India’s contribution to the rest of the world
“India is the cradle of the human race, the birthplace of human speech, the mother of history, the grandmother of legend, and the great grand mother of tradition. Our most valuable and most constructive materials in the history of man are treasured up in India only”

Mark Twain
"India was the motherland of our race and Sanskrit the mother of Europe's languages. India was the mother of our philosophy, of much of our mathematics, of the ideals embodied in christianity... of self-government and democracy. In many ways, Mother India is the mother of us all."

- Will Durant
- American Historian 1885-1981
“If there is one place on the face of this Earth where all the dreams of living men have found a home from the very earliest days when Man began the dream of existence, it is India.”

Romain Rolland - French Philosopher 1886-1944
“We owe a lot to the **Indians**, who taught us how to count, without which no worthwhile scientific discovery could have been made”

*Albert Einstein*
“India conquered and dominated China culturally for 20 centuries without ever having to send a single soldier across her border.”

*Hu Shih, former Ambassador of China to USA*
“Many of the advances in the sciences that we consider today to have been made in Europe were in fact made in India centuries ago”

Grant Duff British Historian of India
India never invaded any country in her last 10,000 years of history.
India invented the Number System. Zero was invented by Aryabhata.
The place value system, the decimal system was developed in India in 100 BC.

śūnya  =  void
kha    =  sky
ākāśa  =  space
bindu  =  dot
This method of graduated calculation was documented in the Pancha-Siddhantika (Five Principles) in the 5th Century. But the technique is said to be dating from Vedic times circa 2000 B.C.
The value of pi was first calculated by Budhayana, & he explained the concept of what is now known as the Pythagorean Theorem.

British scholars have last year (1999) officially published that Budhayan's works date back to the 6th Century, which is long before the European mathematicians.
Algebra, Trigonometry & Calculus came from India.
Quadratic equations were by Sridharacharya in the 11th Century.

\[ ax^2 + bx + c = 0 \]
\[ x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \]
The largest numbers the Greeks and the Romans used were $10^{**6}$ (10 to the power of 6) whereas Hindus used numbers as big as $10^{**53}$ (10 to the power of 53) with specific names as early as 5000 BCE during the Vedic period.

Even today, the largest used number is Tera $10^{**12}$ (10 to the power of 12).
The World's first university was established in Takshila in 700BC.

More than 10,500 students from all over the world studied more than 60 subjects.

The University of Nalanda built in the 4th century BC was one of the greatest achievements of ancient India in the field of education.
Sanskrit is the mother of all the European languages. Sanskrit is the most suitable language for computer software reported in Forbes magazine, July 1987.
According to the Forbes magazine, Sanskrit is the most suitable language for computer software.
Bhaskaracharya calculated the time taken by the earth to orbit the sun hundreds of years before the astronomer Smart.

Time taken by earth to orbit the sun: (5th century) 365.258756484 days
Ayurveda is the earliest school of medicine known to humans. Charaka, the father of medicine consolidated Ayurveda 2500 years ago.

Today Ayurveda is fast regaining its rightful place in our civilization.
The art of Navigation was born in the river Sindh 6000 years ago.

The very word Navigation is derived from the Sanskrit word NAVGATIHK.

The word navy is also derived from Sanskrit 'Nou'.

![Image of a historic sailing vessel](image.png)
According to the Gemological Institute of America, up until 1896, India was the only source for diamonds to the world.
Chess (Shataranja or AshtaPada) was invented in India.
Sushruta is the father of surgery.

2600 years ago he and health scientists of his time conducted complicated surgeries like cesareans, cataract, artificial limbs, fractures, urinary stones and even plastic surgery and brain surgery. Usage of anesthesia was well known in ancient India.
Over 125 surgical equipment were used

Deep knowledge of anatomy, physiology, etiology, embryology, digestion, metabolism, genetics and immunity is also found in many texts.
The earliest reservoir and dam for irrigation was built in Saurashtra.
When many cultures were only nomadic forest dwellers over 5000 years ago, Indians established Harappan culture in Sindhu Valley (Indus Valley Civilization).
Want to know more???
India's Contribution to
Production Technology and Mechanical Engineering
In ancient times, commodities like sugar, palm oil, coconut oil, cotton cloth, clarified butter, cast iron, tin sheets, copper vessels, dyes and pigments like cinnabar (ochre), indigo and lac, perfumes like sandalwood oil, musk tamarind, costus, macir, camphor, and even crude glass crockery were being exported from India.
The earliest recorded use of copperware in India has been around 3000 B.C.

The findings at Mohen-jo-daro and Harappa, bear this out. The earliest documented observation of smelting of metals in India is by Greek Historians in the 4th Century B.C.
India's Contribution to - ASTRONOMY
"In India I found a race of mortals living upon the Earth. but not adhering to it. Inhabiting cities, but not being fixed to them, possessing everything but possessed by nothing". - Apollonius Tyanaeus

Greek Thinker and Traveller 1st Century AD
In India the first references to astronomy are to be found in the Rig Veda which is dated around 2000 B.C.

The Calculation of Eclipses And The Earth's Circumference

The Heliocentric Theory of Gravitation
This facsimile is from the Pancha-siddhantika (Five Principles) dated around the 5th century. This text graphically shows how eclipses are to be calculated. Thus this text foreshadows what Western Astronomers propounded nearly one thousand years later.
India's Contribution to –

PHYSICS & CHEMISTRY
“Ancient Indian theories lacked an empirical base, but they were brilliant imaginative explanations of the physical structure of the world, and in a large measure, agreed with the discoveries of modern physics”

A.L. Basham, Australian Indologist
The Five Basic Physical Elements
Indian Ideas on Atomic Physics

Anu & Parmanu
India's Contribution to MEDICAL SCIENCE
"In the great teaching of the Vedas, there is no touch of sectarianism. It is of all ages, climes and nationalities and is the royal road for the attainment of the Great Knowledge“

_Thoreau, American Thinker_
H OF THE BODY AND MIND
India's Contribution to THE FINE ARTS
"If I am asked which nation had been advanced in the ancient world in respect of education and culture then I would say it was – India”

Max Muller German Indologist
SPORTS AND GAMES
- In Ancient India
Chess, Snakes and Ladders, Playing Cards, Polo, the martial arts of Judo and Karate
India's Contribution to –

**PHILOSOPHY**

[Image of a traditional Indian scene]
"In religion, India is the only millionaire .... The One land that all men desire to see and having seen once, by even a glimpse, would not give that glimpse for all the shows of all the rest of the globe combined".

Mark Twain, American Author 1835-1910
MEDITATION AND RENUNCIATION

AHIMSA - NON VIOLENCE

RELIGIOUS TOLERANCE
CURRENT INFORMATION:
There are 3.22 Million Indians in America.  
38% of Doctors in America are Indians.  
12% of Scientists in America are Indians.  
36% of NASA employees are Indians.  
34% of MICROSOFT employees are Indians  
28% of IBM employees are Indians  
17% of INTEL employees are Indians  
13% of XEROX employees are Indians
First democracy to elect a woman Prime Minister.
India is the 7th nuclear power in the world
India is the 5th largest economy in the world
India is the largest democracy in the world
India has the 2nd largest population in the world (could be a bad point)
India is the 4th nation in the world to have developed/or developing a nuclear submarine
India is the 5th nation in the world to be in the multi billion dollar space commerce business.
India is the 4th nation in the world to develop(or nearly to) ICBM's (can travel up to 14,000km)
India is the 3rd nation in the world, to be able to develop land based and sea based cruise missiles
SUMMING UP
Human excellence depends on development of culture

World's first culture (Yajurveda 7/14: Sa Prathama Sanskriti Vishwara) Many small civilizations were formed but were confined to small regions. Only Indian culture can be called as first world culture.

**Indian Culture = Human Culture**

Culture that focuses on inculcating human values in a man
Unique features of Indian Culture

1. Freedom of thought

- Every thought is allowed to develop freely.
- Theist & Atheist
- Vedanta speaks of soul as image of the Supreme
- Everyone is free to imagine and accept God's form according to one's beliefs.
- Every thought school is part & parcel of Indian Culture.
- A garden has variety of flowers and plants. These differences increase the beauty of the garden
2. Theory of Karmaphal
   - Rebirth

3. Idealistic families

4. Abundance of saints & reformers.

5. Division of society order (based on personal choice, interest, capabilities) & personal life for personal development, for development of society
It is already becoming clearer that a chapter which has a western beginning 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 Toynbee  British Historian 1889-1975*