Vedic Science: Its Influence on Modern Science

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Vedic Science is our true heritage and very few are aware of this fact. To progress constantly ahead one needs freedom and positive society. This present article highlights the contribution of vedic science in development of modern science. A historical perspective has also been discussed here. The Vedas can give us tremendous knowledge, both material and spiritual. This great culture of ours definitely, shall revive our morally degraded society and add great deal of value to our lives.

Introduction

The foreign rule of thousand years proved undoing of India. Vedic Science had given the Indians a head start but our internal problems nullified that. To top it up, we were so overwhelmed by the sheen of western model of erudition that our own Vedic Science was fully ignored. Our rich tradition of Vedic erudition was the most advanced till the Islamic invaders overpowered India. Islamic scholars took full benefit of our corpus of knowledge and utilized the same to progress their own erudition. By thirteenth century, Arabs became most prominent scholars in the world. Through Arabs, Europeans gained this corpus of knowledge. It is only after fifteenth century; the Europeans could utilize these acquired scientific knowledges to their benefit. Today they are the most scientifically advanced nations of the world. Independence in 1947 and Nehru’s tryst with destiny has put us Indians on the path of dynamic progress. Aspirant India needs to follow the progressive path beaconed by our great scholars of the past. Great Aryabhat, Varamihira, Brahmagupta, Bhaskaracharya and the rest, should lead us to become, once again, the leaders of the world's scientific community.

History of Vedic Science

Vedic Science, as referred by the World Scientific Community, originated in antiquity through the perseverance of the faculty of scholarly Rishis, the great thinkers of yore. Through these great sages of ancient India, Indian contribution to the development of Science, the world-over, is tremendous and path-breaking, to say the least. Vedic Science evolved in times when the rest of the world was trundling through the Paleolithic aeon i.e. the Stone Age. The Rishis in their Hermitages persevered, indomitably, to comprehend the intricacies of the Universe- a quest in erudition. Knowledge seeking was a normal pastime among these profound thinkers- just to listen to their normal talk was an exhilarating experience. Each and every word, rich in meaning and full of wisdom. Their enlightening scientific revelations were
constructed in slokas in Sanskrit language-the lingua franca of the erudite. A very few, the initiated, could fathom the depth of these scientific slokas. This exclusivity in scholarly-knowledge proved counter-productive leaving majority of Indians wallowing in ignorance. Rishis, the erudite, pursued the knowledge of science, relentlessly building a rich and scientific corpus of knowledge. This corpus of knowledge was treated as a secret cabal and restricted to a very few elites even among the Brahmins. Further, the knowledge of Sanskrit language remained confined to a few elites and rest were kept away from partaking of its illuminating benefits. Ninety-nine-point nine percent Indians were thus rendered ignorant and consigned to live a life of a lowly Neanderthals!

Over a period of time, this scientific knowledge was carried away by Buddhist Preachers to China, Japan and Far-East Asia as indeed by Arab Merchants to Arab World. By and by, Europeans became wise to this knowledge and benefited the most. By 1300 CE, the Renaissance had Europe fully awake and they used this Vedic Science to educate themselves as well as break path into the modern industrial development. Europe had just risen out of stupor of centuries of Dark- Age and was incredulous at acquisition of this Vedic wisdom. Dark-Age had even buried the Greek and Latin erudition of Plato, Aristotle, Pythagoras, etc under centuries of religious barbarism, after destruction of the Holy Roman Empire. Ab initio, Europeans were at loss to handle the Indian wisdom but, by and by, they got down to business, turning the science into their heritage. Albert Einstein said, “We owe a lot to Indians who taught us how to count without which no worthwhile scientific discoveries could have been possible.”

The ingenious method of expressing every possible number using a set of ten symbols (each symbol having a place value and an absolute value) originated in India during Vedic Time. It astounds everyone how even Archimedes and Apollonius, the doyens of Greek erudition, had no clue about this! The Roman numerals; I to XXXIX (49) and then L= 50, C=100, D=500 & M=1000; proved most impractical in larger calculations. Higher Mathematics, trigonometry, algebra, etc proved beyond the capacity of these Roman Numerals. During Vedic Times, Indian Rishis were deeply immersed in advance mathematics which today has been designated as Vedic Science. Mathematicians world-over appreciate its contribution towards the advancement in scientific development. The knowledge of decimal evolved in India with discovery of zero (shunya i.e. sky, the space) and escaped to China through Buddhist Preachers then much later to Europe by means of Arab Merchants/ scholars.

Vedic Mathematics was part of Atharva Ved and finds storage in its intricate slokas- only
an initiate can decipher the contents. Today the Vedic numerals are accepted universally and Europeans call it as a, “Hindu-Arabic Numerals.” These numerals are 1, 2, 3, 4, 5, 6, 7, 8, 9&0. **These ten symbols (numerals) are capable of representing any and every possible number up to infinity as well as down to minus infinity.** First position has a unit value and the second position has the base value; then third position has base x base and so forth (1- 10- 100 & on). Zero, the Sanskrit shunya, evolved to fill the space of no-value. Today, even a child in Nursery Class takes these ten innocuous appearing symbols for granted and conducts arithmetical sums just like that. Greek and Latin are considered as the pioneers in the field of Metaphysics but Europeans remained stumped in the field of science until Arabs supplied them with the Vedic-Numerals. These foolproof numerals gave tremendous boost to Indian Mathematics especially in the field of Astronomy and related calculations. Indian Thinkers, Philosophers and of course, the Scientists made progress in the field of Science much before than any other scholar in the entire world.

Arya Bhat, born in 476 AD and died in 550 AD, was the pioneer in this field of science. He postulated the theory of Helio-centric Solar-system almost 1000 years before Copernicus and Galileo were born. Arya Bhat was equally adept at the knowledge of Eclipses: both, Solar and Lunar. His book on science, “Aryabhatiya,” (499AD) became the basis of scientific study henceforth. Arya Bhat was followed by a plethora of renowned Indian scientists who took up his scholarship to greater heights. To name a few, Varamihira (505-587 AD), Brahmagupta (589-668), Bhaskar-I (600-680 AD), Arya Bhat-II (920-1000 AD), Bhaskaracharya (1114-1185) and many others. The system of Indian Mathematics is based on mental mathematics and has more specific formulae than generic ones. Most Western Schools, today, teach Vedic Mathematics as mental mathematics to develop memory-skills albeit they do not credit India for this. Calculus, Pythagorean Theorem, value of Pi was already developed and documented in the Vedic Mathematics. Bhaskaracharya wrote in his Book, “Leelavati,” (his daughter’s name) about the problems of Differential Calculus and the theory of Calculus, itself. It is on record that Pythagoras (582 - 507 BCE) was familiar with Indian Upanishads and by corollary with Vedic Mathematics. Pythagorean Theorem has its reference in Sulva-Sutra of Atharva-Ved. **Herodotus,** the father of Greek History, wrote that India was the Greatest Nation of his time. Panini the Grammarian explained context free grammar in 500 BCE on the basis of Meta-syntax: this language is best suited to modern-day computers. Even algebra originated from India: Al-Zabr, an Arab scholar, gained this knowledge from Indian