

Modern Science and Vedic Science

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Abstract : Science rests upon a definition of what constitutes the right means of knowledge through which something can be known. Science, like the classical philosophies of India, recognizes the validity of sensory perception and reason as the main means at our ordinary disposal for gaining authentic knowledge about the world and about ourselves.

Yet science is not content with what the senses present us as reality, any more than the mystic or yogi is, though science builds upon rather than rejects what the senses show. Science has created a vast array of special instruments and equipment from microscopes and telescopes that can greatly increase the range of our physical senses. It has added other instruments like radio telescopes which bring in information about the universe from means that are related to but outside the scope of our ordinary senses. It has created special computers to extend the range of computation as well.

Key words : validity of sensory perspective, Appropriae instrument, universal consciousness, meditative mind, spiritual practices.

Introduction :

While Vedic science recognizes the importance of sensory perception and reason, it considers that there is another, more reliable and internal source of knowledge, particularly necessary for understanding the inner or spiritual world. This is the direct perception of the silent or meditative mind.

Vedic thought holds that the best instrument of knowledge is the silent mind. This allows the mind itself, like an unflawed mirror, to directly reflect reality inside oneself. The mind becomes a reliable instrument of direct knowledge beyond the limitations of the senses. This silent mind is clearly defined in the Yoga Sutras of Patanjali and other texts as the state of samadhi. When the mind is in a state of peace and balance it becomes capable of directly perceiving the nature of things, which is consciousness and bliss. This is samadhi-pramana, samadhi as a means of knowledge in yogic thought, which opens up the inner world of the mind as clearly as our eyes open up the outer world of the senses.

In Vedic science, the meditative mind in samadhi is regarded as the appropriate instrument for knowing the inner reality. Pure consciousness, God or Brahman, after all, is beyond name, form, number, time, place and person or it would just be another object or entity in the outer world. That which comprises the totality but is not limited by the totality cannot be examined by the instruments that work to provide knowledge of limited things.

This does not mean that examining the brain waves of meditators and other scientific experiments of this order are not of any value but that these are secondary and indirect means of knowing the internal reality, like trying to examine a person through their body as reflected in a mirror, rather than examining the body directly.

We must employ the right instrument of knowledge to gain adequate knowledge something. One cannot see the Sun with one's ears, for example. Only the eyes will reveal the light of the Sun. Similarly, the appropriate instrument for knowing the universal Being is not a limited instrument which looks externally, like a telescope, but the silent mind that is able to see within.

Yet while samadhi may not be ordinarily recognized means of knowledge in science, we must note that many great scientific discoveries have been made by scientists when they were in the reverie of the inspired, concentrated or peaceful mind, in a kind of samadhi. Those who do deep research or concentrating thinking also develop the mind in a yogic way that can fall into samadhi, even without knowing what the state is! One could argue that all great discoveries or inspirations arise in a samadhi-like state of absorption and concentration.

Yet samadhis cannot be taken without scrutiny either and, like any source of knowledge, they also can be limited, mixed or partial. They are of different types and lesser Samadhis may not yield entirely correct knowledge.

Modern science and Vedic science also differ in their view of the universe. In Vedic science the universe is a manifestation of consciousness. It is pervaded by consciousness as a universal power. This universal consciousness is different than the embodied consciousness in living beings, though it is related to it.

In modern science, consciousness has been mainly limited to living organisms and identified mainly by the development and functioning of the brain. However, modern science has begun to look for and many scientists recognize such a universal consciousness extending into a life intelligence in all organisms or even a planetary intelligence in the Earth itself. So as we gain a greater understanding of the conscious universe, the approaches of yogic and Vedic science are bound to become more relevant.

Yet Vedic science does not recognize just a background universal consciousness, but a cosmic intelligence and a universal life force to explain how that absolute consciousness is connected to the world of our ordinary experience. It posits God as the universal creator as the supreme intelligence behind the universe and pervading it, not as a mere article of faith or belief. In this way religion can be integrated into a spiritual science as well.

A vast number of statements and materials presented in the ancient Vedic literatures can be shown to agree with modern scientific findings and they also reveal a highly developed scientific content in these literatures. The great cultural wealth of this knowledge is highly relevant in the modern world.

Early indologists wished to control & convert the followers of Vedic Culture, therefore they widely propagated that the Vedas were simply mythology.

Max Muller, perhaps the most well known early sanskritist and indologist, although later in life he glorified the Vedas, initially wrote that the "Vedas were worse than savage" and "India must be conquered again by education... it's religion is doomed"

Using modern scientific methods, such as satellite imagery and dating techniques, it can be shown that the ancient statements of the Vedas are factual, not mythical as erroneously propagated. High resolution satellite images have verified descriptions in The Rig Veda of the descent of the ancient Sarasvati River from its source in the Himalayas to the Arabian Sea.

The mighty Sarasvati River and its civilization are referred to in the Rig Veda more than fifty times, proving that the drying up of the Sarasvati River was subsequent to the origin of the Rig Veda, pushing this date of origin back into antiquity, casting further doubt on the imaginary date for the so-called Aryan Invasion.

The Satellite image (above) clearly shows the Indus-Sarasvata river system extending from the Himalayas to the Arabian Sea. Here the Indus River is on the left, outlined in blue, while the Sarasvati River basin is outlined in green. The black dots are the many archeological sites or previous settlements along the banks of the now dry Sarasvati River.

The drying up of the Sarasvati River around 1900 B.C.E. is confirmed archaeologically. Following major tectonic movements or plate shifts in the Earth's crust, the primary cause of this drying up was due to the capture of the Sarasvati River's main tributaries, the Sutlej River and the Drishadvati River by other rivers.

Although early studies, based on limited archaeological evidence produced contradictory conclusions, recent independent studies, such as that of archaeologist James Shaffer in 1993, showed no evidence of a foreign invasion in the Indus Sarasvata civilization and that a cultural continuity could be traced back for millennia.

It is a common allegation that - The moment a new discovery is made in modern science, Vedic scholar's line up claiming that "Vedic texts already said this" and refer to some random quote or hymn from the Vedic texts.

Now let us start with the above famous quote from Einstein when he said "We should be thankful to Indians who taught us how to count, without which no worthwhile scientific discovery would have been possible".

Einstein was referring to the invention of modern mathematics by ancient Indians. The entire science and technology today is based on the mathematics invented by ancient Vedic scholars. Just have a look at the mathematics followed by ancient Greeks where each number was represented by a unique symbol, so if we had 100 numbers then there were 100 symbols, and as they ran out of new symbols, they invented more and more new symbols. 100 were represented by C, 50 by L, thousand by M and so on. Now with this kind of mathematics one could hardly do anything other than simple addition now compare this to the mathematics invented by the ancient Vedic scholars. Here we use only a limited set of symbols, say 9 symbols from 1,2,3,4,5,6,7,8,9 and use a combination of these to represent ANY numeric value no matter how huge be it 25 or 872134870235. Yes, the place value system using bases was invented by the ancient Indians, and as a by-product of this invention they

also invented zero (the word zero itself is derived from Sanskrit word Shunya which means Nothing) to represent empty places without any value, because without zero you cannot use place value system to differentiate between 11 and 101. And as Einstein rightly said, the entire modern science and mathematics is based on these Hindu numerals (also called Hindu-Arabic Numerals because it was the Arab merchants who came from India who had introduced this system to Europe). No software could be written and so no computers would have been possible without the invention of zero. All software after all run on binary or the base 2 system - zero and one.

Vedic Sciences include both subtle or occult sciences like astrology and the inner science of Self-knowledge through Yoga and Vedanta. Yet it sees all sciences as related. All knowledge is ultimately self-knowledge. Our true self is not merely the human or psychological self but the universal Self. Each one of us is a unique manifestation of the universal consciousness, a human embodiment of it, but our true being is one with the entire universe, with all beings, and ultimately with the Absolute beyond all time and space (Parabrahman). The key even to understanding medicine or physics is to look at the forces of the universe as existing both within and around us as powers of consciousness - to our true being in the universe and the entire universe within ourselves.

Yoga in the classical sense is the practical means of developing the meditative mind to allow for direct perception of truth. As such, it is the basis of all the inner or Vedic sciences. Vyasa, the main ancient commentator on Patanjali's Yoga Sutras, the most important classical text on Yoga, defines Yoga as samadhi or the mind free of conditioning and preconception, the mind in a state of deep meditation. The Yoga Sutras begin with Samadhi Pada or the section dealing with Samadhi. The third and fourth sections of the book also deal mainly with Samyama, which is the joint practice of Dharana, Dhyana and Samadhi.

In the third section of the Yoga Sutras, different forms of knowledge gained by Samadhi are outlined. These include meditations on objects from sites in one's own body to the forces of nature that reveal both the nature of the universe and can grant superhuman powers. The greatest knowledge that can be revealed by samadhi is that of the Purusha, which is not only our true Self but the Self of the universe and yet, in its own nature, is beyond all manifestation.

The field of Yogic science is vast. It includes practices like asana, pranayama, ritual, mantra and meditation. It can reveal knowledge not only of our ordinary body and mind, but of all aspects of the collective and cosmic minds, extending to the very processes of creation. Yoga contains special ways of knowledge relative to the body, mind, prana, senses and consciousness internally and to the powers of energy, light, matter and space externally.

Yet the deeper knowledge not only relates to spiritual practices, but to bringing well-being to all aspects of our nature as well. In the Vedic sciences, human well-being is defined as the harmony of body, mind, prana and soul (Atman or Purusha). Ayurveda, Vedic medicine, shows us how to find health and well-being through understanding the forces of nature and consciousness both within and around us.

The main difference between Ayurveda and what we could call scientific medicine is that it recognizes an underlying prana or vital energy behind all bodily activities. Modern medicine tries to explain all these processes, sometimes extending to human emotion and intelligence, according to biochemistry

alone, as if there were no conscious entity or force of life behind the process. In this regard, modern medicine is often more reductionist and physically based than is modern physics!

The concept of prana posits an overall field of energy and intelligence as a totalistic and holistic power to explain the factors of life at both individual and cosmic levels. As science is now looking for an underlying consciousness behind the universe to explain the laws of physics, it must also look to an underlying cosmic life-force behind life to explain its development. An organic system must include some unique being above and beyond its particular components, processes or chemical reactions.

MOTION OF EARTH

Rig Veda 10.22.14

"This earth is devoid of hands and legs, yet it moves ahead. All the objects over the earth also move with it. It moves around the sun.

In this mantra,

Kshaa = Earth (refer Nigantu 1.1)

Ahastaa = without hands

Apadee = without legs

Vardhat = moves ahead

Shushnam Pari = Around the sun

Pradakshinit = revolves

Rig Veda 10.149.1

"The sun has tied Earth and other planets through attraction and moves them around itself as if a trainer moves newly trained horses around itself holding their reins."

In this mantra,

Savita = Sun

Yantraih = through reins

Prithiveem = Earth

Aramnaat = Ties

Dyaam Andahat = Other planets in sky as well

Atoorte = Unbreakable

Baddham = Holds

Ashwam Iv Adhukshat = Like horses

GRAVITATIONAL FORCE

Rig Veda 8.12.28

"O Indra! by putting forth your mighty rays, which possess the qualities of gravitation and attraction-illumination and motion - keep up the entire universe in order through the Power of your attraction."

Rig Veda 1.6.5, Rig Veda 8.12.30

"O God, You have created this Sun. You possess infinite power. You are upholding the sun and other spheres and render them steadfast by your power of attraction."

Yajur Veda 33.43

"The sun moves in its own orbit in space taking along with itself the mortal bodies like earth through force of attraction."

Rig Veda 1.35.9

"The sun moves in its own orbit but holding earth and other heavenly bodies in a manner that they do not collide with each other through force of attraction."

Rig Veda 1.164.13

"Sun moves in its orbit which itself is moving. Earth and other bodies move around sun due to force of attraction, because sun is heavier than them."

Vedic Cosmology is yet another ancient Vedic science which can be confirmed by modern scientific findings and this is acknowledged by well known scientists and authors, such as Carl Sagan and Count Maurice Maeterlinck, who recognized that the cosmology of the Vedas closely parallels modern scientific findings.

Carl Sagan stated, "Vedic Cosmology is the only one in which the time scales correspond to those of modern scientific cosmology."

Nobel laureate Count Maurice Maeterlinck wrote of: "a Cosmogony which no European conception has ever surpassed."

French astronomer Jean-Claude Bailly corroborated the antiquity and accuracy of the Vedic astronomical measurements as "more ancient than those of the Greeks or Egyptians." And that, "the movements of the stars calculated 4,500 years ago, does not differ by a minute from the tables of today."

The ninety foot tall astronomical instrument known as Samrat Yantra, built by the learned King Suwai Jai Singh of Jaipur, measures time to within two seconds per day.

Cosmology and other scientific accomplishments of ancient India spread to other countries along with mercantile and cultural exchanges. There are almost one hundred references in the Rig Veda alone to the ocean and maritime activity. This is confirmed by Indian historian R. C. Majumdar, who stated that the people of the Indus-Sarasvata Civilization engaged in trade with Sooma and centers of culture in western Asia and Crete.

Voltaire, the famous French writer and philosopher) stated that "Pythagoras went to the Ganges to learn geometry." Abraham Seidenberg, author of the authoritative "History of Mathematics," credits the Sulba Sutras as inspiring all mathematics of the ancient world from Babylonia to Egypt to Greece.

As Voltaire & Seidenberg have stated, many highly significant mathematical concepts have come from the Vedic culture, such as:

The theorem bearing the name of the Greek mathematician Pythagorus is found in the Shatapatha Brahmana as well as the Sulba Sutra, the Indian mathematical treatise, written centuries before Pythagorus was born.

The Decimal system, based on powers of ten, where the remainder is carried over to the next column, first mentioned in the Taittiriya Samhita of the Black Yajurveda.

"Sanskrit's potential for scientific use was greatly enhanced as a result of the thorough systemization of its grammar by Panini... On the basis of just under around 4000 sutras (rules expressed as aphorisms), he built virtually the whole structure of the Sanskrit language, whose general 'shape' hardly changed for the next two thousand years... An indirect consequence of Panini's efforts to increase the linguistic facility of Sanskrit soon became apparent in the character of scientific and mathematical literature" G. G. Joseph The crest of the peacock Princeton University Press (2000).

"Whatever sphere of human mind you may select for your special study, whether it be language, or religion, or mythology or philosophy, whether it be laws or customs, primitive art or primitive science, every where you have to go to India. Whether you like it or not because some of the most valuable and most instructive materials in the history of man are treasured up in India and in India only" Max Muller (ref: A short History of Sanskrit Literature) T. K. Ramachandra Iyer, R.S. Vadhyar & sons, 1984

Francois Voltaire stated: "... everything has come down to us from the banks of the Ganges."

From these statements we see that many renowned intellectuals believed that the Vedas provided the origin of scientific thought.

Other famous personalities who spoke of the greatness of the Vedas were: Alfred North Whitehead (British mathematician, logician and philosopher), who stated that: "Vedanta is the most impressive metaphysics the human mind has conceived."

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