil paathi serthal" - Kunram means smaller length. Add half of the smaller length.
"Varuvathu karnam thaanae." - What we get is the hypotenuse , here represented as karnam = Karna-sutra (Diagonal).

http://yalarivanjackson.blogspot.com/2014/10/history-of-tamil-people_18.html
<http://santhoshkrishnaswamy.blogspot.com/2013/12/v-behaviorurldefaultvmlo.html>
<http://www.terafiq.com/2022/01/alternate-method-to-compute-hypotenuse.html>

Bothaiyanaar / Pythagoras Theorem

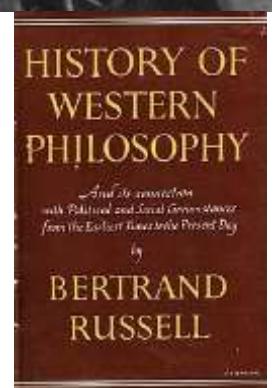
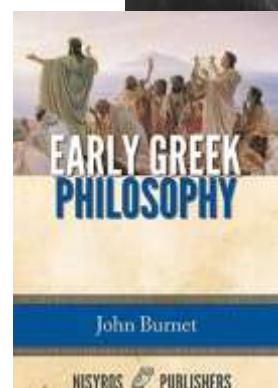
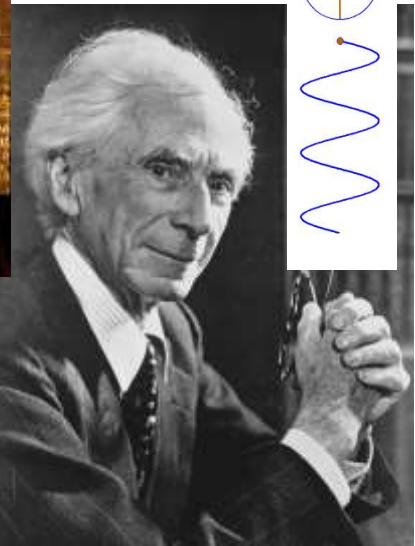
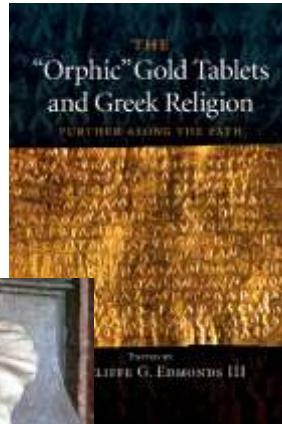
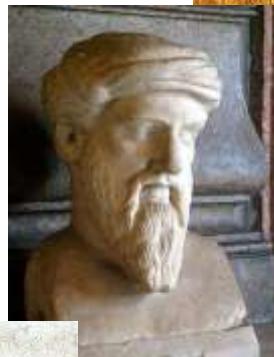
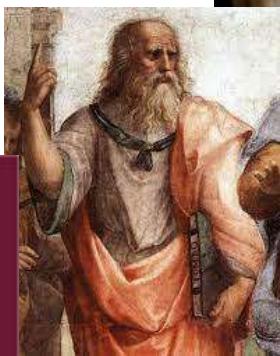
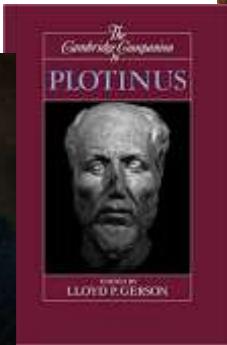

$$\begin{aligned} a &= 8 \\ b &= 6 \\ c &= ? \\ c &= (a-a/8) + (b/2) \\ &= (8-1) + 6/2 \\ &= 7 + 3 = 10 \end{aligned}$$

The combination of mathematics and theology, which began with Pythagoras, characterized religious philosophy in Greece .. **Orphism before Pythagoras was analogous to Asiatic mystery religions.**

- Bertrand Russell: III, pg 54

(John) **Burnet goes on to state that there is a striking similarity between Orphic beliefs and those prevalent in India at about the same time** .. He then comes on to the original meaning of the word 'Orgy' (Urgo), which was used by the Orphics to mean 'Sacrament', and was intended to purify the believer's soul and enable it to escape from the Wheel of Birth.

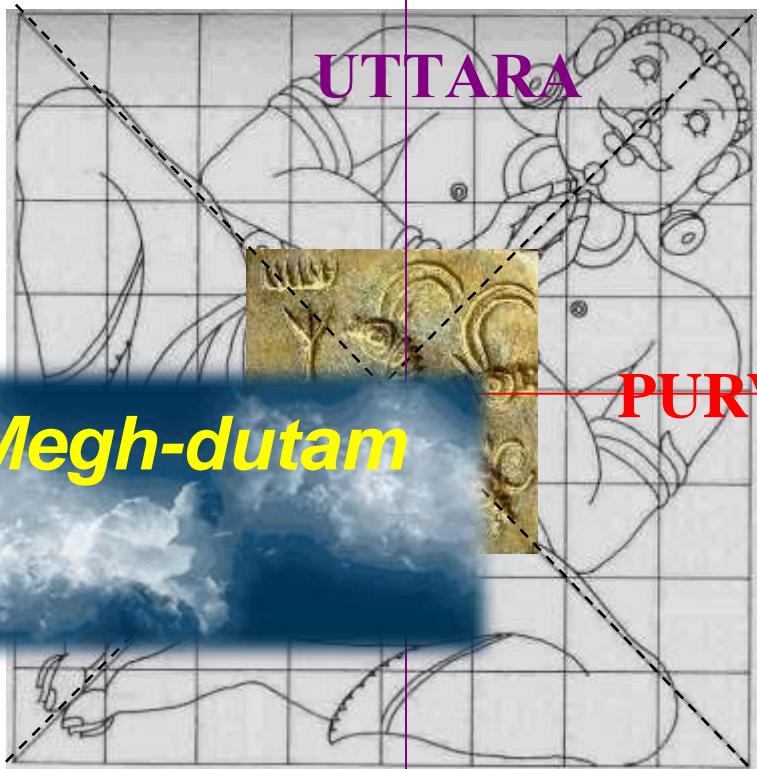
- Bertrand Russel: I, pg 43



Cardinals of the spatio-temporal

Double intender - space & time: Sama Veda

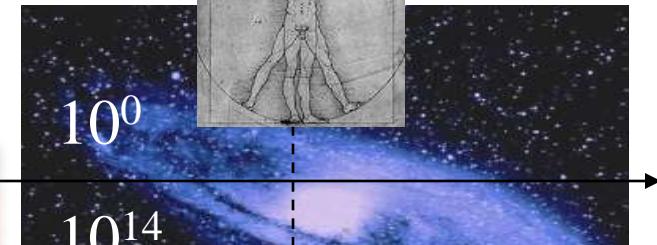
Vayu



Issan

Agni

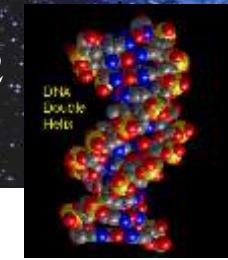
Nairiti



10^0

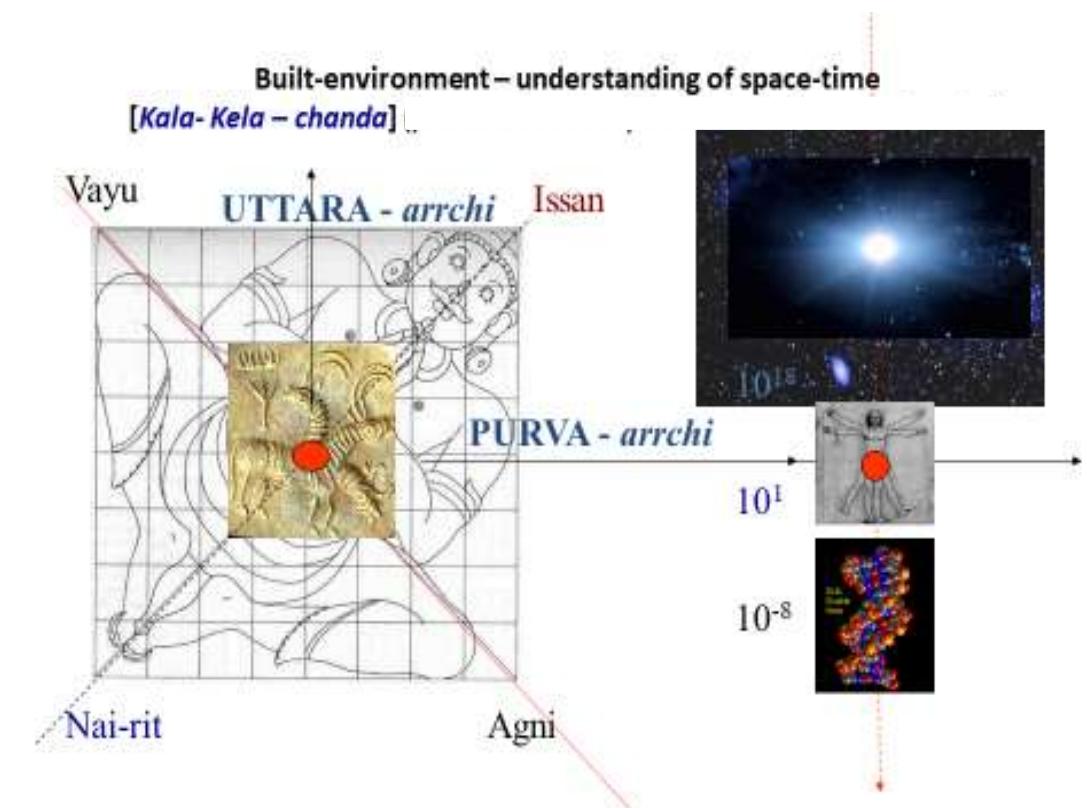
10^{14}

10^{-12}

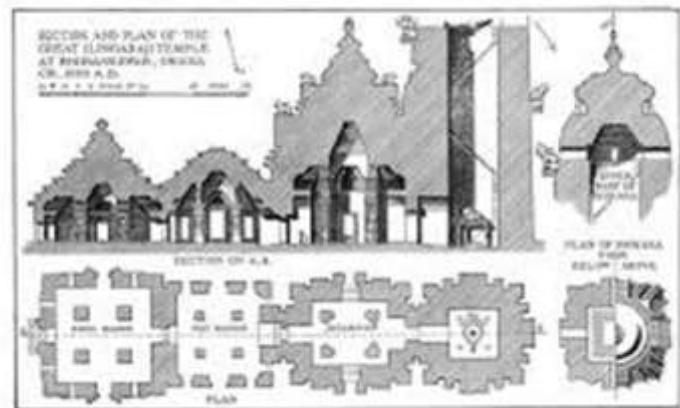
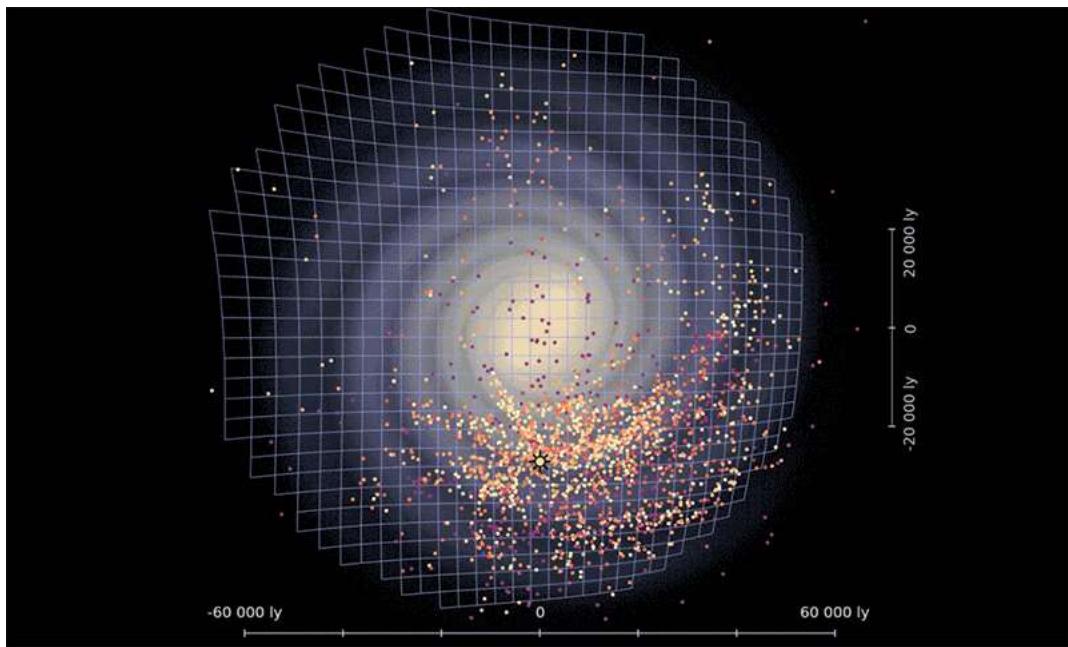
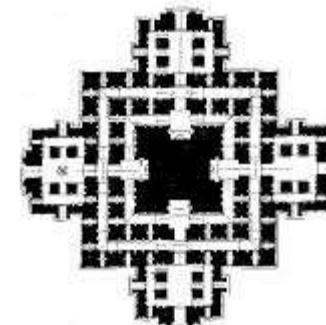
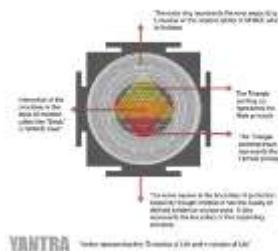
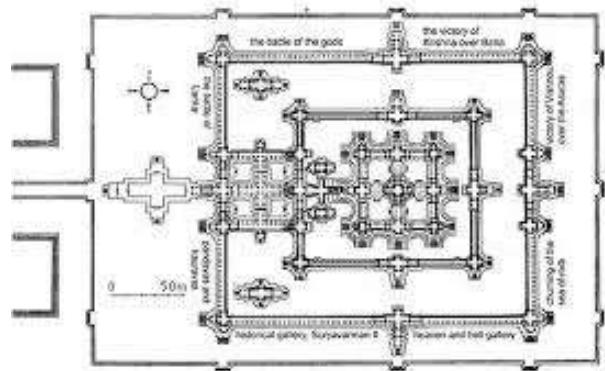


THE SCALES

- The ‘*vastu-Purusha-Mandala*’ leads to evolution of various yantras or sacred glossary of geometrical forms used in different contexts of Indian design processes. It leads to respect of an economic scale in design variety and heterogeneity, but all resting on an ecosystem of interconnectedness and its deeper unity.



LAYOUTS & EXPERIENCE



LAYOUTS & EXPERIENCE

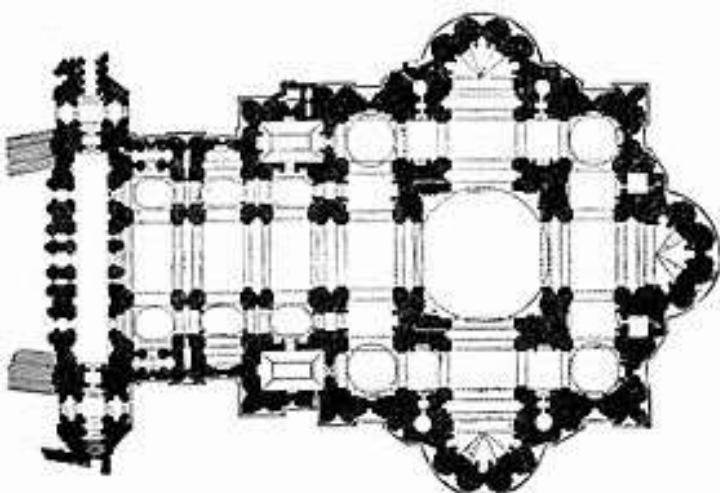
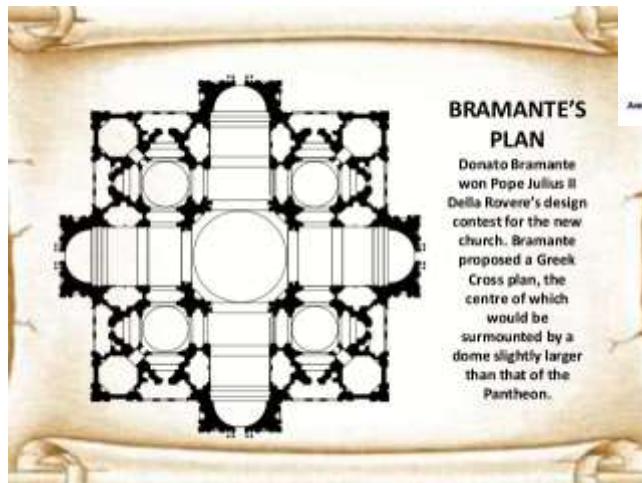
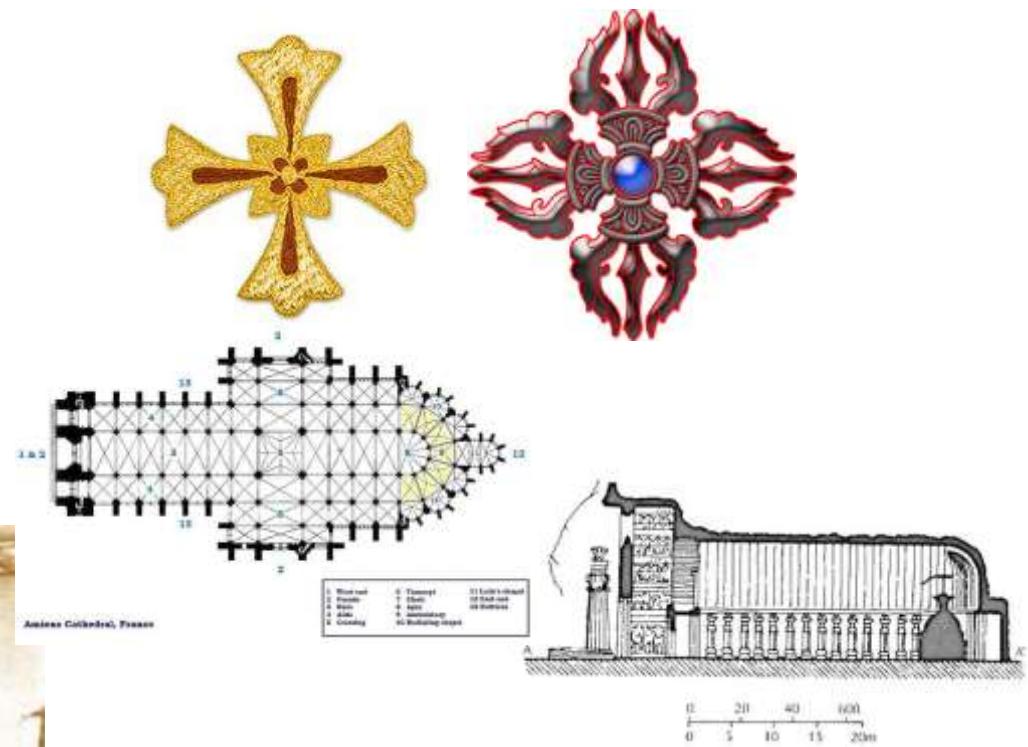


Fig. 4 und 5. Längenscheit und Grundriss von St. Peter in Rom.

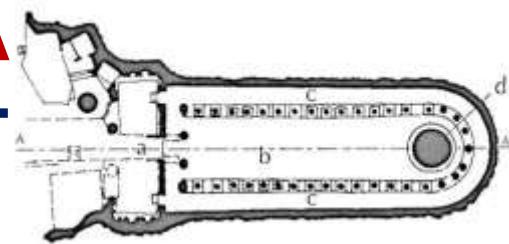


BRAMANTE'S

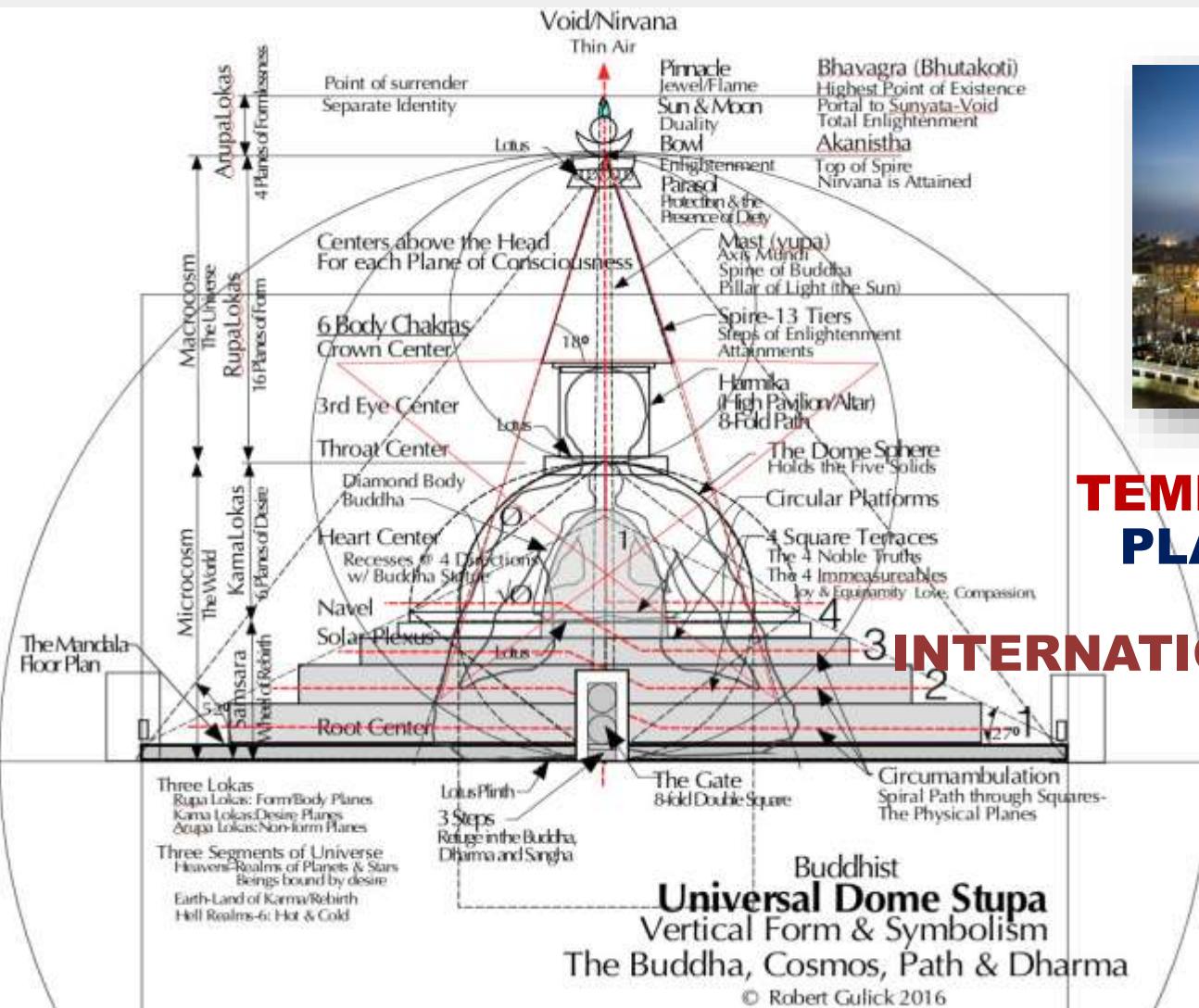
PLAN
Donato Bramante won Pope Julius II Della Rovere's design contest for the new church. Bramante proposed a Greek Cross plan, the centre of which would be surmounted by a dome slightly larger than that of the Pantheon.



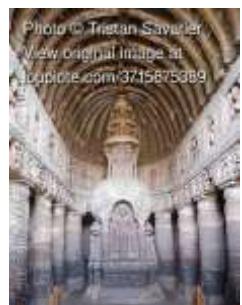
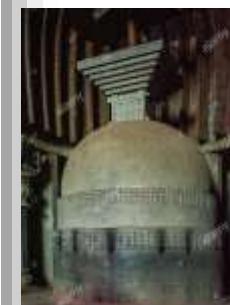
BASILICA CHAITYA HALL



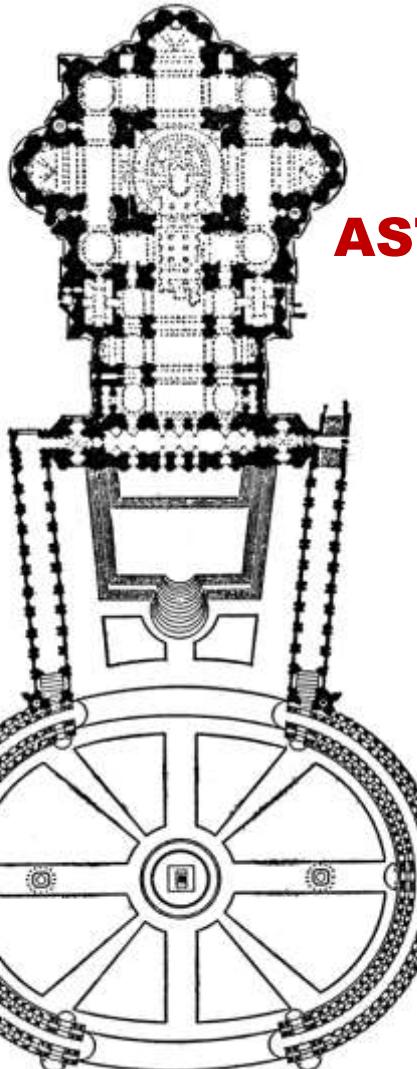
FORMS & FORMULATIONS



TEMPLE FORMATION PLANNING SCAPES & INTERNATIONAL DIASPORA



PATTERN & FORMULATIONS



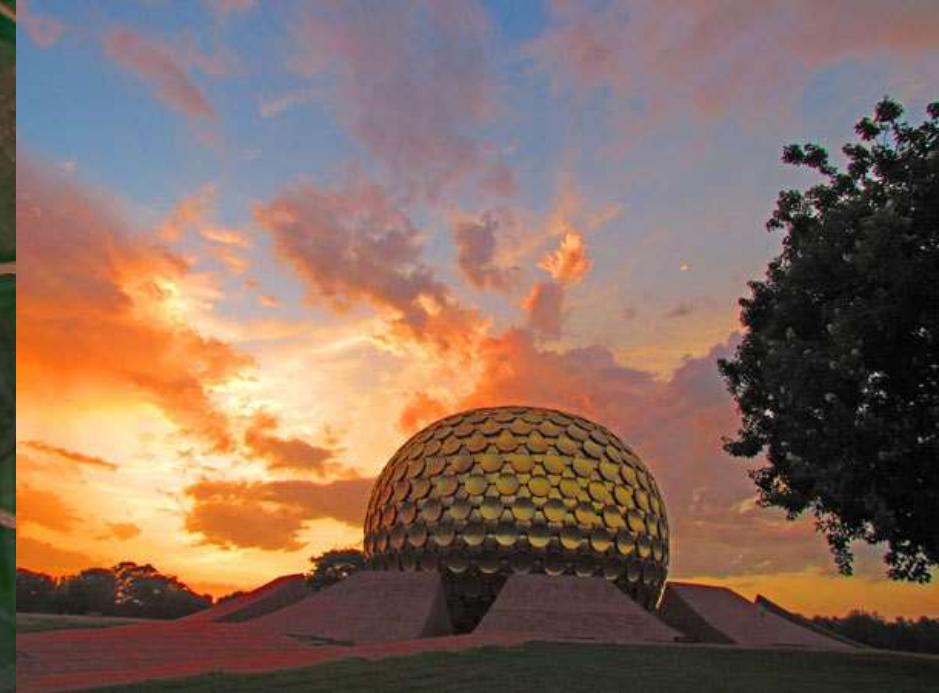
**ASTRAL FORMATION
SOLAR INVICTUS
&
RENAISSANCE**



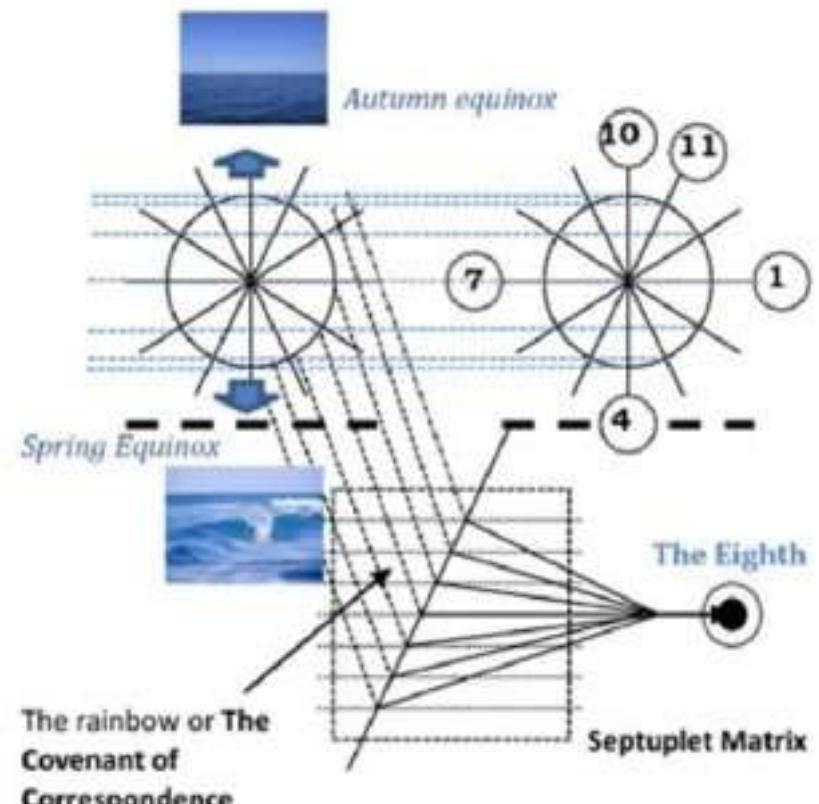
BUILT & UNBUILT



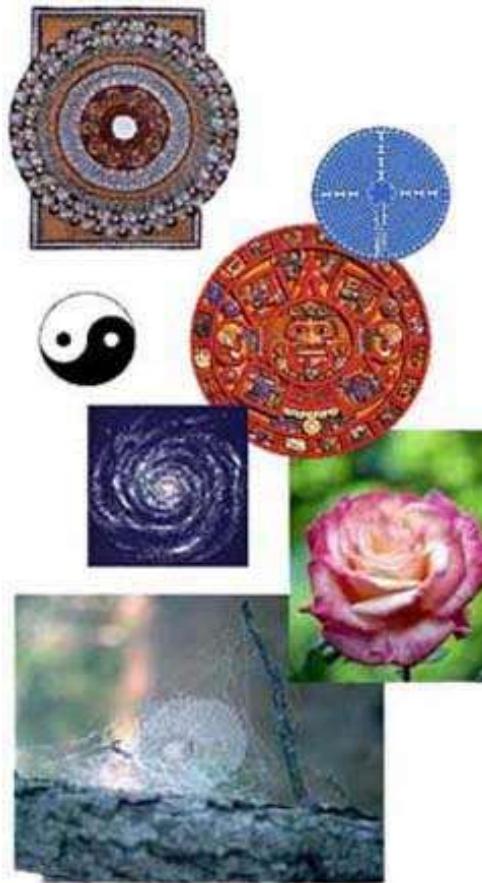
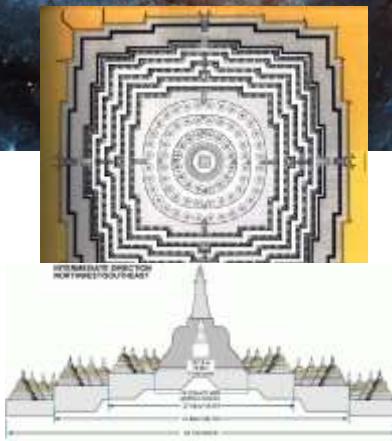
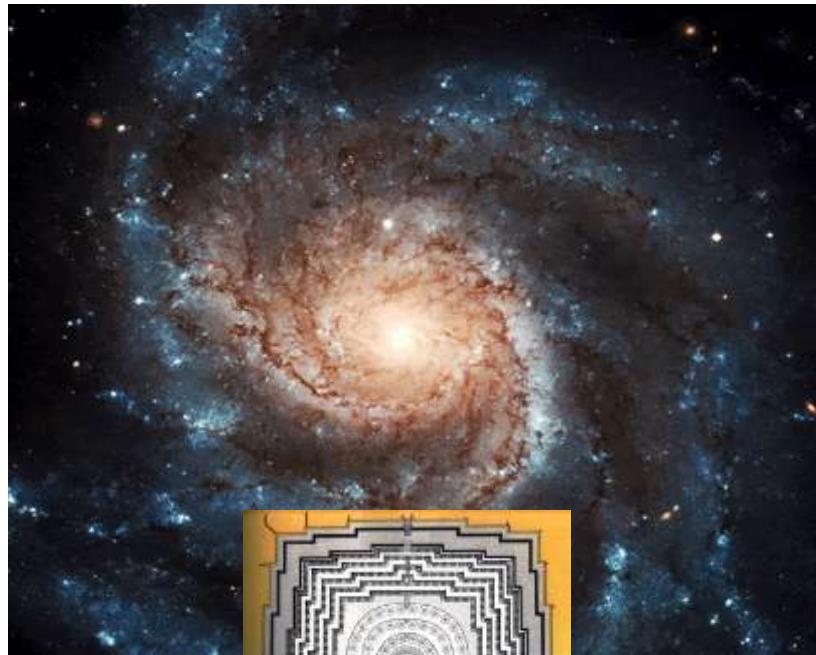
**MANDALA OF THE SUN
UTTARAYANA
SOLAR INVICTUS
&
THE INDIAN RENAISSANCE**



VAST & SMALL



Representations of *Mandala*



- **The Tao**

Images in Nature

- **Kalachakra**

- **Spiral galaxy**

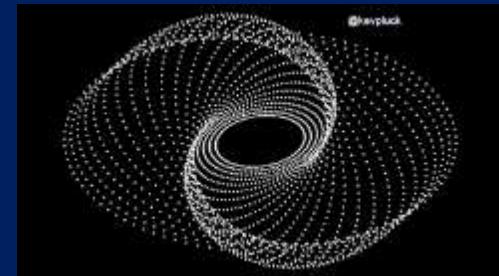
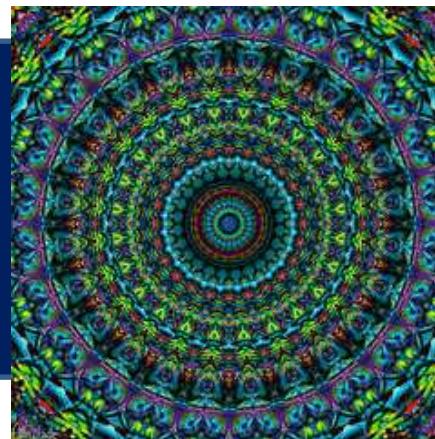
- **Spider Web**

- **Atomic Circle**

- **Flower web**

The DEEP ECOSYSTEM OF VASTU VIDYA

THE TEMPORAL SCALE



PART 2

Joy Sen

Professor

Department of Architecture & Regional Planning

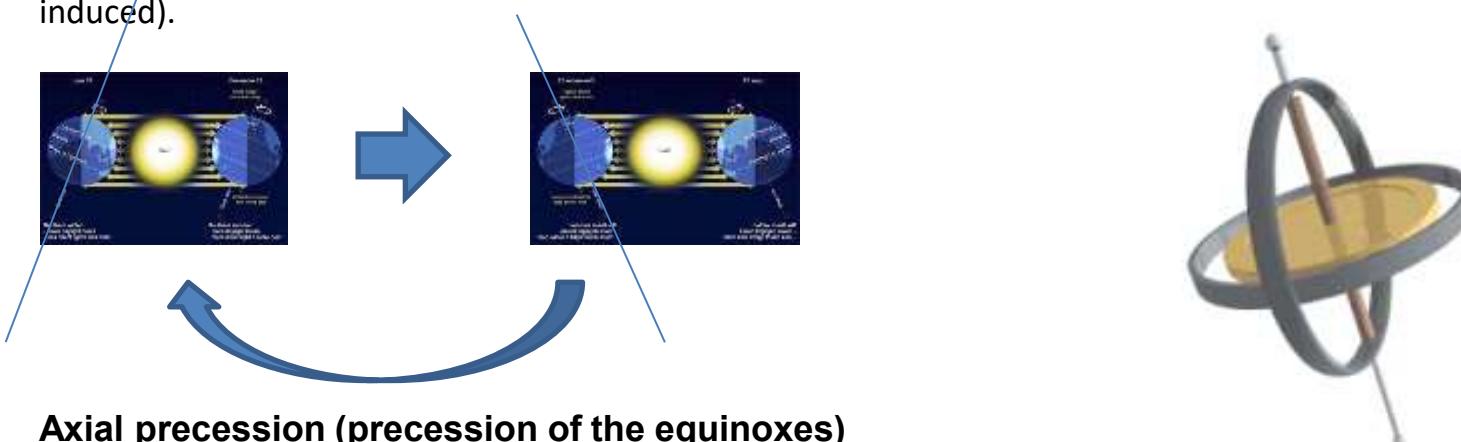
Indian Institute of Technology Kharagpur

THE COSMIC CYCLE: PRECESSION

Axial precession (precession of the equinoxes)

Precession is a **change in the orientation of the rotational axis** of a rotating body.

In physics, there are two types of precession: torque-free (transcendent or FREE) and torque-induced (immanent or induced).

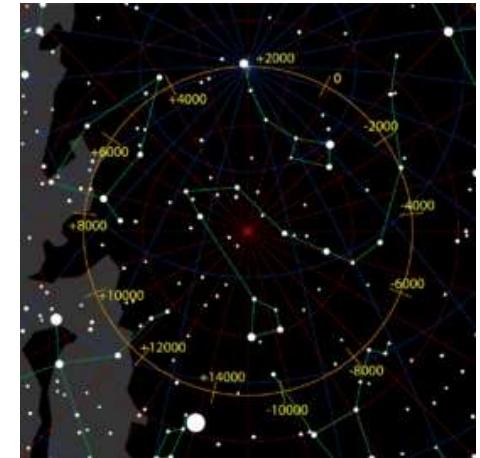
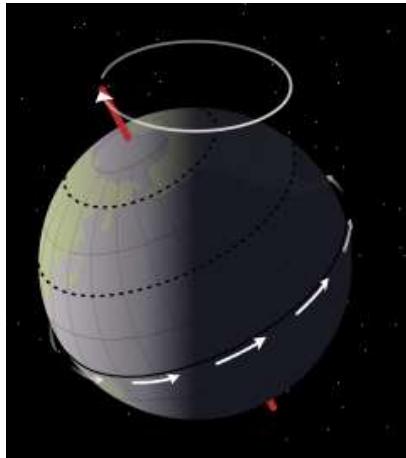


Axial precession (precession of the equinoxes)

Axial precession is the movement of the rotational axis of an astronomical body, whereby the axis slowly traces out a cone. In the case of Earth, this type of precession is also known as the *precession of the equinoxes*, *lunisolar precession*, or *precession of the equator*.

Earth goes through one such complete precessional cycle in a period of approximately 26,000 years or 1° every 72 years, during which the positions of stars will slowly change in both equatorial coordinates and ecliptic longitude. Over this cycle, Earth's north axial pole moves from where it is now, within 1° of Polaris, in a circle around the ecliptic pole, with an angular radius of about 23.5°.

REALITY OF COSMIC PRECESSION ON HELIOCENTRIC GEOCENTRICISM



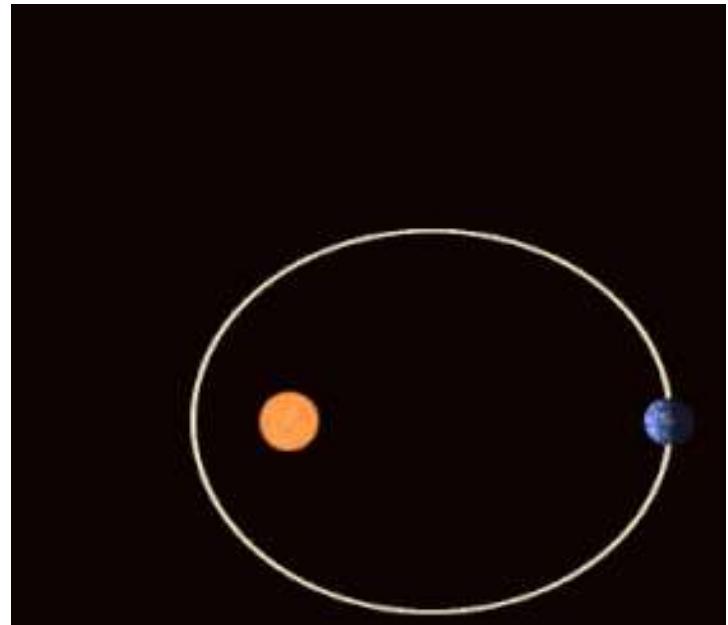
Precessional movement of the axis (left), precession of the equinox in relation to the distant stars (middle), and the path of the north celestial pole among the stars due to the precession. Vega is the bright star near the bottom (right).

REALITY OF COSMIC PRECESSION ON HELIOCENTRIC GEOCENTRICISM

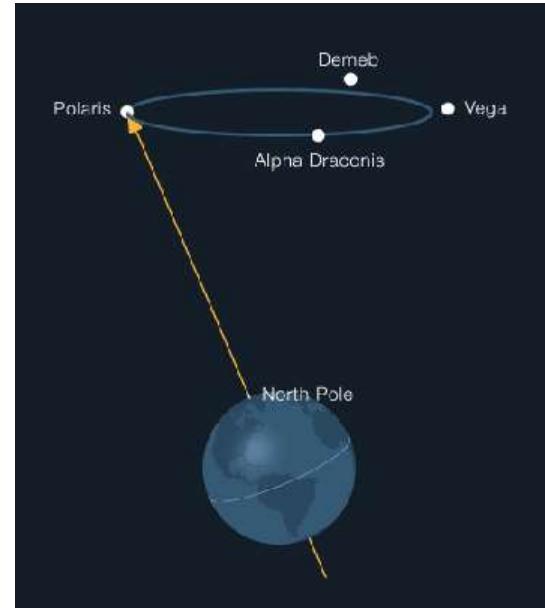
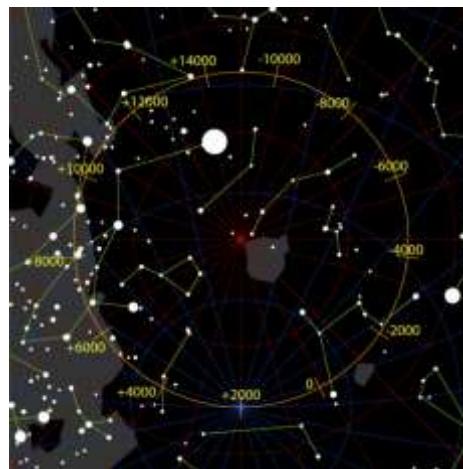
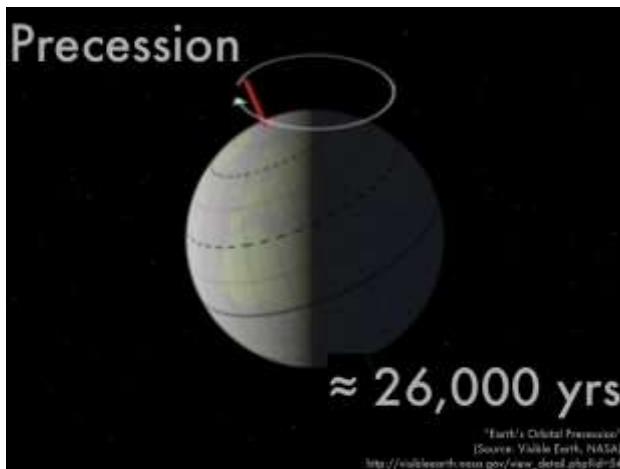
Precession of the equinoxes

The orbits of planets around the Sun do not really follow an identical ellipse each time, but actually trace out **a flower-petal shape because the major axis of each planet's elliptical orbit also precesses** within its orbital plane, partly in response to perturbations in the form of the changing gravitational forces exerted by other planets. This is called perihelion precession or apsidal precession.

In the adjunct image, Earth's apsidal precession is illustrated. As the Earth travels around the Sun, its elliptical orbit rotates gradually over time. The eccentricity of its ellipse and the precession rate of its orbit are exaggerated for visualization. Most orbits in the Solar System have a much smaller eccentricity and precess at a much slower rate, making them nearly circular and nearly stationary.



REALITY OF COSMIC PRECESSION ON HELIOCENTRIC GEOCENTRICISM



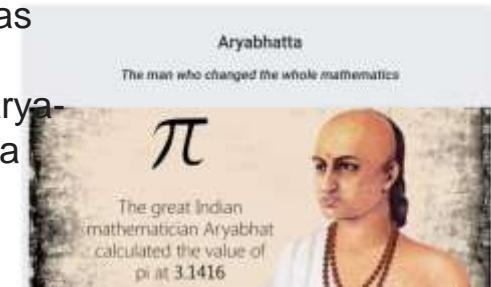
13000 Years (East to West) + 13000 years (return to East)

The gravitational forces due to the Sun and the Moon induce the precession in the terrestrial orbit. This precession is the major cause of the climate oscillation on the Earth having a period of 19,000 to 23,000 years.

It follows that the changes in Earth's orbital parameters (e.g., orbital inclination, the angle between Earth's rotation axis and its plane of orbit) are **important for the study of Earth's climate, in particular for the study of past ice ages (Krita yugas)**.

An medieval beginning started with Aryabhata or Aryabhata I (around 470 AD) was the first of the major mathematician-astronomers from the classical age of Indian mathematics and Indian astronomy. His works include the Āryabhaṭīya and the Arya-siddhanta. For his explicit mention of the relativity of motion, he also qualifies as a major early physicist.

Scottish mathematician JOHN PLAYFAIR (1748 – 1819) also took an interest in Indian astronomy and compared them with traditional and ancient astronomy from Egypt and Greece. He also examined Indian concepts in trigonometry.

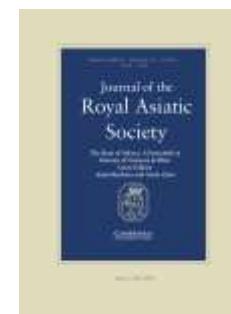
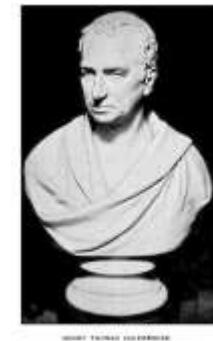


Henry Thomas Colebrooke (15 June 1765 – 10 March 1837) was an English [orientalist](#) and mathematician. He has been described as "the first great [Sanskrit](#) scholar in Europe", and **co-founder of the Royal Astronomical Society**, second President and of the Royal Asiatic Society, serving as founder Director.

Olin Chaddock Wilson (January 13, 1909 – July 13, 1994) was an American astronomer best known for his work as a stellar spectroscopist, born in San Francisco, CA. In collaboration with Vainu Bappu, an Indian astronomer, he also showed that there was a correlation between the width of the Ca II lines in stellar spectra and the star's luminosity, the Wilson-Bappu Effect.



Olin C. Wilson



Francis Wilford (1761–1822) was an Indologist, Orientalist, fellow member of the Asiatic Society of Bengal, and a constant collaborator of its journal – Asiatic Researches – contributing a number of fanciful, sensational, controversial, and highly unreliable articles on ancient Hindu geography, mythography, and other subjects. He contributed a series of ten articles about Hindu geography and mythology for Asiatic Researches – associated with Asiatic Society of Bengal -, between 1799 and 1810, claiming that all European myths were of Hindu origin and that India.

Older pioneers

Older pioneers

John Henry Pratt FRS (4 June 1809 – 28 December 1871) was a British clergyman, astronomer and mathematician. A Cambridge Apostle, he joined the British East India Company in 1838 as a chaplain and later became Archdeacon of Calcutta.



Bankim Chandra Chatterjee or Bankim Chandra Chattpadhyay, (1838 – 1894) was an Indian novelist, poet and journalist.

He was the composer of *Vande Mataram*, originally in Sanskrit, personifying India as a mother goddess and inspiring activists during the Indian Independence Movement.



The essays written for the *Bongodarshan* between 1872 and 1875 were essentially adaptations from the writings of European scientists who lived and worked between the 17th and 19th centuries. This includes the Italian Evangelista Torricelli, Frenchman Blaise Pascal, Scotsman Charles Lyell, Irishman John Tyndall and Englishmen T.H. Huxley, Norman Lockyer and Richard A. Proctor. Between them, these men had covered the scientific disciplines of biology, mathematics, astronomy, physics, geology and anthropology, which also goes to show the breadth of Chattpadhyay's intellectual engagement with science. ... a certain assessment of the date of the battle of Mahabharata.

Older pioneers

PART 1

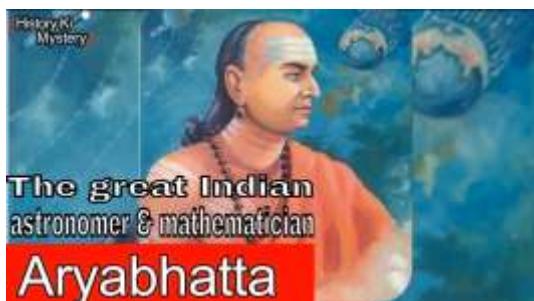
THE RIG VEDIC INTERMEDIATE PERIOD & THE INDUS VALLEY CIVILIZATION



Hermann Jacobi has argued that in some portion of the Rigveda and Atharvaveda, belong to a few Rishis of a certain period or span of time, **the sun was in Phalguni**, and in the Sankhayana and Gobhila **Grhyasutra the Full moon was in Bhadrapada during the summer solstice**, which would have occurred at **4500-2500 BCE**, confirming a part **period P of the Vedic age**, and also a period, which is commensurate to the times of the Indus Valley Civilization. This may be an intermediate period.

Bryant 2001:254; Jacobi 1909

Bryant, Edwin (2001), The Quest for the Origins of Vedic Culture, Oxford University Press



In this context, the late 4th-millennium date has a precedent in the calculation of the Kali Yuga epoch, based on planetary conjunctions, by Aryabhata (6th century BCE). Aryabhata's date of **18 February 3102 BCE** for Mahābhārata war has become widely accepted, which is within **this period P**.

Recent pioneers 1

There are 53 references in RigVeda as prayers offered to Ashvinis at dawn. The description clearly points to the first sighting of **the pair of stars in the Aries constellation just before sunrise (Heliacal Rising)** after Winter Solstice to mark the year beginning (Uttarayana). It proves a majority of the Rishis in a period 7000 BCE or even earlier.

file:///C:/Users/Prof.%20Joy%20Sen/Downloads/RigVeda_dates_to_8th_millennium_BCE_base.pdf



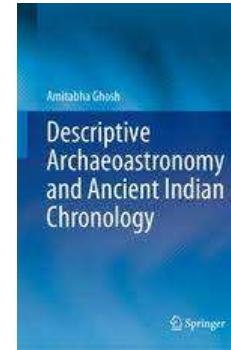
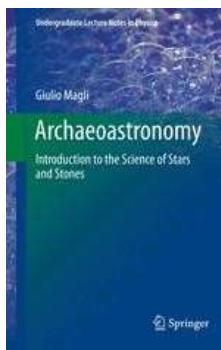
Winter Solstice occurred in Aries (Avvam Nakshatra) on 19 December, 7001 BC. Sley at 07:15 Hrs (RgFeatu-5-77-2).

स्वस्था यथुसा यातमवांदत्सा निधि मधुप्रनं पिवाथः ।
वि वां रथो वध्वा यादमनोऽनानिदयो वायते वर्णनिष्प्राम् ॥ ऋ-सं. ७-६१-३ ॥
हे शुभुहना अंडिवदेवो ! आप श्रेष्ठ घोड़ों से जै रथ पर बैठकर, अन के सहित यहाँ
मधुरस का पान करें । मर्य के माथ गमन करने वाला आपका रथ गतिशील घोड़ों से छुनोक
छोड़ को भी अंकित करता है ।

Well horsed and celebrated, Ashvins come to our presence and drink madhuras! Your chariot, travelling along with the sun, marks with its track the farthest ends of heaven. RV 7.69.3 Saptarshi Seer Vasistha

Ashvinis then represented the southernmost point of sunrise on the horizon, i.e., the Winter Solstice. The position of Ashvinis (Aries) matched that of the Winter Solstice about 9000 years ago (7000 BCE) as shown in the sky views.

Prof. Saroj Bala and her team; Dr. Siri Kalyanraman

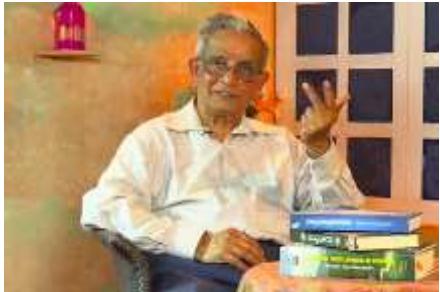


Recent pioneers 2

The dates derived from astronomical references span a range from 7000 BCE-2200 BCE. The references are derived from almost all the books of RgVeda. These dates are consistent with the date of Mahabharata war derived on the basis of astronomical references and planetarium software by the author. However, the range of dates for RgVeda based on astronomical references and verified by planetarium software does not agree with either the relative or absolute chronology proposed by Talageri.

An examination of the chronology of RgVeda based on astronomical references using Planetarium Software

B. N. Narahari Achar (2009)



Equinox at Ardra 5440 BCE

<https://talageri.blogspot.com/2017/12/the-use-of-astronomical-evidence.html>
<http://bharatkalyan97.blogspot.com/2013/11/rgveda-chronology-based-on-astronomical.html>



Tracing a Cosmic Pattern

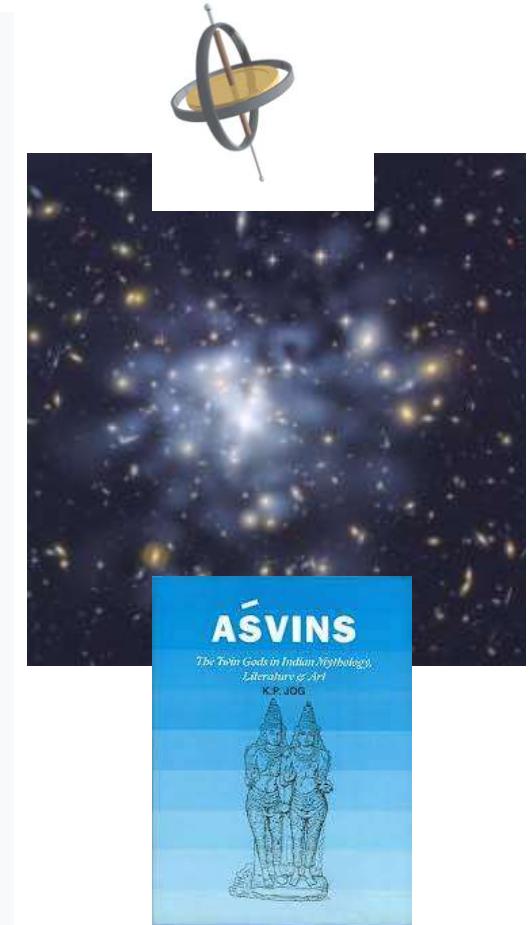
THE RIG VEDIC INTERMEDIATE PERIOD: TRACES FROM MAHARSHI ATRI MANDALA & HIS LINEAGE ATREYA OVER THE AGES ..

1. Initiate the worship of those, who come at early morning: It is unconditional and divine. **The Asvins claim the sacrifice at daybreak:** the sages forwarding from the depth of meditation the first share to extol them.
2. **Worship at dawn and it advances the Asvins:** nor is the worshipper at eve put aside. The legacy of worship and mediation continues , but each first in worship is most highly favored (@Winter solstice/ elliptical orb)

Rig Veda: 5.77.1-2: Saptarshi ATRI-lineage BHOUMA Atreya

DEVATA: ASVINS

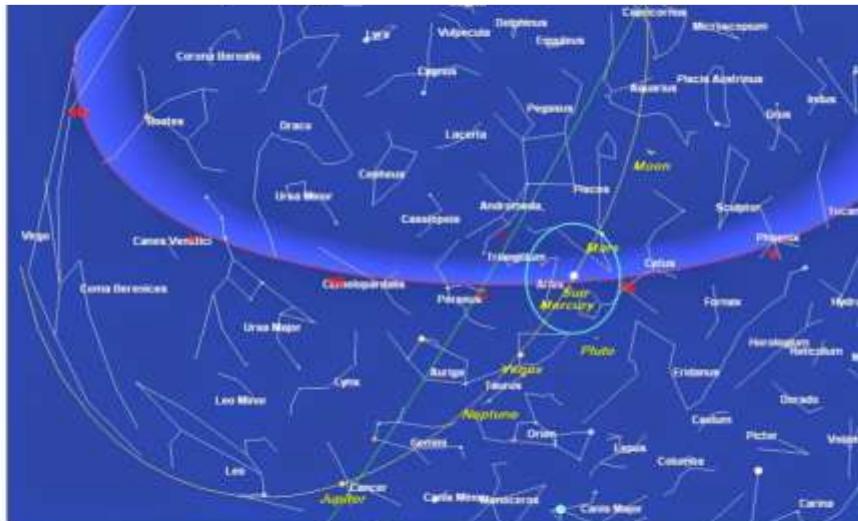
- Equivalent to imagery of Diouskouris of Castration (CASTOR) and Pollination (Pollux) in Orphic lores and tales of Argonauts
- From Present to Past = the dispersion was 14 degrees (when Asvins were helically rising at Dawn and hence, then visible at dawn)
- Removal or dispersion is 50.4 seconds per year
- So this event had occurred at **8000 BCE + (which is a post-Saptarshi Age)**



Evolution of Cosmic Pattern

Worship the Asvins at early dawn; offer their oblations: the evening is not for the gods; it is unacceptable to them: and whether it be any other than ourselves who worships them or propitiates them, the worshipper who is foremost is the most approved of. Rig Veda: 5.77.1-2: Saptarshi ATRI-lineage BHOUMA Atreya

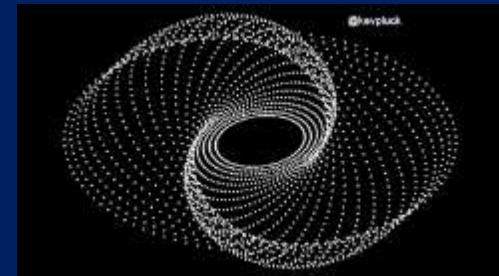
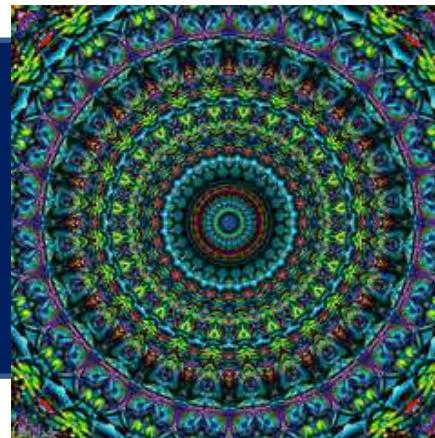
First sighting of Ashvinis (Aries) on the eastern horizon after Winter Solstice, just before sunrise (Heliacal rising), was used as marker for the year beginning as shown in the sky views over Delhi on 5 January, 7000 BC and 19 December, 7001 BC.



Winter Solstice occurred in Aries (*Asvini Nakshatra*) on 19 December, 7001 BC . Sky at 07:15 Hrs (*RgVeda 5:77.2*)

प्रातर्यजध्वमश्विना हिनोत न सायमस्ति देवया अजुष्टम् ।
उतान्यो अस्मद्यजते वि चावः पूर्वः पूर्वो यजमानो वनीयान् ॥ ऋ-सं. ५-७७-२ ॥

SEVEN FOUNDATION PRINCIPLES OF VASTU VIDYA SUTRAS



PART 3

Joy Sen

Professor

**Department of Architecture & Regional Planning
Indian Institute of Technology Kharagpur**

GENESIS

- The foundations of IAKS is rooted in the bedrock of Indian Knowledge System (IKS). The first mentions of these foundations are evident in the Rig Veda, 7th Mandala that forwards a set of pointers that are truly **the seven wonders of ancient Indian Architectural Knowledge**.
- **They are wonders as they are the latest findings of modern sciences, which was arrived at by our ancient Rishis in the inner laboratory of the human mind and psychic *prana*.**
- **HABITATION (Kshetra) – HABIT (Kshetragya)
complementarities ** (Neuro-physiological
& psycho-somatic probes)**





Origin in the SRUTIS

वास्तोष्पते शग्मया संसदा॑ ते सक्षीमहि॒ रण्वया॑ गातुमत्या॑ । पाहि॑ क्षेम॑ उत्
योगे॑ वरं॑ नो॑ यूयं॑ पात्॑ स्वस्तिभि॑ः॒ सदा॑ नः॑ ॥
वास्तोष्पते शग्मया संसदा॑ ते सक्षीमहि॒ रण्वया॑ गातुमत्या॑ । पाहि॑ क्षेम॑ उत्
योगे॑ वरं॑ नो॑ यूयं॑ पात्॑ स्वस्तिभि॑ः॒ सदा॑ नः॑ ॥

Lord of VASTU: Sage Vasistha: Rig Veda 7.54.3

"The spirit indwelling (Pati) the built-environment (Vastu) is the encircle and witness-protector of the dwelling (Mandala), so that may we be possessed of a benign, vibrant, comfortable, delightful, opulent abode, bestowed by the footfall of the infinite Lord on the finite; whether in possession or expectation; and ever cherish us with Lord's blessings."

- **Vasu Vidya (Earth Sciences)**
- **Vasava (Lord of earth)**
- **Vastu Vidya (Built sciences)**
- **Vasundhara (Earth)**
- **Vasati (Dwelling)**
- **Vasistha (Patron Sage of all-dwelling)**
- **Vasudeva (Eternal Lord)**

ईशावास्यमिदं सर्वं यत्किञ्च जगत्यां
जगत् ।

Isha Upanishad 1

- **Base**
- **Boss (nave of Circa/ Circuit)**
- **Omni-BUS**
- **VESTibule**
- **Vesta (Ancient Etruscan-Roman Goddess of Abode)**
- **Bust**



1

The principle of recursion:

what is 'as above, so below' is the basis of the origin of Indian sacred altars, the

footprint of the celestial on the terrestrial, and vice versa.

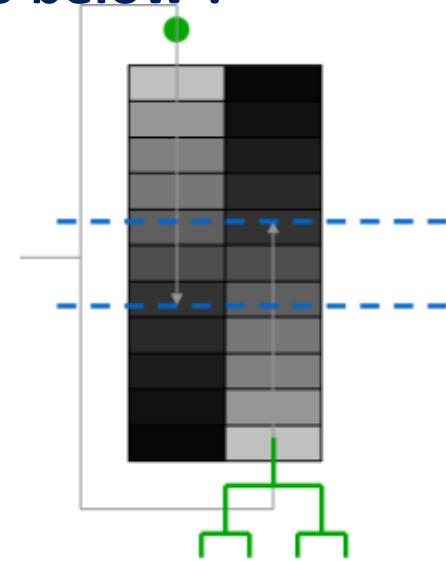
- *The depiction of the Mandala in Western Ghats, Ellora: kailashnath Temple 750 AD*
- *The depiction of Mandala in Ratnagiri Paleolithic Petroglyphs, Western Ghats 12000 BCE*



The principle of recursion: what is ‘as above, so below’: Isha Upanishad: 6 Gita: Chapter 7



<https://occr.org.in/author-desk.php>



ॐ द्वादशम्।

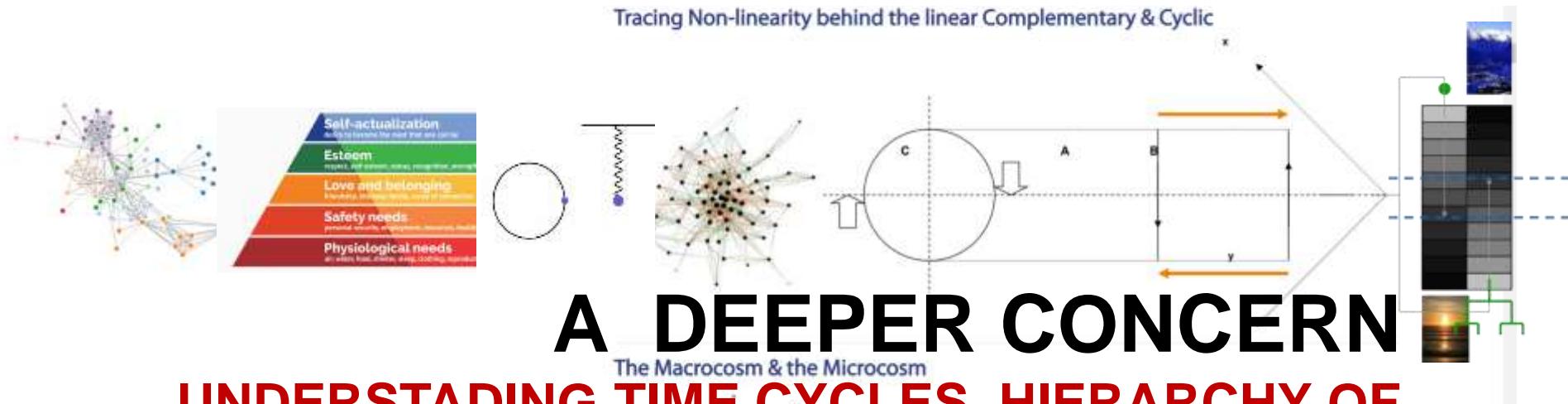
छन्दांसि यस्य पर्णानि यस्तं वेद स
वेदवित् ॥15.1॥



The principle of recursion: what is 'as above, so below'

The TAO of PHYSICS : SHAPE GRAMMAR & GEOMETRY OF FLUID FORMS

Tracing Non-linearity behind the linear Complementary & Cyclic



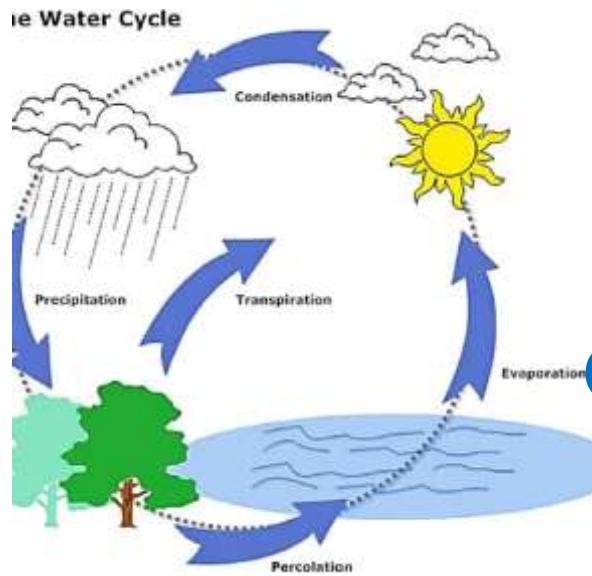
A DEEPER CONCERN

The Macrocossm & the Microcosm

UNDERSTADING TIME CYCLES, HIERARCHY OF SUSTAINABILITY OF HABITS - HABITATION



LESSONS FROM THE ANCIENT WISDOM



Aeration

Linear reductionist scope (i^{th})

Condensation

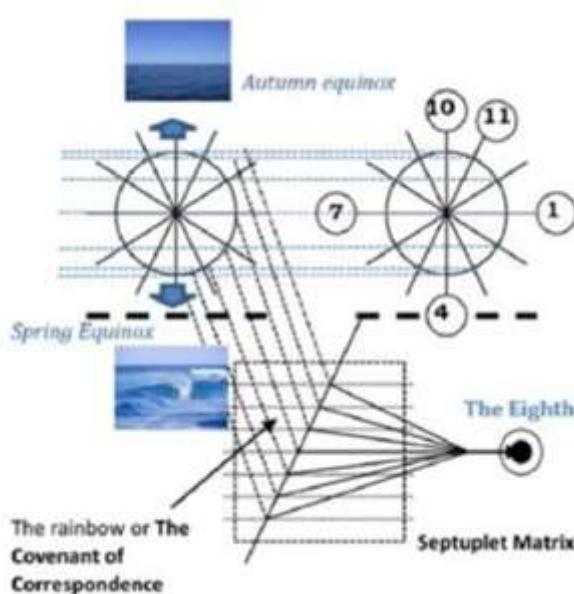
RIG VEDA : 1.164

Flooding – Infiltration – Recharging – Aquifer – re-flooding



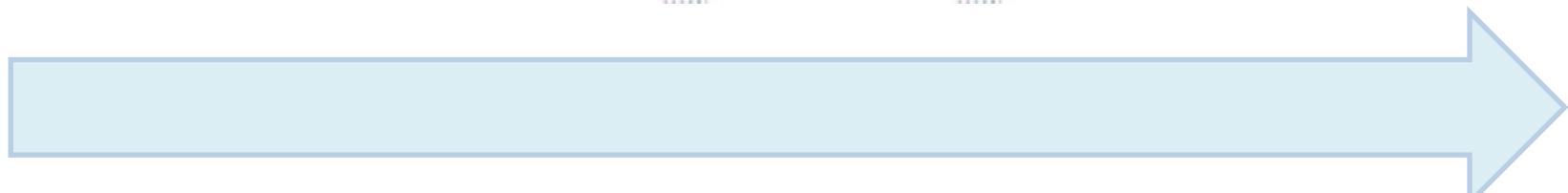
The depiction of a mirror as footfall:

The principle of recursion leads to the delineation of a construct, which means. ‘The *Microcosm and the Macrocosm are built on the same plan*

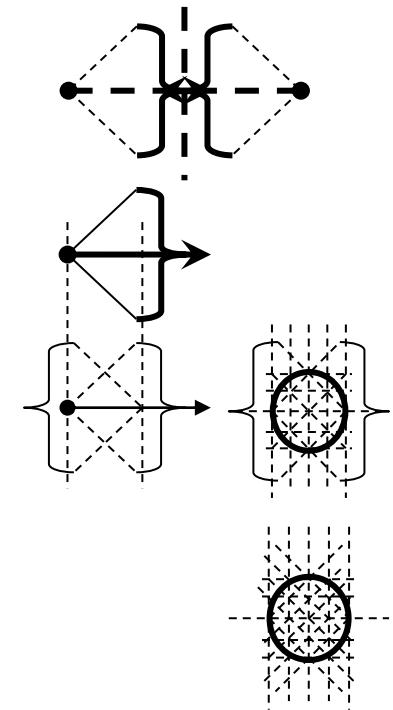
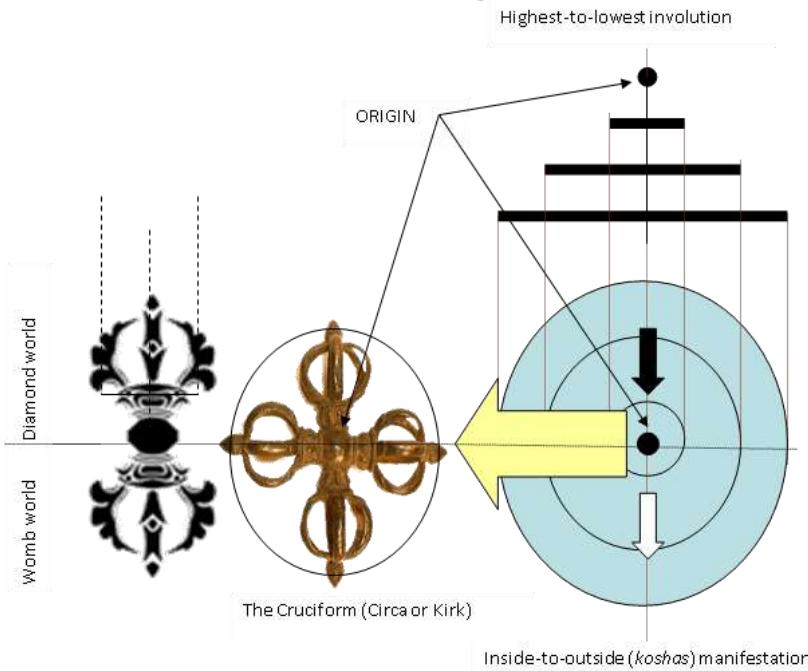


- *The microcosm and the macrocosm are built on the same plan. Just as the individual soul is encased in the living body, so is the universal Soul in the Living Prakriti [Nature] — the objective universe. Shivâ [i.e. Kâli] is embracing Shiva: this is not a fancy.*
- *This covering of the one [Soul] by the other [Nature] is analogous to the relation between an idea and the word expressing it: they are one and the same; and it is only by a mental abstraction that one can distinguish them. Thought is impossible without words. Therefore, in the beginning was the Word ..*

Swami Vivekananda
Almorah, Kurma (Kumaun) Himalayas 1890



The depiction of a mirror as footfall: *Chandelier – parable of the Solar Bee-hive*



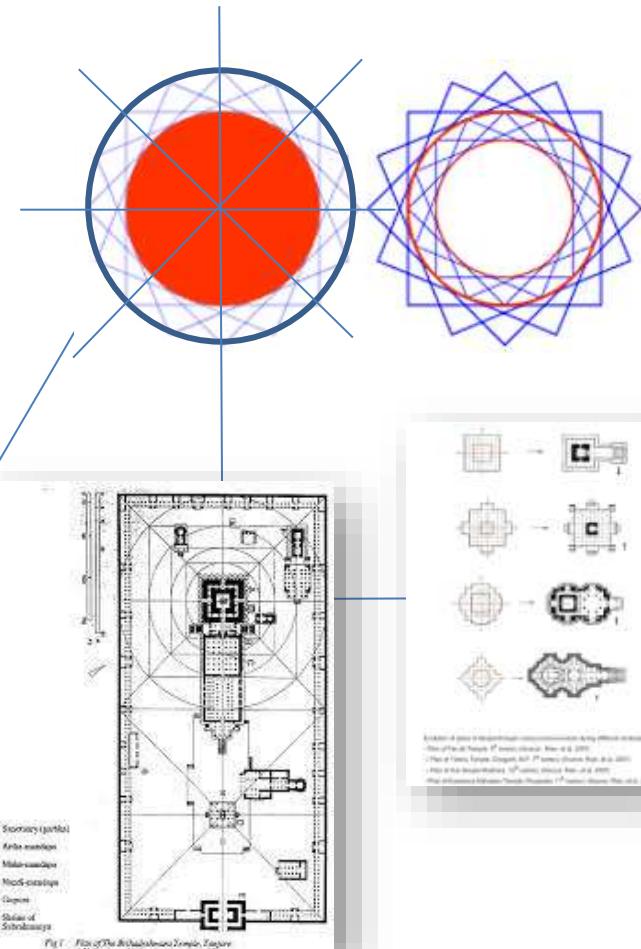
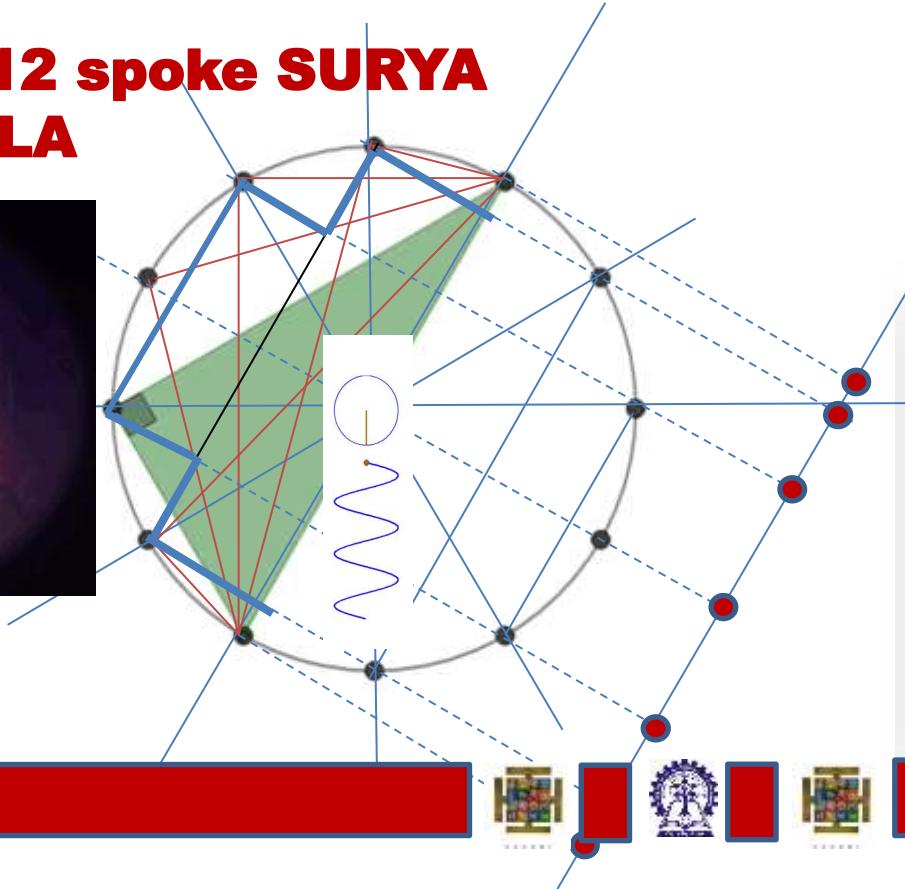
Total Internal Reflection



As per 16 spoke CHANDRA MANDALA

ALTARS & TEMPLES

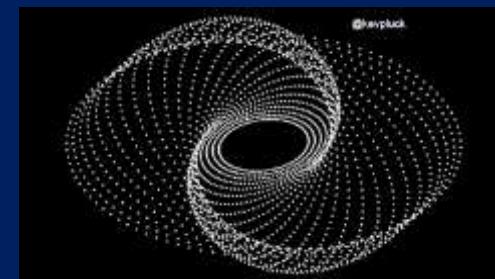
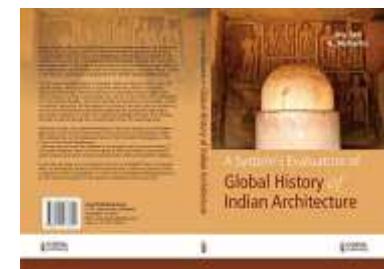
As per 12 spoke SURYA
MANDALA



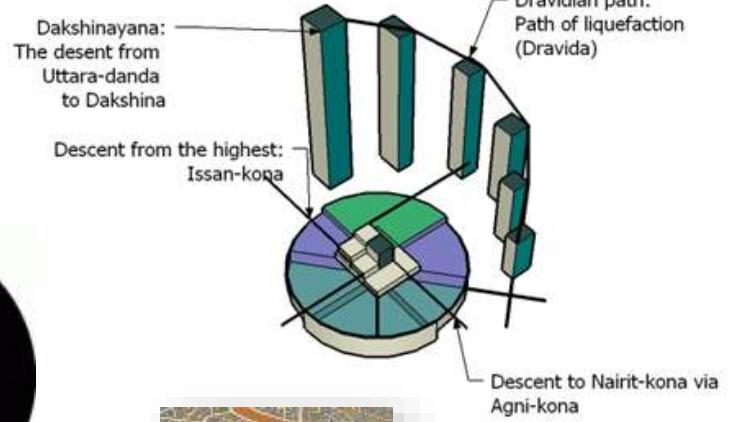
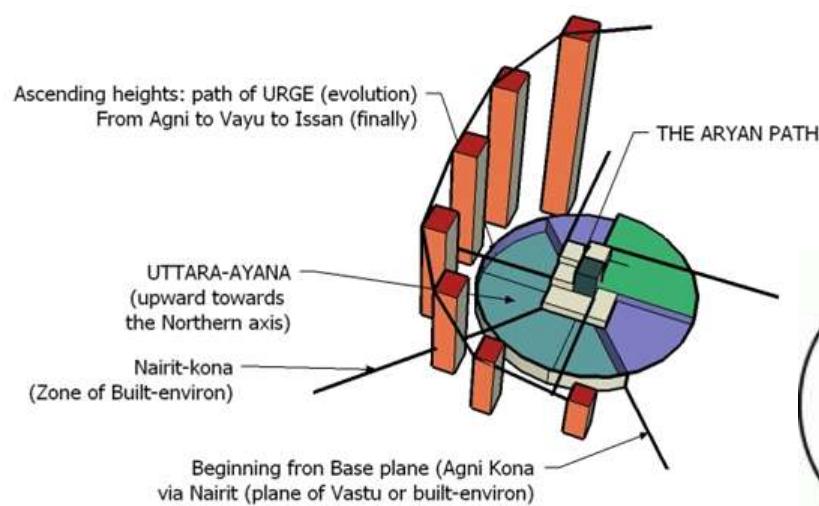
The sacred diagram called ‘The Mandala’: the plan at the physical level reflects the urges, the ladder of evolution for the human mind, facilitating the anthropic principle to reach that truth (sooth), its rhythm, in the vast (*Satyam Ritam Vrihat*)

- Strictly speaking, the word *Mandala* means ‘Circle’. It is generally represented as a complex pattern of drawing. Throughout ancient Asiatic civilizations like India, China and the ancient Near east (mainly Persia), *Mandala* has been depicted as an ideal concept of Order, both at the Universal

The Penguin Dictionary of Symbols
Paris, 1969



Unity of (Dakshina) Uttara and Dakshina (Purva) Ayana called ‘The Mandala’:



Sustainable Urban Planning in India



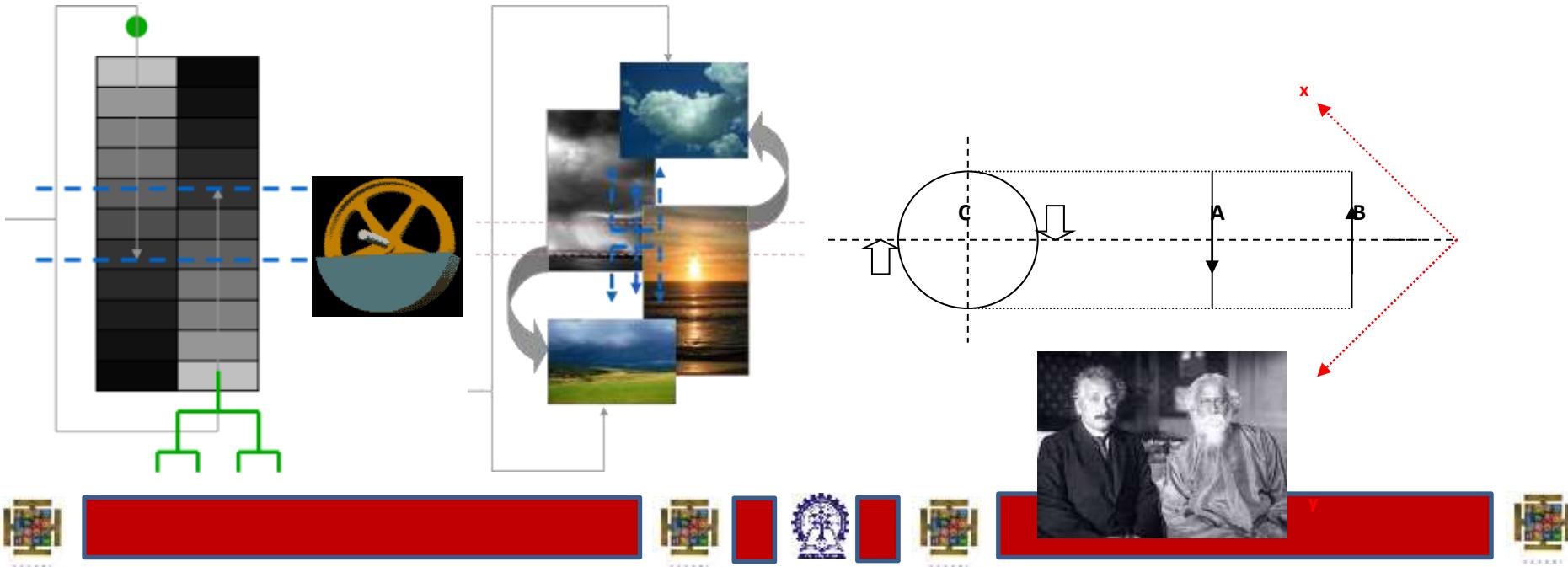
The Hierarchy of Minds:

The hierarchy of mind is based on the latent heat of evolution using the gradations of *pancha-bhutas*, *manas*, *buddhi* and *ahamkara* heading for the *Mahat* (**THE ANTHROPOIC PRINCIPLE**)

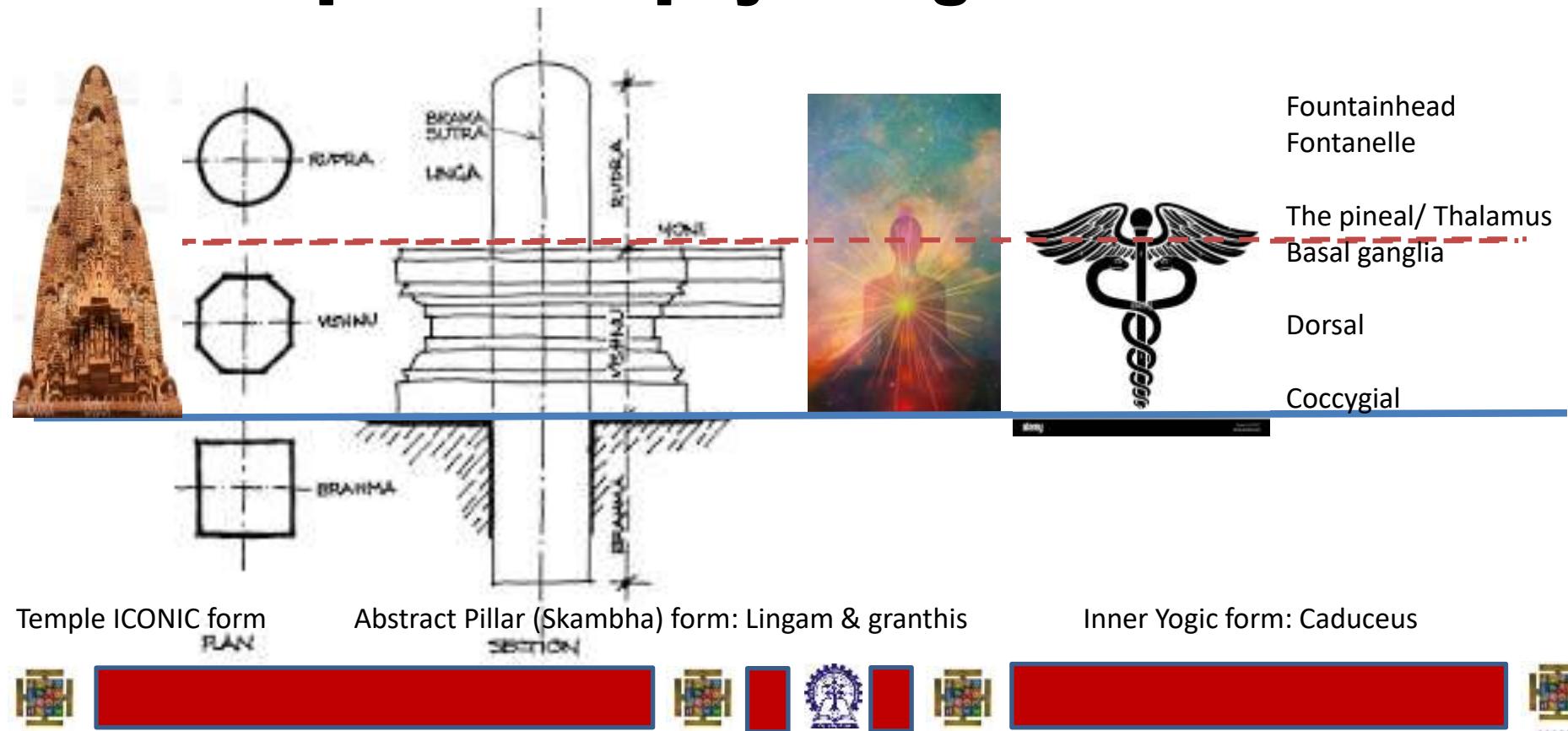
- Seed=TREE

Weather cycle

- Functions A and B as $y = f(x)$ appearing linear and not related but actually inter-related, inter-dependent and non-linear C



THE MICROCOsm : The deeper neuro-physiological scale



Ascending Hierarchy of Needs:

This is the principle of aeration and rarefaction corresponding to progression of mental waves, and representing an ascending Temple form: from Form to Formless

AIM OF STHAPATYA VASTU VIDYA

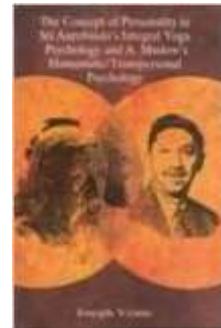
From the OUTER TEMPLE to the INNER TEMPLE: Reaching highest self-esteem and actualization of the self



Maslow's hierarchy of needs

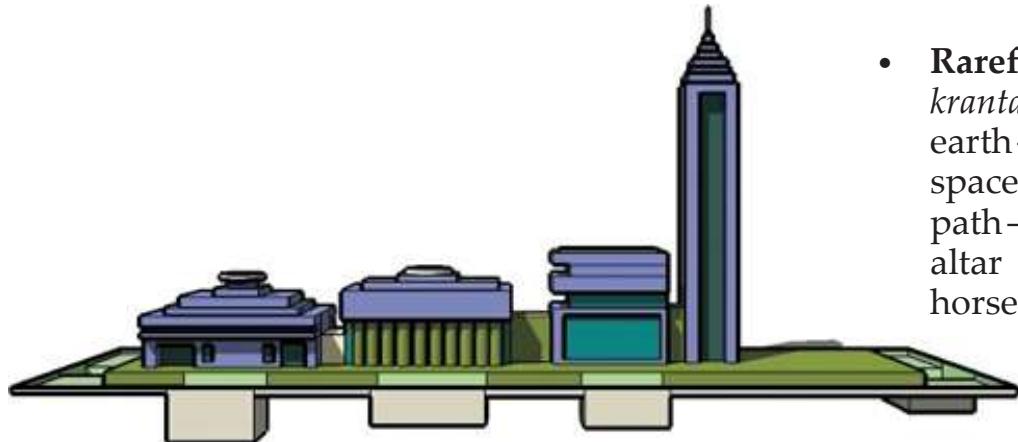
All these ratiocinations of logic, all these bundles of metaphysics, all these theologies and ceremonies may have been good in their own time, but let us try to make things simpler and bring about the golden days when every man will be a worshipper, and the Reality in every man will be the object of worship.

Swami Vivekananda: Practical Vedanta IV
Delivered in London, 18th November 1896



The principle of Fire-Aeration

(rarefaction or expansion of life-principle to that vast formless infinite) 1:
reaching the summit or AGNI-SIKHARA



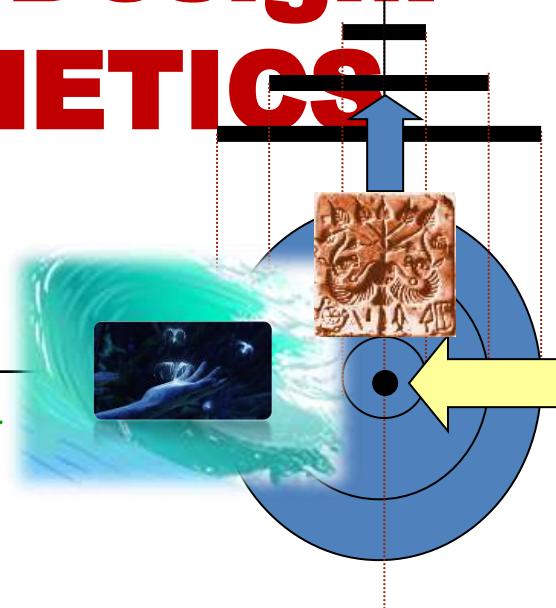
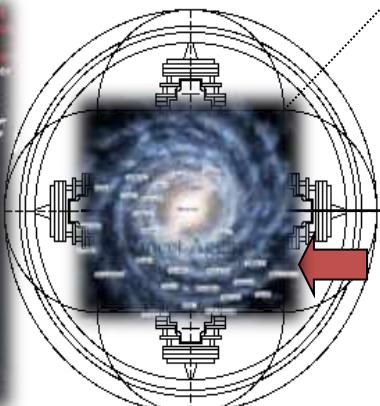
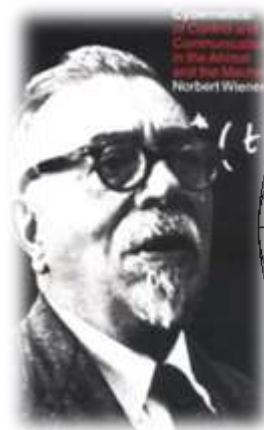
- Rarefaction by fire—'Arya' (principle of *Aswa-kranta* or *Uttarayana*): It is a movement from earth—to water—(through fire)—to air (life)—to space and beyond. This is *aswa-kranta* (the rising path—the *Yupa*, the deconstructive sacrificial altar depicted by the allegory of a galloping horse).

Shape grammar of North Indian form

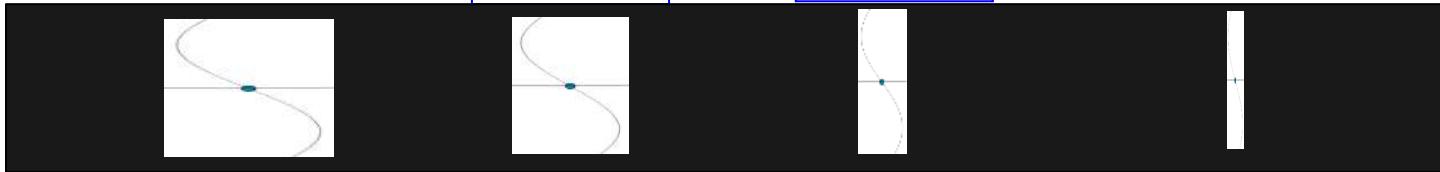
Note The ascending height and accentuation of built-form as one moves from periphery to core (axis line).



The graded evolution of Creative Design: CYBERNETICS



Physical
Cartesian Mental
Habitual Cognitive
Meditative Cosmologica
I
All-pervasive



Descending Hierarchy of Minds:

This is the principle of liquefaction and condensation corresponding to return of mental waves, and representing an descending Temple form: from Formless to Form

The principle of “Dripping”

(Condensation or contraction of the wave of life-principle) 2

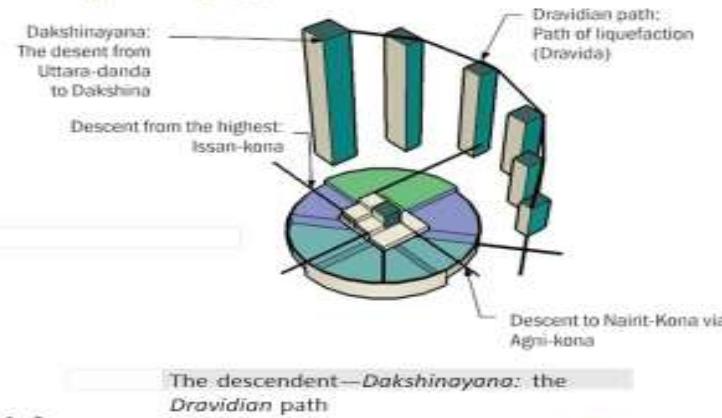
त्वमेव विद्या द्रविडःम् त्वमेव, त्वमेव सर्वम् मम देव देव ॥
Viswa-sara tantra: GURU GITA

The entire elixir of knowledge, the showers of immortality is yours, based on the FLOW of involution, descent (Dravibhuta or FORMATION) of tangible or formed spiritual Wealth at our end.

नूचं पुरा च सदैनं रथीणां जातस्य च जायंमानस्य च क्षाम् ।
सतश्च गोपा भवतश्च भूर्देवा अस्मि धारयन्द्रविणोदाम् ॥

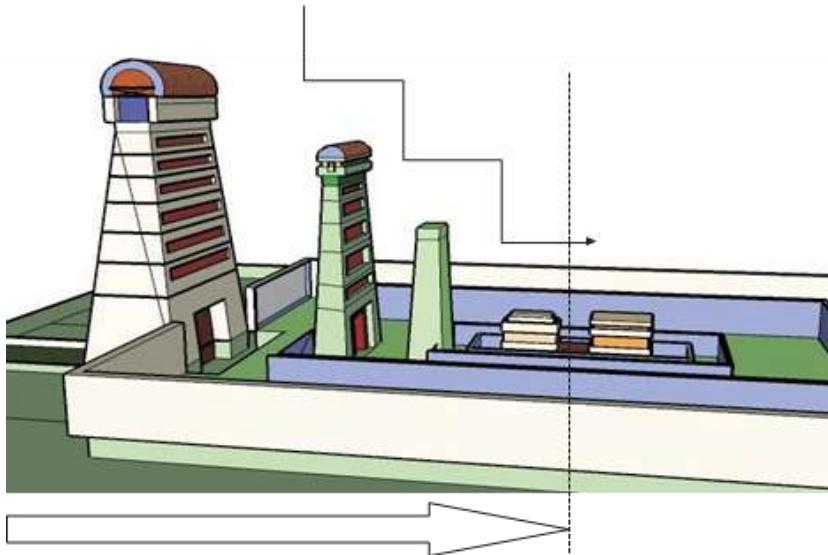
Rig Veda 1.96.7

In response to the ascent of the inner igneous principle, Agni, and its sacrifice, thereafter, the spiritual wealth is formed and poured from above into the receptacle here below.



The principle of Elixir-Dripping

(Condensation or formation of the wave of life-principle as formed wealth) 2:
Reaching the nadir or Go-PURAM

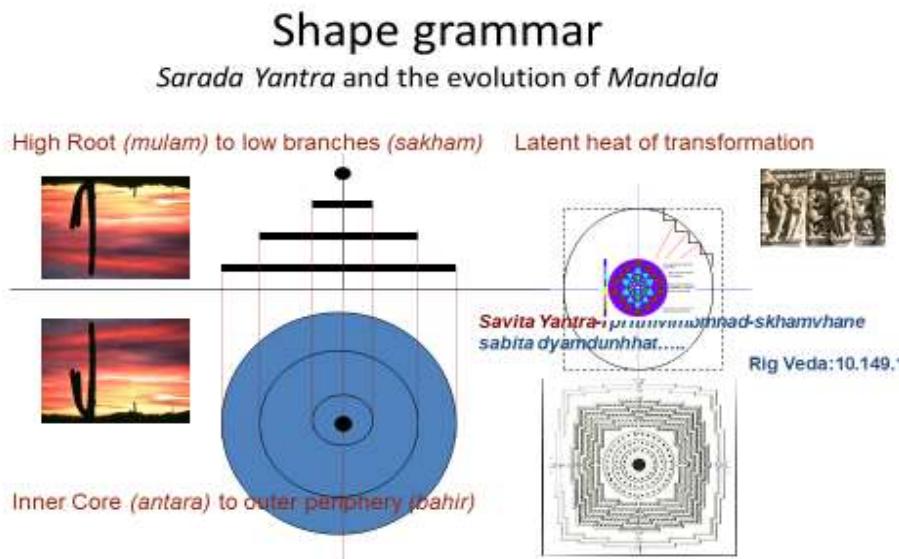


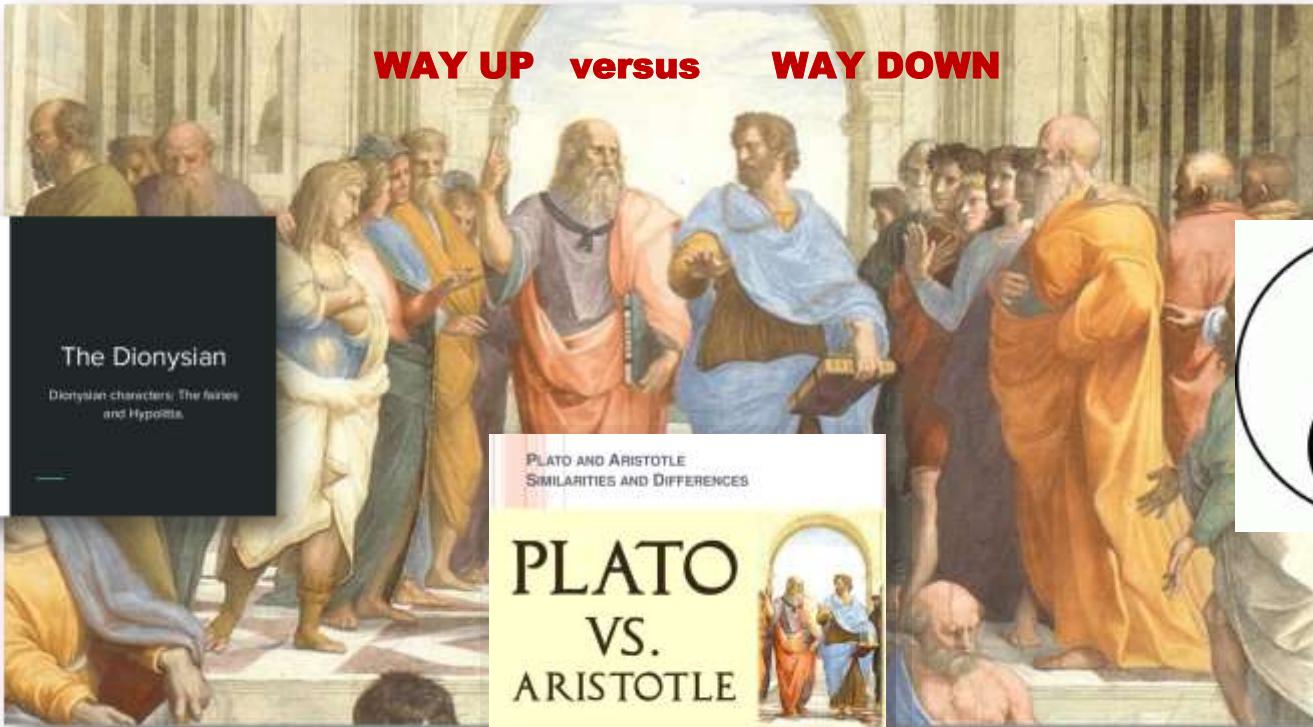
Note The descending height and concentration of built-form as one moves from periphery to core (axis line).

- Condensation by the life-giving waters—‘Dravida’ (principle of *Go-kranta* or *dakshinayana*): It is a movement from beyond—through space—into the creation of the five principles in the descendant (involution) and through ‘life giving waters’ of the symbolic Milky way, the allegorical cow-herds (*Soma* or *Go*). This is *Go* or *Vishnu-kranta* (the step-down path – *Ur-u-chrome* – the constructive image-making altar).
- ‘*Go*’ means LIGHT-rays, showers of immortal light. For instance: “abang-manasa-GO-charam” (THAT which can be expressed in words, by mind, and by Light).

The cross-over and two-way truth:

The Construct of the Complete Template. It is composed of the three, one, the measured Architectural Form and its environ (*Vastu*) based on, two, the ascent and return of the *Purusha* (the inner Force-field of human mind, the user) in, three, the vast circuits of energy spaces of fields over time (mandala).

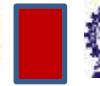
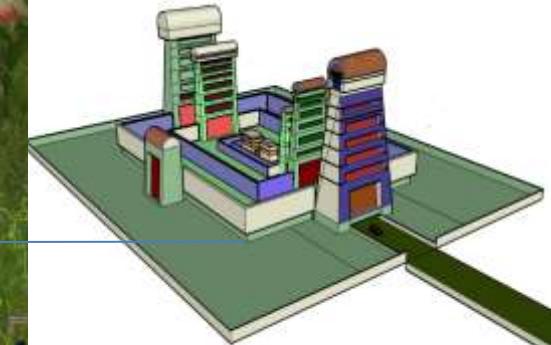
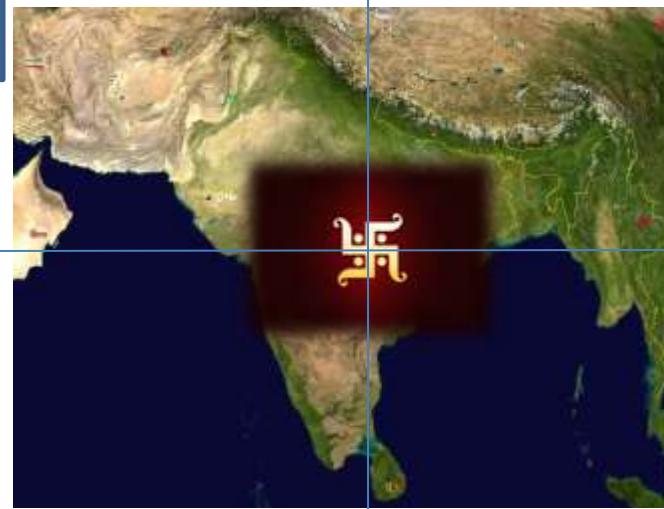
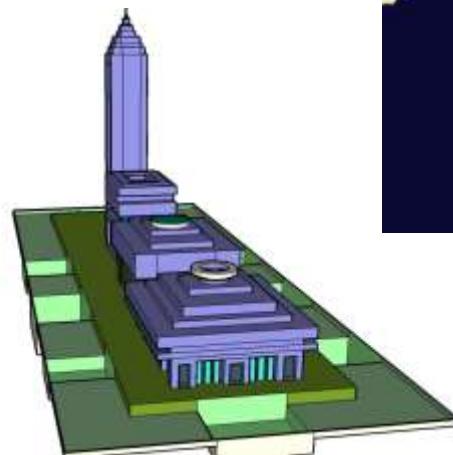




The cross-over and two-way truth:

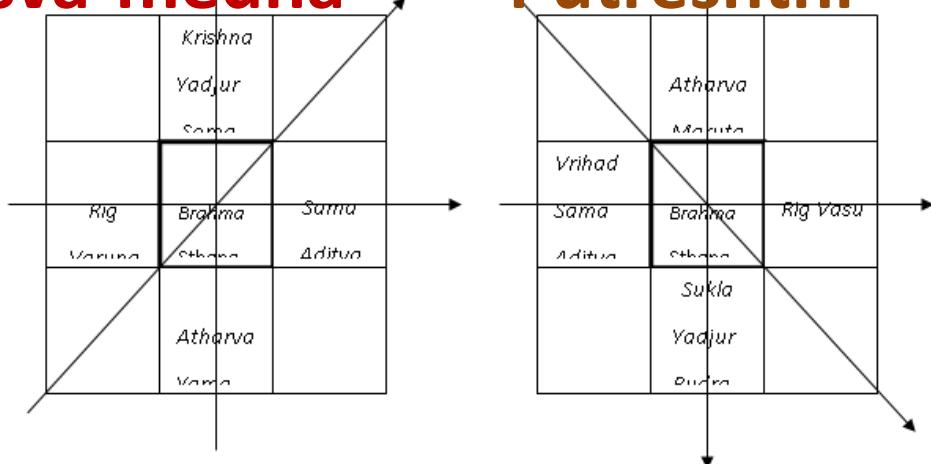
The geographical scape of India

- The Chatur-Vedi
- The Garden of ODON/ Adonis/
- Eden
- The Chahar-Bagh



The cross-over and two-way truth: Asva-medha

Putreshthi



https://occr.org.in/publication/Ramayana_Synopsis_Bro20.pdf

Vastu Purusha (Adhyatma)

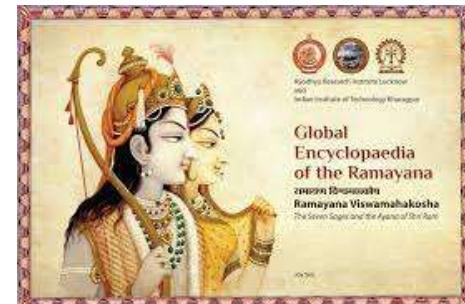
(Indwelling latent divinity)

Vasu Vidya (Rig Veda: 1.164.49)

Virat Purusha (Adhideva)

(All pervading divinity)

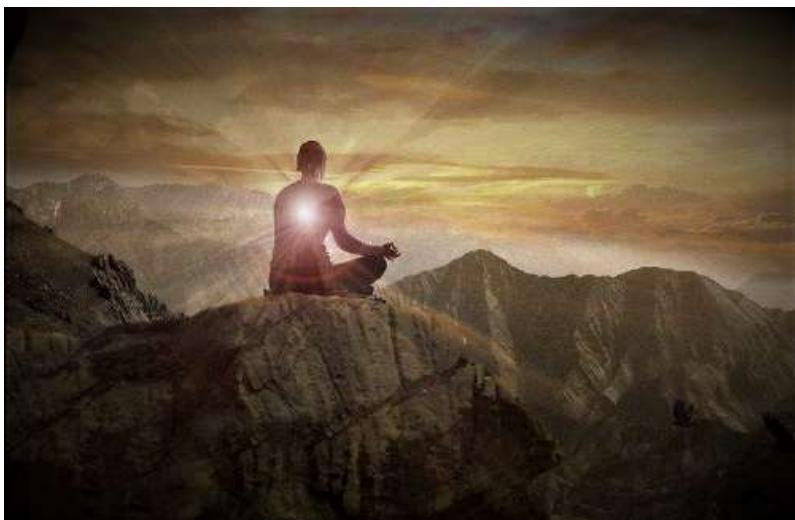
Madhu Vidya (Rig Veda: 1.116.12)



AIM OF STHAPATYA VASTU VIDYA

From the OUTER TEMPLE to the INNER TEMPLE:

Reaching highest self-esteem and actualization of the self

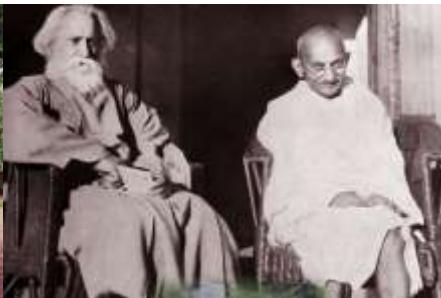
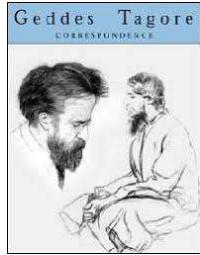


Maslow's hierarchy of needs

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 when every man will be a worshipper, and **the Reality in every man will be the object of worship.**

Swami Vivekananda: Practical Vedanta IV
Delivered in London, 18th November 1896





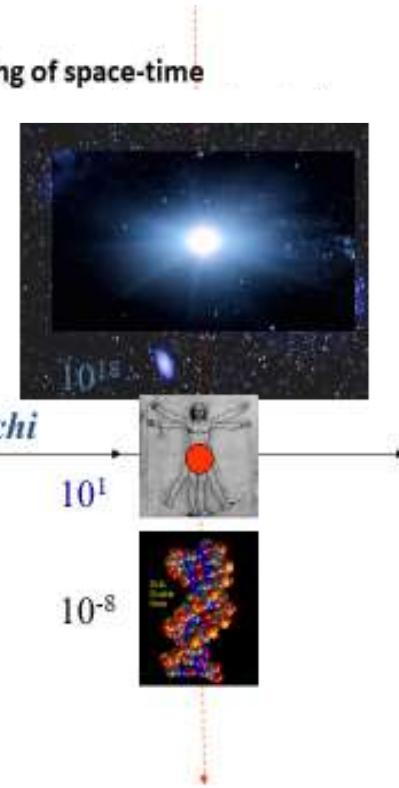
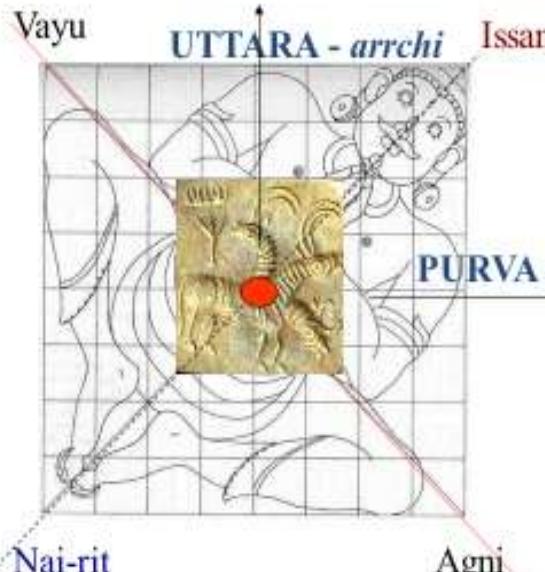
**Paradigm shift - “GREEN PRINCIPLES AS WAY OF LIFE”
“ONE CHANGES RATHER THAN CHANGING THE ENVIRONMENT”**
Ar Amos Rappaport



C

- The ‘*vastu-Purusha-Mandala*’ leads to evolution of various yantras or sacred glossary of geometrical forms used in different contexts of Indian design processes. It leads to respect of an economic scale in design variety and heterogeneity, but all resting on an ecosystem of interconnectedness and its deeper unity.

Built-environment – understanding of space-time
[*Kala- Kela – chanda*]



FOUNDATION IN THE APEX / ZENITH: RITASYA BUDHNA

ऋतस्य बुध्नं उषसामिष्ण्यन् वृषा मही रोदसी आ विवेश ।
मही भित्रस्य वरुणस्य माया चन्द्रेवं भानुं वि दधे पुरुत्रा ॥७॥

RIG VEDA 3.61.7

Realization CYCLIC TIME & Propagation of FUNCTIONAL SERIES (Individual) + (Collective)

FOUNDATION IN THE TAIL / NADIR : AHIR BUDHNA

शं नौ अज एकपाददेवो अस्तु शं नोऽहिर्बुध्न्यः । शं समुद्रः ।
शं नौ अपां नपात्पेरुरस्तु शं नः पृश्नेभवतु देवगौपा ॥१३॥

RIG VEDA 7.35.13

UPPER: RITASYA BUDHNA



LOWER: AHIR BUDHNA



Ladder of needs (Maslow's Hierarchy)

From the individual to the universal

Internal Design

INTEGRATION

External Design



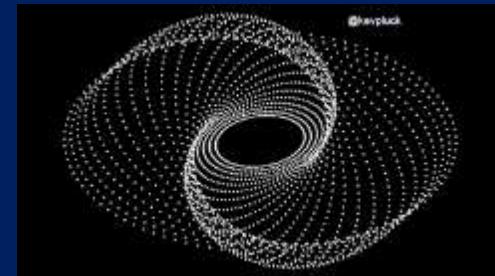
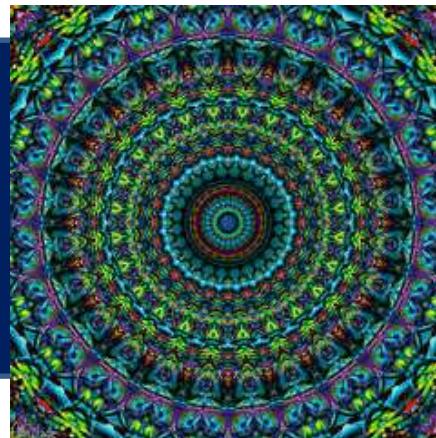


WHY THE TWO VASTS MEET?

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

SEVEN FOUNDATION PRINCIPLES OF VASTU VIDYA EXAMPLES



PART 4

Joy Sen

Professor

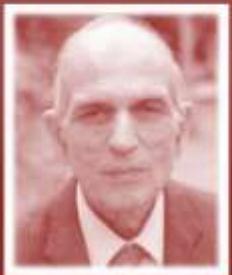
**Department of Architecture & Regional Planning
Indian Institute of Technology Kharagpur**



Jawahar kala Kendra

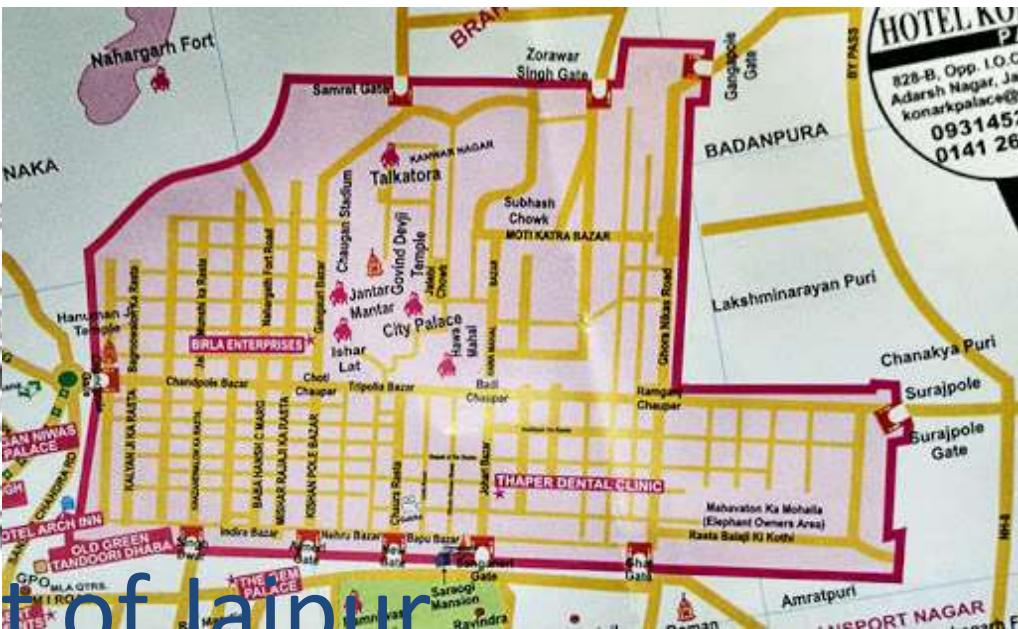
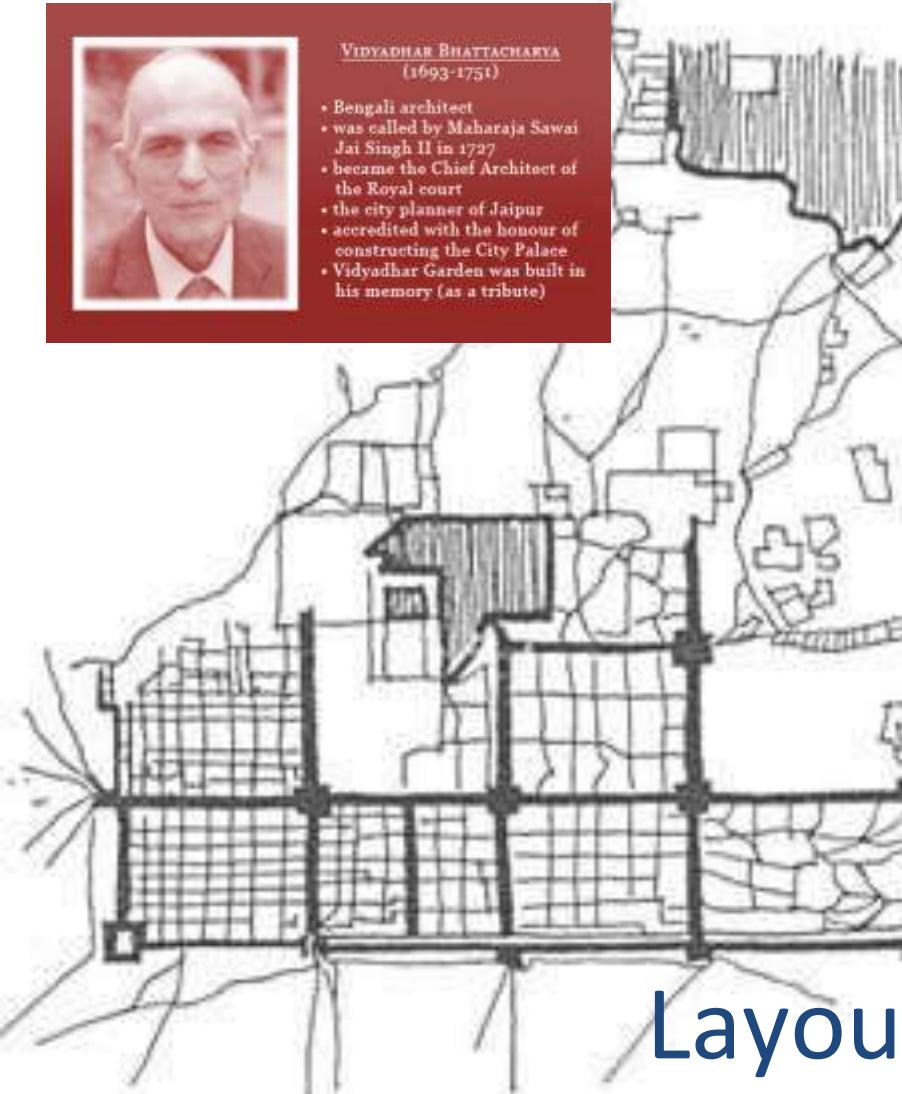
CHARLES CORREA





VIDYADHAR BHATTACHARYA
(1693-1751)

- Bengali architect
- was called by Maharaja Sawai Jai Singh II in 1727
- became the Chief Architect of the Royal court
- the city planner of Jaipur
- accredited with the honour of constructing the City Palace
- Vidyadhar Garden was built in his memory (as a tribute)



Layout of Jaipur

Vidyadhar Bhattacharya



United World College

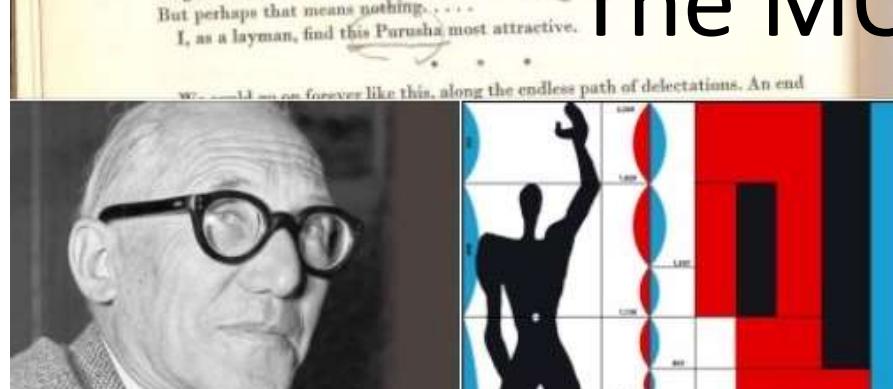
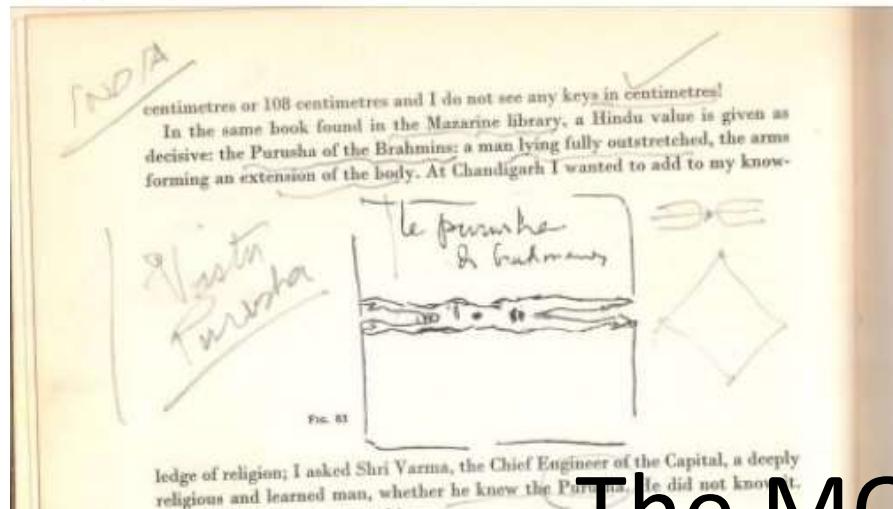
Christopher Beninger



MAHINDRA UNITED WORLD COLLEGE , PUNE, INDIA



In 1962: Forerunner of BAUHAUS with Marcel Breuer and Walter Gropius, LE CORBUSIER designed the Carpenter Center for the Visual Arts at Harvard University, Cambridge, Massachusetts after having the Indian experience at Chandigarh and that of the PURUSHA Mandala and the role of Nabhi (Nave) in Anthropometrics and the Fibonacci series. Here is BOOK 2, pg 196, MODULAR (MIT Press, 1958) penned by CORBUSIER who was deeply influenced by the Indian semantics and semiotics of the PURUSHA and the ORB (Mandala) around. SRI VERMA, Chief Engineer of Chandigarh then, introduced Corbusier to VASTU VIDYA.



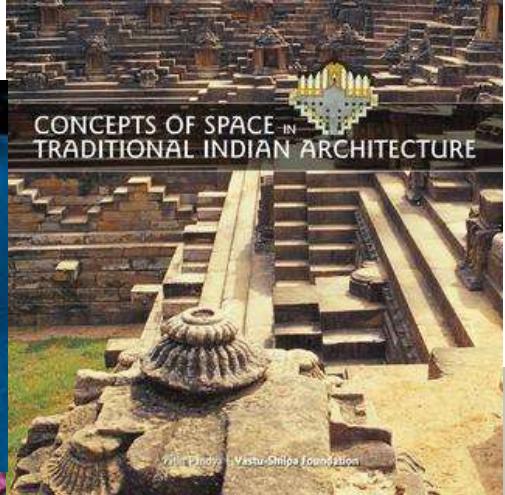
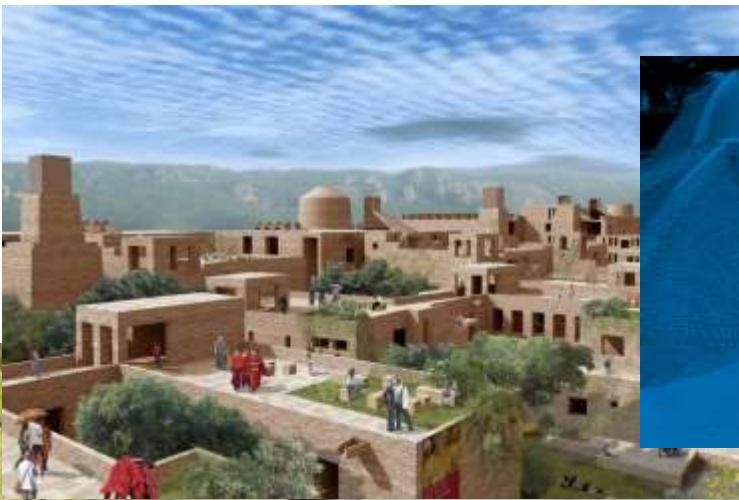
Shreyas Bharule, Patrick Christy and 21 others

7 Comments 2 Shares

The MODULER: Purusha

Le Corbusier





VASTU SHILPA FOUNDATION

Balkrishna V Doshi

VASTUSUTRA UPANISAD

The Essence of Form in Sacred Art

Boner - Sarma - Bäumer



सौंदर्यशास्त्र और निर्मित पर्यावरण विज्ञान Aesthetics & Built-Environmental Sciences

प्रदर्शन और सृजनात्मक कलाएँ Performing & Creative Sciences



"It is already becoming clearer that a chapter which has a consistent beautifying will have to have an Indian ending if it is not to end in the self-destruction of the human race... At this supremely dangerous moment in history, the only way of salvation for mankind is the Indian way."

- Dr. Arnold J. Toynbee, British Historian



In his book *On Art*, Dr. Arnold J. Toynbee placed an unswerving search to restore and lead the Indian art tradition to its true self by formulating a new style of art that can serve as a model for the world. He believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted. He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

Dr. Arnold J. Toynbee's vision of Indian art is to create a new style of art that can serve as a model for the world. He believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted. He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.



He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted. He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

The ancient artist had deep feeling of being himself an integrated part of the cosmos and participating in all its categories and elements, freely acquired by innumerable generations in unequal centuries of meditative experience.

- Alice Bömer
Asian Art Historian



He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted. He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

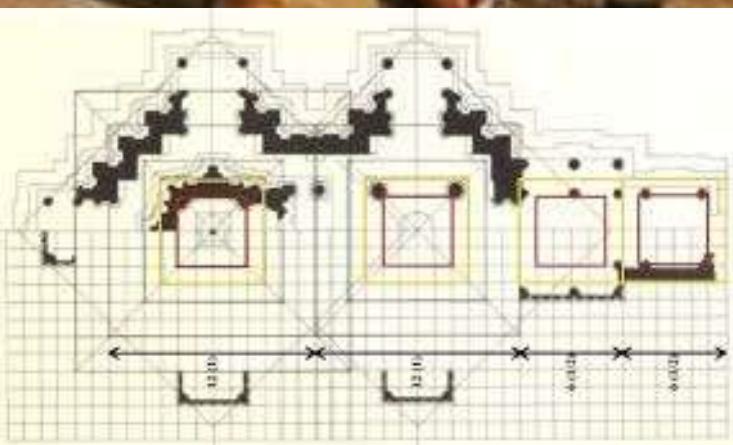
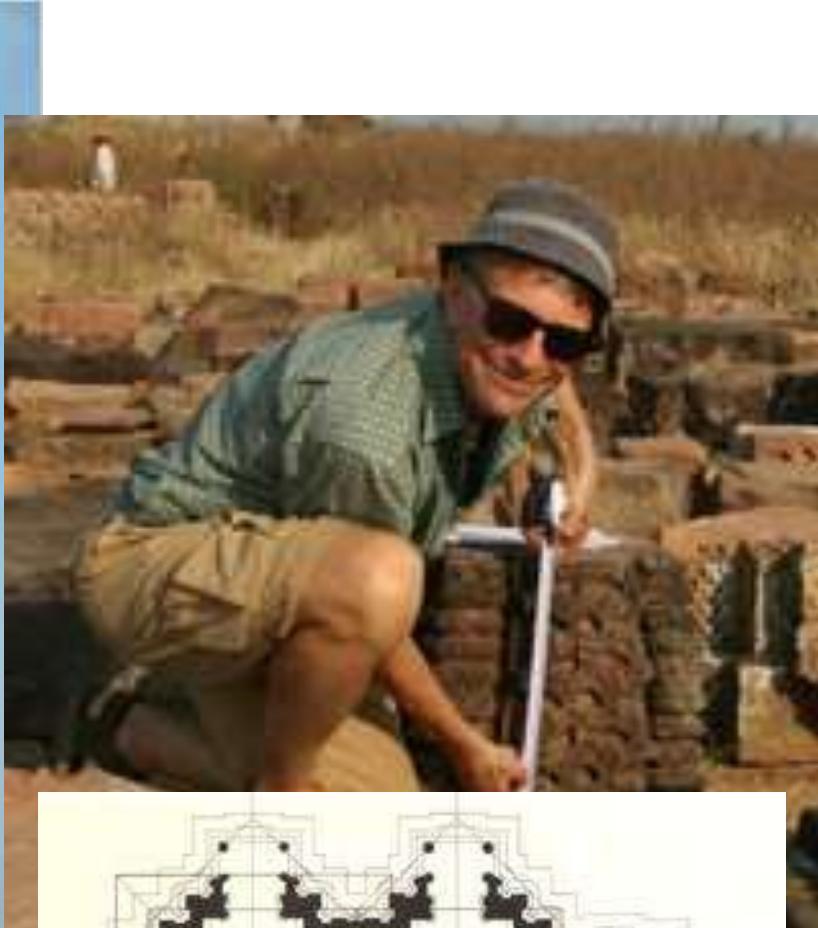
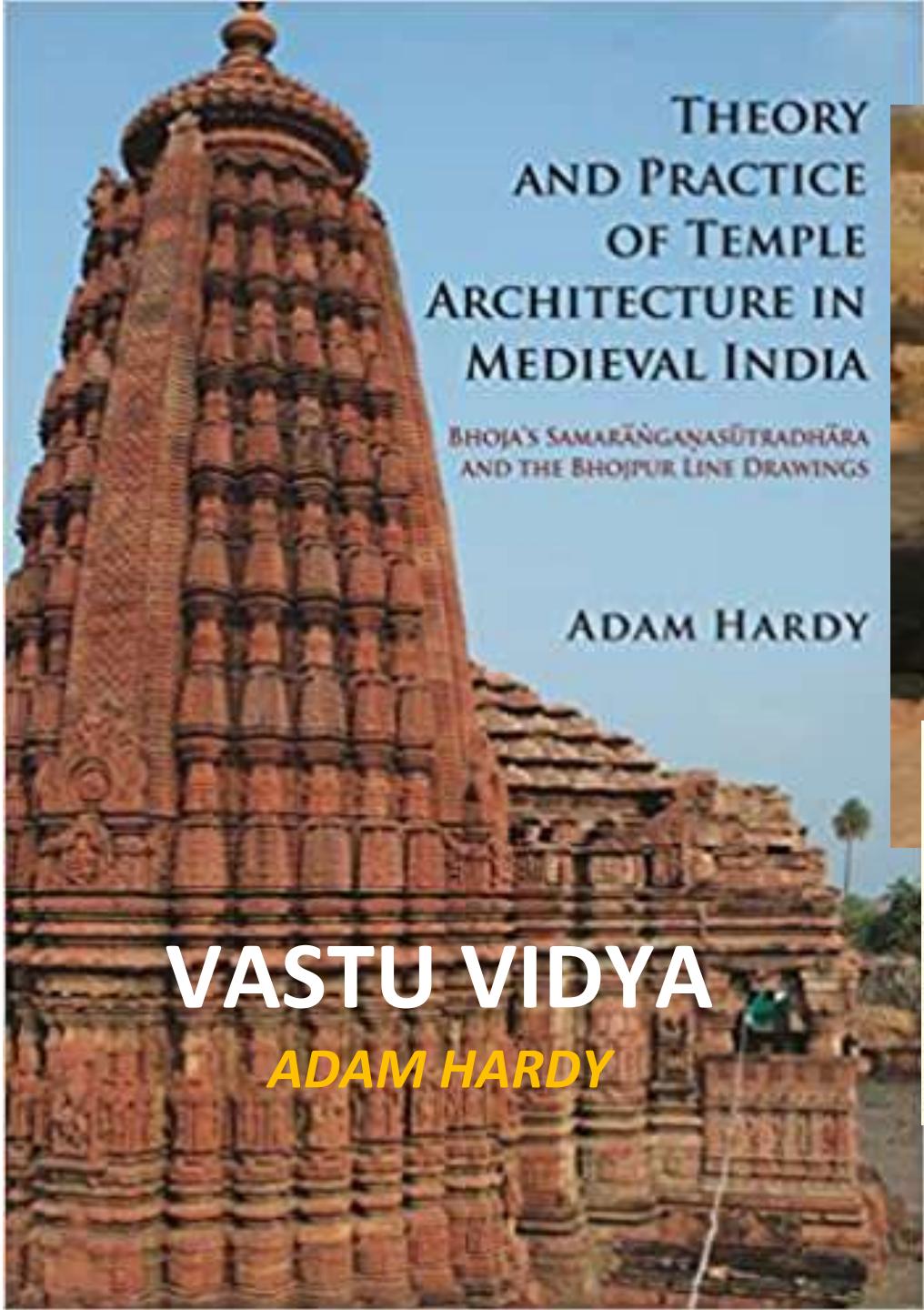


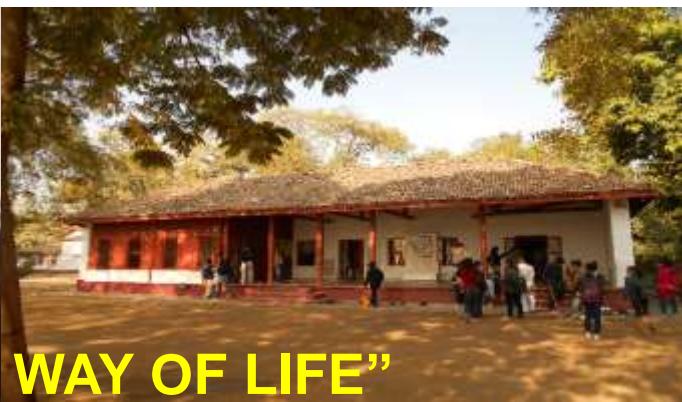
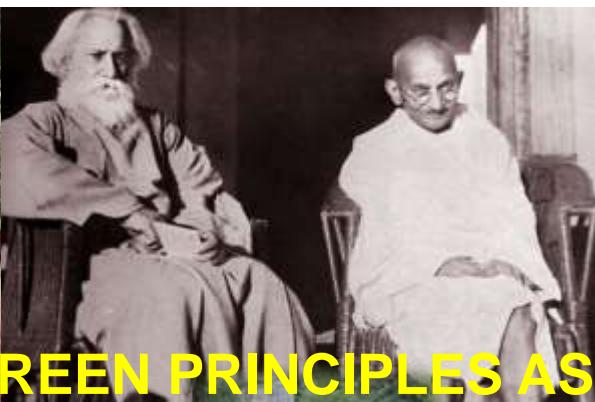
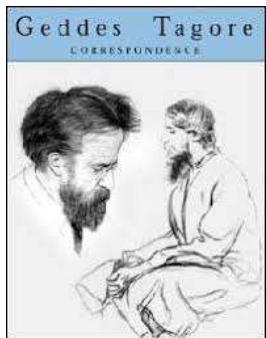
He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

He also believed that the Indian art tradition is the most important in the world, and that it must be preserved and promoted.

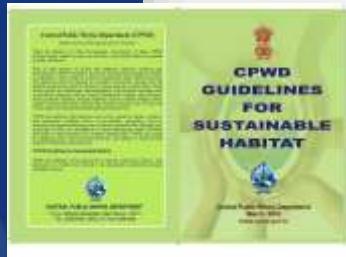




Paradigm shift – “GREEN PRINCIPLES AS WAY OF LIFE”
“ONE CHANGES RATHER THAN CHANGING THE ENVIRONMENT”
Ar Amos Rappaport



Sustainable Habitat



teri THE ENERGY AND
RESOURCES INSTITUTE
Creating innovative solutions for a sustainable future

Sustainable Buildings
Sustainable Habitat Program

WEB-S Unlocking Sustainability 2020



National Mission On Sustainable Habitat

USHD

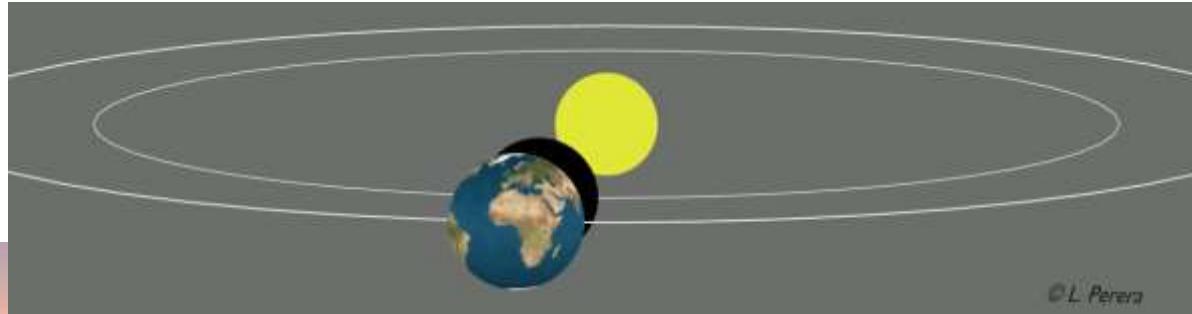
stands for

Universal Sustainable Habitat Development

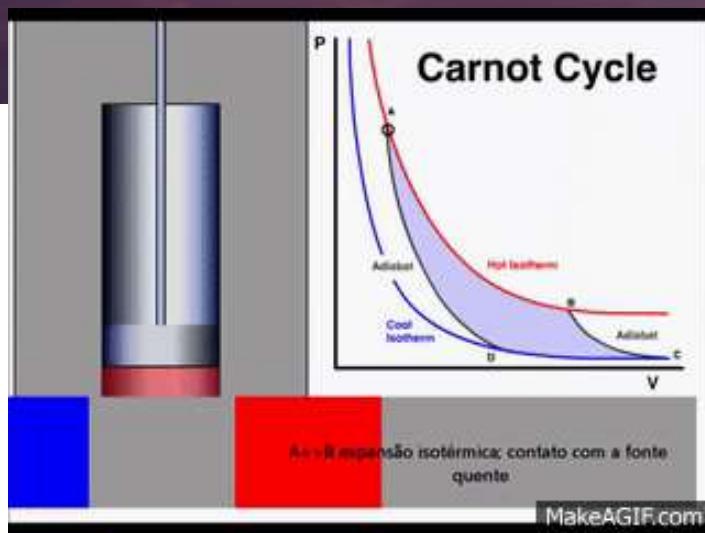


Abbreviations.com

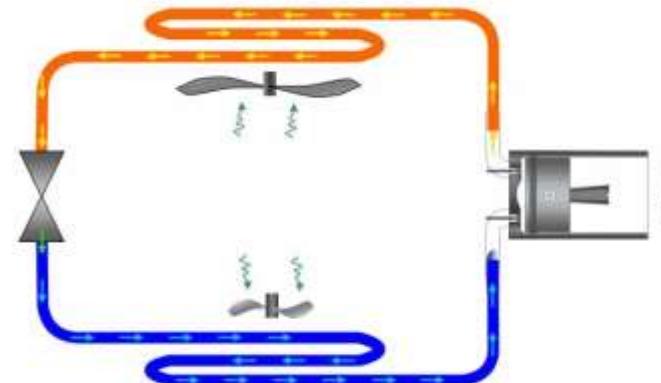




O.L. Perera

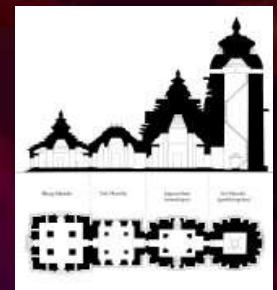


MakeAGIF.com



THE COMPLETE MOVEMENT

The Temple of all Temples



JOY SEN | PROFESSOR | INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR