Indian Philosophy and The Universe

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Indian Philosophy

• Philosophy is a fundamental nature of
  » knowledge,
  » Reality and
  » Existence

• Originated in the Indian sub-continent, includes:
  – Hindu Philosophy
  – Buddhist Philosophy
  – Jain Philosophy

• It is unique in its applications of analytical rigor to metaphysical/ supernatural/ philosophical problems

• It goes into very precise detail about:
  – the nature of reality,
  – structure and function of Human consciousness, and
  – how the relationship between the two have important implications for human salvation, i.e., MOKSH
Indian Philosophy

• Significance lies in the eternal principles of human frailty, strength, beauty and destiny.

• Organic growth, which is like a tree constantly producing more branches from the same roots, has turned Hinduism into a religion and a philosophy in which there is room for everyone to have their own place.
Questions Addressed in Indian Philosophy

• Who am I? Where have I come from? Why have I come?
• What is the essential nature of my being (Gyaan – self realisation)?
• What is my relationship with the manifold universe and with other human beings?
• What is truth and conclusions on questions of truth?
• What is the relationship between the centre of consciousness and the objects of the world? (Bhakti - prayer)
• What are the guidelines for action (Karma - deed) as long as one is in a physical body?
• Does one live after death (Moksha – Eternal Journey)?
Indian Philosophy – Across HUMAN

• Each person has its own character or talents.
• For a person with a:

<table>
<thead>
<tr>
<th>Personality</th>
<th>Desired Path</th>
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<tbody>
<tr>
<td>Philosophical Bent</td>
<td>KNOWLEDGE (Gyan)</td>
</tr>
<tr>
<td>Practical Bent</td>
<td>DEEDS (Karma)</td>
</tr>
<tr>
<td>Disciplined Person</td>
<td>SPIRITUAL CONTROL (Yoga)</td>
</tr>
<tr>
<td>Religious Person</td>
<td>WORSHIP (Bhakti)</td>
</tr>
</tbody>
</table>

• Life is divided into 4 stages called ASHRAM:

<table>
<thead>
<tr>
<th>Stages</th>
<th>Activity Defined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brahmcharya</td>
<td>Discipline &amp; Education</td>
</tr>
<tr>
<td>Grahsthyya</td>
<td>Parenthood &amp; Active Work</td>
</tr>
<tr>
<td>Vanyaprassthya</td>
<td>Stage of retreat in which worldly ties are loosened, Middle Age</td>
</tr>
<tr>
<td>Sanyasa Ashram</td>
<td>Life of Hermit, Old Age</td>
</tr>
</tbody>
</table>
Evolution of Caste

- Every person has an individual place & Tasks to fulfil in Society:

<table>
<thead>
<tr>
<th>Castes</th>
<th>Tasks Responsible for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brahmin</td>
<td>Priests</td>
</tr>
<tr>
<td>Kshtriya</td>
<td>Worriers</td>
</tr>
<tr>
<td>Vaishya</td>
<td>Merchants</td>
</tr>
<tr>
<td>Shudra</td>
<td>Labourers</td>
</tr>
</tbody>
</table>
## Fundamental Difference in Western & Indian Philosophy

<table>
<thead>
<tr>
<th>Western Philosophy</th>
<th>Indian Philosophy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual Pursuit</td>
<td>Essence of Truth</td>
</tr>
<tr>
<td>Disciplinary Approach</td>
<td>Holistic Approach</td>
</tr>
<tr>
<td>Competitive</td>
<td>Comprehensive</td>
</tr>
<tr>
<td>Practical Orientation</td>
<td>Theory oriented Practical</td>
</tr>
<tr>
<td>Religion is independent to culture</td>
<td>Religion derived culture</td>
</tr>
<tr>
<td>Linear (Birth &amp; Death)</td>
<td>Cyclic (Birth, Re-birth)</td>
</tr>
</tbody>
</table>
The Universe - Brahmand

- **Aham brahmasmi**: An expression of I am ness; I am in all and all are in me, it is a state of supreme eternal Brahma, the state of oneness.

- **Tat tvamasi**: expression of the relationship between the individual and the Absolute. "He that is the Essence of your soul, He is the Truth, He is the Self, thou art That”.

- **Praghanam Brahman**: Prajnana means awareness, consciousness, which is pervading the subtlest texture of the cosmos and is present and active everywhere, at all the places and all the time. It energizes the physical, emotional and spiritual realms.

- **Sarvam Khalu Idam Brahman**: All this multiplicity in the form of universe or creation is essentially Brahman (Supreme Self or Pure I AM Consciousness).

  **Universe, therefore, is a formation in Brahman or Pure I AM Consciousness.**
The Universe

Sarvam Khalu Idam Bramh
(Pure Knowledge is not a **means** to an end but the end itself)

The Universe is Everything:
• Both living & inanimate
• Both Atoms & Galaxies

• **Spiritual Things & Material (if exists)**
• **Heaven & Hell (If exist)**
The Universe: Totality of All Things

- **Totality of All Things** - which can be experienced through:
  - Sense - Organs (PERCEPTION)
  - Reason (CONCEPTION)
  - More directly by transcendental KNOWLEDGE

- **Non-Material entities**:
  - Space
  - Time
  - Ether
  - Consciousness – Realisation

- Universe is Expanding-Law of Hubble – i.e., 1) Balloon has dots, expands, distance increases, BUT the center of Universe remains; 2) There exists Parallel Universe
The Universe: Theoretical Query

Characteristics of a ‘Thing’ is **not** Absolutely ONE, or Absolutely MANY:

a) just because it possesses an unbroken contour or identity of its material;
   i. i.e., a lump of garden soil is one or many?

b) One’s point of view – common sense
   i. One always changes

The only thing which could be absolutely ‘ONE’ is the whole ‘REALITY’ itself.
The Universe: Fundamental Doctrines

1. **Idealism**: ‘All Reality is Mental’; Nothing exists but state of Consciousness.
   (Philosophers- Plato, Leibnitz, Berkeley, Hume, Kant, Hegel & Scientists- Sir, Eddington, Sir James Jeans, Hermann Weyl, Ernst Mach, Raymond Poincare, etc. who supports)

2. **Realism**: ‘Independence of any relation to the experience of a subject’, What exists, exists equally whether it is experienced or not.
   – In consideration with
     • Substance - Element
     • Quality - Value
     • Change - Variation

(Philosophers Democritus, Aristotle, Rene Descartes, Bertrand Russell & scientists Newton, Bohr, Albert Einstein, Hisenberg, Whittaker, Reichenbach, Joad, Sir Oliver Lodge, Prof. Henry Margenau support)
Hinduism

- It is more than a Religion
- It is a way of Life that has developed over approximately 5 Millennia
- It is rich & multi-cultured history
- It has made the structure of MYTHICAL and PHILOSOPHICAL principles into a highly differentiated maze
- Practically impossible to get the Total knowledge of this.

(Ref. Eva Rudy Janse, The Book on Hindu Imagery)

- Ghnanm Vighyana Sahitam

Einstein quotes: Science without Religion is Deaf & Religion without Science is Blind.

Eye is a Vision: Microscope, Telescopes equates Spirituality & Religion
<table>
<thead>
<tr>
<th>Period</th>
<th>Event</th>
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<tbody>
<tr>
<td>Vedic Period</td>
<td>Vedas, Upanishads</td>
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<tr>
<td>Pre-Epic Period</td>
<td>Bhagavad Gita</td>
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<tr>
<td>Epic Period</td>
<td></td>
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<td>Common Era</td>
<td></td>
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<td>Medieval Renaissance</td>
<td>Buddhism, Vedanta Philosophy</td>
</tr>
<tr>
<td>Modern Period</td>
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</table>

The Evolution of Hinduism
Outline of Indian Philosophy

• Vedic Period (2500 B.C. – 600 B.C.)
• Epic Period (600 B.C. – 200 A.D.)
• Sutra Period (200 A.D. – 600 A.D.)
• Scholarly Period (600 A.D. – 1700 A.D.)
• The Modern Period (1700 – present)

• Composed in Sanskrit beginning as early as 1,750 – 1,500 BCE
The Vedas
What are the Vedas?

- **4 Scriptures**: brought knowledge and wisdom to us.
- Those are: Rig, Yajur, Sama, and Atharva Veda.
- It holds the key to Spiritual wisdom and many more subjects within them. For example:
  - Art
  - Literature
  - Space Science
  - Technology
  - Magic
  - Health
  - Music
  - Weaponry
  - Logic
  - Hypnotism
  - Medicine
  - and more.
The Vedic Heritage - Philosophy

Vedas are the most ancient scriptures, communicated from 4000 - 1500 B.C.

<table>
<thead>
<tr>
<th>Veda</th>
<th>Philosophy</th>
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</table>
| Rig Veda     | • Atma, Parmatma, Creation, Genesis, Death, Rebirth, Liberation  
• A collection of poetic hymns invoking and glorifying many gods and goddesses which are personifications of different aspects of nature. Agni, Vayu, Varuna, etc. Highly symbolic language with metaphysical/philosophical ramifications. |
| Yajur Veda   | • Sacrifices, Mantra, Bhakti  
• Mantras used for sacrificial yagnas or extended rituals |
| Sam Veda     | • Hymns from Rig Veda, Karma Kand, Rituals  
• Has mantras from Rig Veda but these follow certain rules of prosody and tone for accuracy of effect. Relates to sound and its effects on the human mind and body. |
| Atharva Veda | • Prayers, Magic Chants, Philosophy, Meditation  
• The mantras here deal with the ordinary world and acquisition of material gains. |
Vedic Knowledge as an Inverted Tree

*Bramhan* - God
Non-Dual Reality

4 Vedas

Vedic literature
Visualisation of Vedic Impacts

5 Natural Elements: Water, Fire, Air, Earth & Atmosphere

Resources are for Everyone, leave for Future Generation – Ishavasyamidam Sarvam

- Bhrugu Sanhita: 10,000 yrs before
- Minuteness in 2 Celestial Age:
  - 12 Rashi
  - 27 Nakshtra
  - 4 Charan
  - 1/2 Charan
  - i.e., $12 \times 27 \times 4 \times \frac{1}{2}$ is the Probability of Human taking birth
Brahman - “to expand”

- Fundamental Principle of the universe. (*Kena Upanishad IV and V*)

- Reality in all, and all things are in Brahman. (*Svetasvatara Upanishad, IV. 2–4*)

- State of non-duality. (*Brhadaranyaka Upanishad, IV.v.14–15*)

- Ineffable/ inaccessible. (*Kena Upanishad, 1.5-9*)
• Vedic literature is divided into four chronological stages –
  – Samhita consists of all the Vedic mantras.
  – Brahmana is the commentary on the meanings of the mantras.
  – Aranyaka gives methods for the training of the mind for higher attainment for aspirants to a spiritual life.
  – Upanisads – 108 prominent Upanisads, 11 of which are considered prominent. Veda means “knowledge” and Vedanta means “the end of knowledge”.

• This set of Vedic literature – a gigantic compilation of texts generated by unknown sages – is the fertile ground from which have sprouted all the different systems of Indian philosophy.

• There are orthodox and heterodox systems of Indian philosophy.
  – Orthodox ones are: Nyaya, Vaisesika, Samkhya, Yoga, Mimamsa and Vedanta.
  – Heterodox (unorthodox) systems are Jain, Carvaka and Buddhism.
Scripts: 18 Puranas

• It talks about: ‘Always a birth of Every Thing’ – Scope for Development – (Radio wave, x-ray, microwave are talked)
• 4 are important – Vishnu, Garud, Vayu, Brahmand Puran
• i.e., Jambudwip – Island with specific species of plants, herbs, etc
• Devi Bhagwat: explains the varied Geological Features of Planets (Jupiter, Saturn, Venus)
• Sun Temple, Jantar Mantar gives micro calculation of TIME based on the movement of Planets
• Panchangs are prepared based on Astronomy (Distance of Planets)
Anti-Matter

• Anti-matter is exactly the opposite of normal matter.
• An anti-matter atom would consist of a positron, an anti-proton, and an anti-neutron.
• In theory this means that there is a parallel universe.
• This parallel universe could be the spiritual world.
Two Theories in Astronomy: Big Bang & Steady State Theory

The universe originated billions of years ago in an explosion from a single point of nearly infinite energy density – Big Bang Theory.

On 6th October, 1923, Cosmic Age (1/10*43) parts we have gone back.

Bhrugu Rushi – 10,000 m yrs before mentioned about time: Ansh, Kala, Vikala: Degree, Min & Second.

In Sanskrut Big Bang mentioned in Ratri Sukta; Purush Sukta, a mention of How Universe Begun, Nasidip Sukta – What happened before Big Bang.

Super-sensory Knowledge – not a science but is a consciousness. i.e. a spoonful of Tears – is a water. But of Happiness or Sorrow?

The universe has always existed and has always been expanding with hydrogen being created continuously – Steady State Theory (Now it is Over).

13.7 Million Years – Creation of Universe.
The **Trimurti** (three forms) represent Brahman manifested in the processes of:

**creation, preservation, and dissolution** of the cosmos.

(In Purana – Composed during Gupta Period – 320-540 CE)
Upanishad

Upa- (near), ni- (down), sad (to sit): sitting near the teacher
The *Upanishads* teach that all life forms move through repeated cycles of birth, death, and rebirth, until final liberation from this cycle, **MOKSHA**.

Stage of

*Sarvam Khalu Idam*  
*Brahman*
The Upanishads

• Composed between 800-500 BCE by various rishis (seers)
• The Upanishads are the greatest source of Indian philosophical thought.
• Added as the final sections of the divisions of Vedas. (Vedanta = end of the vedas)
• Upanishads are classified as sruti (“that which is heard”) and are authoritative.
• Upanishads are Philosophical commentary on the early portions of the Vedas, and it is grounded in the practical experiences of the rishis.
Six Primary Concepts in the *Upanishads*

- **Brahman**
- **Atman**
- **Karma**
- **Samsara**
- **Moksha**
- **Avidya**
Primary Concepts of Hinduism

World is a single Family. Vasudhaiv Kutumbakam.
Sarvam Khalu Idam Brahman – OM – Nothingness
Nothingness has a particular Frequency, Dark Matter, Dark Energy. Every thing has a GATI (dynamic)

• **BRAHMAN**: SUPREME REALITY OF GOD, i.e.,
  1. All pervading and absolute reality
  2. Beyond description
  3. Worshiped in various forms, male or female, and by many names

• **DHARMA**: 
  1. Mode of conduct most conducive to spiritual advancement
  2. Includes universal human values and values specific to an individual’s stage in life (i.e., student, parent)
Primary Concepts of Hinduism

- **KARMA:**
  1. Principle of cause and effect
  2. An individual’s every action produces an appropriate outcome for him/her
  3. Outcomes may span over life time.

- **MOKSHA:** THE ULTIMATE GOAL IS -
  1. Freedom from samsara, the cycle of reincarnation (the soul survives death to be reborn in a new body)
  2. Achieved by self-realization and elimination of material desires and attachments.
Meditation

Chanting mantras such as *OM*, signifies the cosmic power of Brahman

*Aham Brahmasmi*

(I am Brahman).

*Moksha:*

freedom from the cycle of reincarnation
The Epic Period

- The *Ramayana* of Valmiki Rushi, written in 3rd century BC, and tells story of *Rama*, and his wife, Sita.
- Rama and Sita are generally seen as ideal examples of great manly heroism and wifely devotion.
Mahabharata

- *Mahabharata*, Sanskrit for Great Story, written by Vyas Muni between 300BC & 300AD, is one of the great epic poems of ancient India.

- The story is about the battle of one family over a kingdom in northern India.

- The *Bhagavad Gita* (Song of God) is contained in the Mahabharata. It is dialogue between Krishna and the hero Arjuna on the meaning of life.
Sutra Period

- Six systems of Philosophy
- Nyaya
- Vaisesika
- Samkhya
- Yoga
- Purva Mimasa
- Uttara Mimamsa or Vedanta

Vedas: the unexplored ocean of knowledge.
Buddhism
Early Buddhism in India

Founded by Siddhartha Gautama (born about 563 B.C.)

• Siddharth/ Gautama was raised in a pampered lifestyle but then he encountered an old man, a sick man, a corpse, and a monk
  – Siddharth was impressed by the monk and himself determined to take up an ascetic, wandering life to help him understand the phenomenon of suffering
Siddhartha Gautama

• About 534 B.C., Gautama left his family to take up the existence of a holy man
• Intense meditation and extreme asceticism did not enlighten him sufficiently
• One day he resolved to sit under a large bo tree until he understood the problem of suffering
• For 49 days he withstood various temptations and threats from demons and finally received enlightenment
  – Thus Gautama became the Buddha—“the enlightened one”

The Buddha by Odilon Redon
Buddha – Teaching of a Man

Sterling point in Buddhism:

• Mankind and the way in which they suffer not just physical pain but the general feelings of dissatisfaction with LIFE craving to achieve or have more the fear of CHANGE & DEATH.

Buddhism does not require:

a) A person to accept fixed belief and ideas
b) No debate on the existence of “GOD”

Main thing to help people overcome SUFFERING & to achieve a FULL LIFE.
2 Branches of Religion

Hinayana & Mahayana

• Triple Jewel is COMMON among BOTH called Tri Ratna:

<table>
<thead>
<tr>
<th>Tri Ratna</th>
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</thead>
<tbody>
<tr>
<td>Buddha</td>
<td>Enlightened One</td>
</tr>
<tr>
<td>Dharma</td>
<td>Teaching</td>
</tr>
<tr>
<td>Sangha</td>
<td>Community of Monks</td>
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</tbody>
</table>
Buddhist Doctrine

- Buddha announced his doctrine publicly at the Deer Park of Sarnath in 528 B.C.
- Delivered the “Turning of the Wheel of Law” sermon which marked the beginning of Buddha’s quest to spread the law of righteousness

Dhamekha Stupa is believed to mark the place of Buddha’s first sermon
Four Noble Truths

- All life involves suffering
- Desire is the cause of suffering
- Elimination of desire brings an end to suffering
- A disciplined life in accordance with the Noble Eightfold Path brings the elimination of desire

Conducts & Ethics

- Right Thought
- Right Intent
- Right Speech
- Right Action
- Right Livelihood
- Right Effort
- Right Mindfulness
- Right Concentration

Conception of NIRVANA & Freedom from the Cycle of Re-Birth
MAHAYANA

• Concept of **Bodhisatwa**: Being who desired the highest enlightenment for the welfare of others.

• **SIX PARIMITA**:
  1. Dana
  2. Shila
  3. Kshanti
  4. Birya
  5. Dhyana
  6. Praghna

  • **Meditative Practices**
  • **Ordained Monks**
  • **Monastery**

  Meditation & Introspection were encouraged
The Middle Path or Moderate Way

• **Avoid extremes**—either an overt pursuit of passionate worldly desire or extreme asceticism

• **Live a moderate lifestyle** characterized by quiet contemplation, thoughtful reflection, and disciplined self-control
  
  – *Reduces desire* for material goods and other worldly attractions
  
  – *Eventually results in detachment* from the world itself
Nirvana

- Living this lifestyle will lead to personal salvation—escape from the cycle of incarnation and the attainment of nirvana
  - *Nirvana* is the state of perfect spiritual independence

The Wheel of *Dharma* symbolizes *samsara*, the continuous cycle of birth, life, and death. One is liberated from this endless cycle of rebirth when *nirvana* is achieved.
Monasteries

- Early Indian education was informal, mostly involving just a sage and his students.
- Buddhists organized monasteries and began offering regular instruction and established educational institutions.
- Most famous monastery was at Nalanda.

Ruins of monastery at Nalanda
Between 600 and 1000 A.D., Buddhists built hundreds of cave temples around Dunhuang depicting scenes of Buddha
Assembled libraries of religious literature
Supported missionaries which spread Buddhism throughout China

Boddhisattva Avalokitesvara, south wall, Cave 45
In this painting, Prince Siddhartha leaves his palace to search for the true meaning of life, an event known as the Great Departure. Special helpers called ganas hold his horse’s hooves so he won’t awaken anyone.
The Buddhist Monastery at Ajanta (2nd BCE-6th CE, west central India)
Gupta period paintings preserved in the oldest caves:
The Stupa/Image Hall (late 6th CE)
Inside the Hall:
stupa & Buddha
image merged
into one
Ceiling & Side Columns:
rock-cut imitation of wooden structure
Another Stupa/Image Hall
Ways in which Buddhism and Hinduism are similar:

1) Both believe in reincarnation.
2) Both believe there are many different paths to enlightenment.
3) Both believe that our suffering is caused by excessive attachment to things and people in the physical world.
4) Both believe in an ultimate spiritual reality beyond the illusions of the physical world.
5) Both practice meditation and other forms of yoga.
6) Both believe that eventually all living spirits will achieve enlightenment and liberation, even if it takes many incarnations. Remember that in Mahayana Buddhism, the original teachings of the Buddha are assimilated to Hindu practices, including prayers, gods (even the Buddha as god in all his many incarnations). Mahayana Buddhism also introduces the idea of (temporary) heavens and hells.
<table>
<thead>
<tr>
<th></th>
<th><strong>Buddhism</strong></th>
<th><strong>Hinduism</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principle</strong></td>
<td>This life is suffering, and the only way to escape from this suffering is to dispel one's cravings and ignorance by practising the Eightfold Path.</td>
<td>To follow dharma, i.e. eternal laws</td>
</tr>
<tr>
<td><strong>Practices</strong></td>
<td>Practices of the Threefold Training: Morality, Concentration, and Wisdom.</td>
<td>Meditation, Yoga, contemplation, yagna (communal worship), offerings in the temple.</td>
</tr>
<tr>
<td><strong>Goal of Philosophy</strong></td>
<td>Buddhism is not a philosophy. It is the practical teachings of the Buddha and its goal is 'nirvana'.</td>
<td>Salvation, freedom from the cycle of birth and reincarnation.</td>
</tr>
<tr>
<td><strong>Means of salvation</strong></td>
<td>Buddhism has nothing to do with &quot;salvation&quot;. The only goal in Buddhism is to attain Nirvana. To do this, we should let go of our desires, cravings and attachments, and try to dispel our ignorance</td>
<td>Reaching enlightenment by the Path of Knowledge, the Path of devotion, or the Path of Good Deeds.</td>
</tr>
<tr>
<td><strong>Scriptures</strong></td>
<td><strong>Tripitaka</strong> - a vast volume of 3 main sections: the Discourses, the Discipline and the Absolute Doctrine - which appeared only after the death of the Buddha, thanks to the monks who collected all the teachings of the Buddha.</td>
<td>Vedas, Upanishad, Puranas, Gita. Smriti and Sruti are oral scriptures.</td>
</tr>
<tr>
<td><strong>Belief of God</strong></td>
<td>Buddhists do not believe in a Creator God, but, do have non-creator deities.</td>
<td>The deity often varies from sect to sect. Smarta/Monists sect believes Everything is God. There are monotheistic sects also.</td>
</tr>
</tbody>
</table>
• MEDICAL SCIENCE from VEDA
• Yoga and Ayurveda :
• Charak Sanhita
Vedic Math

• The Vedas were very advanced in math.

• The Vedas had short cuts to Multiplication and Division.

• Many saints and sages were very advanced in all of these subjects including zero and infinity.
21 * 13

Total: 273

Note: if the number of dots in one column is more than 9 add to next column. This does not apply for the first column.
Nikhilam Multiplication

99 × 89

1) Write the base
2) Find the first complement
3) And the second complement
4) Multiply the complements

The answer is 8811
Gravity? - Newton?

- Baskaracharaya had discovered gravity way before Newton proposed the idea.
- Quote from Baskaracharaya, "Objects fall on the Earth due to force of attraction by the Earth. Therefore, the Earth, Planets, Constellations, Moon, and Sun are held in orbit due to this attraction."
  — Baskaracharaya, In Siddhanta Shiromani, 12th Century
- Newton rediscovered gravity in 1687 AD
The Binary System - Gottfried Leibniz !

- The binary system is made up of ones and zeros.
- One was described as an existence part and zero was a nonexistence part.
- The Vedas said that all life was made up of these parts: nonexistence (0) and existence (1).
Atomic war thousands of years ago?

- The Indus valley and Harappa civilization suddenly vanished.
- Most theories state that they starved because the Indus river changed courses but it is also discussed that the skeletons (of the Indus valley people) are very radioactive.
- Even comparable to the Hiroshima and Nagasaki skeletons. Studies are still going on.
- During the Mahabharata and Ramayana epics many tools were used such as the Brahmastra and Vimanas.
- Can we relate this with nuclear weapons and spacecraft.
- In Tibet, a paper in Sanskrit was discovered. After translation, the paper was instructions to build a spacecraft or Vimana.
<table>
<thead>
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<th>Scientific Innovation</th>
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<tbody>
<tr>
<td>THE EXISTENCE OF SOLAR SYSTEM</td>
</tr>
<tr>
<td>THEORIZED GRAVITY</td>
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<tr>
<td>THE SPEED OF LIGHT</td>
</tr>
<tr>
<td>ACCURATELY PREDICTED THE DISTANCE BETWEEN SUN AND EARTH</td>
</tr>
<tr>
<td>THEORIZED THAT EARTH IS A SPHERE</td>
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<tr>
<td>MEASURED THE CIRCUMFERENCE OF THE EARTH</td>
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<td>ESTIMATED THE LENGTH OF AN YEAR</td>
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<td>DEDUCED PI VALUE</td>
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Hinduism & Science

ARYABHATT (476 CE) MASTER ASTRONOMER AND MATHEMATICIAN

- earth is round, it rotates on its axis
- acknowledged for calculating p (Pi) to four decimal places: 3.1416 and the sine table in trigonometry

BHASKARACHARYA II (1114-1183 CE) GENIUS IN ALGEBRA

- was the first to discover gravity, 500 years before Sir Isaac Newton
- His renowned mathematical works called 'Lilavati' and 'Bijaganita' are considered to be unparalleled and a memorial to his profound intelligence

NAGARJUNA (100 CE) WIZARD OF CHEMICAL SCIENCE

- As the author of medical books like 'Arogyamanjari' and 'Yogasar,' he also made significant contributions to the field of curative medicine
- Nagarjuna had discovered the alchemy of transmuting base metals into gold

ACHARYA KANAD (600 BCE) FOUNDER OF ATOMIC THEORY

- He was the pioneer expounder of realism, law of causation and the atomic theory. He has classified all the objects of creation into nine elements, namely: earth, water, light, wind, ether, time, space, mind and soul.
- He says, 'Every object of creation is made of atoms which in turn connect with each other to form molecules.'

ACHARYA CHARAK (600 BCE) FATHER OF MEDICINE

- Revealed the facts on human anatomy, embryology, pharmacology, blood circulation and diseases like diabetes, tuberculosis, heart disease, etc.
- His renowned work, the 'Charak Samhita', is considered as an encyclopedia of Ayurveda
# Hinduism & Science

## Acharya Sushrut (600 BCE) Father of Plastic Surgery
- Details the first ever surgery procedures in 'Sushrut Samhita', a unique encyclopedia of surgery.
- Prescribes treatment for twelve types of fractures and six types of dislocations. His details on human embryology are simply amazing.

## Varahamihir (499-587 CE) Eminent Astrologer and Astronomer
- Varahamihir's book 'Panchsiddhant' holds prominent place in the realm of astronomy. Noted that moon and planets are lustrous not because of their own light but due to sunlight.
- In the 'Bruhad Samhita' and 'Bruhad Jatak', he has revealed his discoveries in the domains of geography, constellation, science, botany and animal science.

## Acharya Kapil (3000 BCE) Father of Cosmology
- His pioneering work threw light on the nature and principles of the ultimate Soul (Purusha), primal matter (Prakruti) and creation.
- Because of his extrasensory observations and revelations on the secrets of creation, he is recognized and saluted as the Father of Cosmology.

## Acharya Bharadwaj (800 BCE) Pioneer of Aviation Technology
- He authored the 'Yantra Sarvasva' which includes astonishing and outstanding discoveries in aviation science, space science and flying machines.
- Profound Secret: The technique to make a flying machine invisible through the application of sunlight and wind force.

## Acharya Patanjali (200 BCE) Father of Yoga
- It seeks to discover and realize the ultimate Reality through yogic practices. Acharya Patanjali.
- He prescribed the control of prana (life breath) as the means to control the body, mind and soul.

Rama Setu – Bridge
Hanuman Chalisa – Jaldhi Landhi gaye Acharaj Nahi
City Constructed under Water – Bet Dwarika: Lord Krishna Nagari
Om or Aum: Hindu Symbol of the Absolute

• Om or Aum is of paramount importance in Hinduism.
• Om represents both the unmanifest (nirguna) and manifest (saguna) aspects of God. That it pervades life and runs through our prana or breath.
• OM is a matrix of all sounds, when in its diversified form gives rise to all words used in language.
• **AUM represents the 3 Fold Division of Time**
  - A – is the waking state
  - U – is the dream state
  - M – is the state of deep sleep
• At the end of AUM is a pause, a silence. This represents the state known as Turiya, or Infinite Consciousness.

Source: [http://hinduism.about.com/od/omaum/a/meaningofom.htm](http://hinduism.about.com/od/omaum/a/meaningofom.htm)
Ending with

- Asato ma Sadgamaya
- Tamaso Ma Jyotirgamay
- Mruturma Amrutam Gamay
- Sarvesham Shanti Bhavatu
- Sarvesham Purnam Bhavatu
- Sarvesham Swasti Bahvatu
- Om Shanti Shanti Shanti (Upnishad)
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