India’s Contribution to the Metallurgy

Metallurgy, the practice of separating metals from their ore and refining them into pure metals. In India, metallurgy developed into a science that made use of high refinement and precision techniques to extract metals and form different mixtures of metals (alloys) to prepare objects to be used for different aspects of day-to-day activities.

Ancient Sanskrit texts contain various references to the use of metals. The Rigveda mentions ayas (metals), the Yajurveda and Atharvaveda have references to smiths (skilled metal workers) as well as the smelting process.

- The techniques of using metallic tools for agriculture and minting coins developed thousands of years ago in ancient India.
- Metals were used to create images, statues and artistic items like lamps in ancient India.
- The famous iron pillar at New Delhi, which is 7.32 meters tall and made of 98% wrought iron, was constructed by Vikramaditya almost 1600 years ago around the 5th century BC. This iron pillar is a glowing example of the high skill level of Indian craftsmen of those times because it has withstood dust, extreme weather and rust for more than
a thousand years. This kind of rust proof iron was not possible till iron and steel was discovered a few decades ago.

- The Romans used armour and cutlery made from Indian iron.
- The Indian metallurgist Nagarjuna wrote a book Rasaratnakara around the 9th century BC which explains the preparation of various metallic compounds and the extraction and purification of various metals such as gold, silver, tin and copper from their ores.
- Indians were the first to use to develop the technique of isolation, distillation and use of zinc.

These examples suggest that Indians developed the techniques of separating metals thousands of years ago and used them creatively for making objects to be used for various activities of daily life.

It can be summarized from this article that science and technology in ancient India and in the centuries to follow advanced earlier than most other countries of the world and contributed a great deal in the fields of Civil Engineering, Navigation and Metallurgy. Indian people were creative, innovative and made great use science and technology for new discoveries and inventions that helped in the overall progress of human civilization over the course of centuries.
Yoga - a form of preventive medicine and spiritual journey

Yoga is a system of exercise for physical and mental nourishment. The origins of yoga are shrouded in antiquity and mystery. Since Vedic times, thousand of years before, the principles and practice of yoga have crystallized. But, it was only around 200 BC that all the fundamentals of yoga were collected by Patanjali in his treatise, named Yogasutra.

Yoga works on the mind and the body at the same time, as well as exploiting their interdependence. Yoga asanas (postures) and breathing deal with the physical body, but due to their effect on the brain, they also affect the mind.

Yoga considers that most diseases are due to insufficient life force, either in the body as a whole, or a blockage of life force to one part of the body. This leads to a lowered body resistance or immunity to disease. The best way to increase the general life force of the body is by good nutrition, sufficient deep steep, a positive mental attitude and yoga.

There are different types of Yoga, while these share common elements, some focus more on postures and breathing exercises, whereas others have a greater focus on spirituality. Yoga forms constitute a ladder of sorts, from the “lowest” form of Hatha yoga the foundation, with its focus on physical postures and breathing techniques, to the “highest” form known as Raja, or “union by mental mastery.” Other forms being Bhakti yoga or yoga of devotion, Karma yoga – yoga of selfless action, Gnana Yoga – yoga of knowledge, Mantra yoga – Union by voice or sound.

Newer forms of hybrids of yoga are also proposed such as Power yoga or Acu-yoga. There are also variations of yoga depending on “the teacher that is being followed.”

These days, yoga classes are being held at most health and wellness
centers across the United States. Along with meditation, it is probably one of the most popular alternative therapies. Clinical practices have established that several ailments, including hypertension, clinical depression, amnesia, acidity, can be controlled and managed by yogic practices.

All the wonders of modern science and technology will not bring happiness, peace of mind, health or a long life. Although wonders have been achieved in our external environment – space travel, computers, etc.- our internal environment has been neglected. Thousands of years ago the ancient yogis turned their minds inwards and discovered their true nature. This allowed them to work out a system of body and breathing exercises, which results in vitality, rejuvenation, and peace of mind.

Why not enjoy the benefits of modern science, but also do yoga to enjoy the benefits of vitality, rejuvenation and peace of mind as well? Yes, you can have the cake and eat it too!

In conclusion the many advances made by seers of yore should inspire Hindus today who are once again making a mark in the cutting-edge fields of science and technology

As is evident, most of these sciences were in tune with nature. The ancients did not plunder the earth to search for its natural treasures. It was a contemplation, which took years to manifest. We should follow in the footsteps of yesterday in search of a better tomorrow which is in universal harmony that we lost somewhere along the race for existence.
Dear children, when you are listening to or reading a story from the Puranas (scriptures), you must have a good receiving mind (shravan). One should not let mockery of the subject touch his or her mind. A story must be heard with reverence and faith, not housing any doubts. These stories have deep philosophy. As we mature in our thoughts and understanding, the essence of the story lights up with a message and shows us the Hindu way of life. Hence one must listen or read these stories with a clear attitude and with devotion.

Who is lord Dattatreya?

Shri Dattatreya is a very ancient incarnation, with all the three primal energies of Brahma, Vishnu and Shiva manifested to be one. He is considered as the universal Guru hence also called as Guru Dattatreya or Datta Guru. The Lord took form on the full moon of the Hindu month Margashirsh (early December).

Birth of Shri Dattatreya:

There are several stories behind the birth of Shri Dattatreya which are being told since the vedic time. Following is the one most commonly believed.

Dattatreya had descended into the realm of world as progeny of Atri and Anusuya, a sage couple of the Vedic age. Anusuya was very famous for her devotion to her husband. She was the embodiment of chastity. She had limitless spiritual power.

The three Gods (Brahma-Vishnu-Mahesh) wanted to test her spiritual power and chastity. They transformed themselves into mendicants, approached the hermitage of sage Atri and begged for alms. At that time sage Atri was away at the river doing his daily prayers. When Anusuya came out to offer food to them, they made a strange request; the food to be prepared and served to them by Anusuya, without wearing any clothes. In the Hindu tradition any ‘athithi’ (guest) cannot be turned away, as they are considered to be an aspect of God. For a moment, Anusaya was in a dilemma. She smiled to herself and reflected thus: “I am totally purified by the long association with the holy Sage Atri. What harm can anybody ever do to me? So I do fear nothing. As they have sought food from my hands, I look upon them as my own children and not as strangers or...
grown up men!” Her thoughts – the thoughts of a pious and chaste person – instantly became reality; the elderly guests became her babies!!

Sage Atri returned back to the hermitage. He saw his wife Anusuya fondling three babies. Anusuya said “These children are the gift of God to us who have been childless so far”. Sage Atri was overjoyed and named them Datta, which means ‘given’. At this time, the three Gods took their real form and disclosed the truth. They praised the Anusaya’s power of chastity and purity. Sage Atri and Anusuya prayed that they should remain as their sons. They consented and the three Gods merged into one body with three heads. This is how Shri Dattatreya incarnated.

Shri Dattatreya’s another name is Gurudeva Datta – the Guru of all Gurus. He came to light the lamp of wisdom among the people. His face radiates all wisdom and draws us away from the lures of the world. Though He moves from place to place, His favorite abode is the Holy Audambar (a type of tree).

Shri Dattatreya possesses a Trishul (trident), Sudarshan Chakra (rotating disc), a conch, Japa-Mala and a begging bowl. A cow and 4 dogs are also shown with Him. Let us try to understand the symbolic meaning of His form.

• The Cow, which is always with Him, represents the Mother Earth and Dharma. She is the wish fulfilling cow ‘Kamadhenu’.
• The four dogs symbolise the four Vedas – the external repositories of Spiritual Wisdom.
• The trident indicates that He has transcended the three gunas, which constitute the illusory world: Sattva-illumination, Rajas-activity and Tamas-inertia.
• The ‘Sudharshana chakra’, disc indicates that He is beyond the cycles of time i.e. the past, present and future and His holding of ‘chakra’ means He is the controller of time.
• The conch represents the eternal sound ‘AUM’ – which is the manifestation of the Spirit. It is also the life principle in us and the cosmos.
• The ‘bhasma’ ashes indicated His
‘Vairaagya’ dispassion as well as His purity. Ashes indicate the evanescent nature of all created objects and the ultimate state of all matter.

- He always carries a begging bowl so as to teach us the lesson that we will be dependant on each other and we will have to share our wealth and food with others.
- The japa-mala, rosary He wears reminds us that our primary duty is chanting the sacred name of the Lord and meditating on the feet of the Lord, and our redemption depends on this discipline alone.

It is believed that Shri Dattatreya, in order to bless His devotees and the righteous ones, wanders about in the guise of a random guest at the lunch hour. That’s why it is said that a random guest has to be treated as the very embodiment of Lord Dattatreya.

Shri Dattatreya had twenty four teachers (Guru) from the Nature. Once, He told the king Yadu, “Many are my teachers from whom I acquire wisdom and knowledge freely. I wander in the world…. The earth, air/breeze, sky, fire, the sun, pigeon, python, sea, moth, elephant, ant, fish, Pingala the courtesan, arrow-maker, infant/playful boy, the moon, honeybee, deer, bird of prey, maiden, serpent, spider, caterpillar and water are my twenty four preceptors.

During the medieval time, there were several spiritual persons and scholars born to explore and spread the teachings of Shri Dattatreya. Try to get more information on them. Also try to read a sacred book - Shri Guru Charitra - which has included the stories and teachings of Shri Dattatreya.