

Real science consists of an objective pursuit of truth through observation and experimentation. It occurs apart from any beliefs or preconceptions about what it is going to find. It is based upon reason and direct perception, in which the reality is allowed to reveal itself. 1

However, the universe we live in is a multidimensional reality from the subatomic to the supragalactic in the realm of physics alone. Biology, medicine, psychology and the social sciences require different perspectives and approaches to deal with appropriately. On top of these are subtle forces and influences, extrasensory, occult and spiritual that many people claim to experience as well and have developed special methods of working with.

Besides any knowledge of the external world is the knowledge of the internal world, the perennial quest for Self-knowledge or knowledge of our true nature, as evidenced by the most primary and important of all life's many questions, "Who am I." This inner quest or inner science can be very different in approach than the outer sciences.

From an Indian perspective, we can call this inner science of Self-knowledge, 'yogic science'. Traditional Yoga and Vedanta also has its goal as the objective pursuit of truth. But it aims at the supreme truth - which is the eternal - that truth which never changes. It regards relative truths - up to and including the very existence of the external world itself - as ultimately an illusion because these eventually, at one time or level or another are found not to be valid. This yogic science aims not just at the knowledge of the world but an understanding of Knower.

Science and Spirituality in India

In India, science and spirituality have always gone together. Spirituality through Yoga and Vedanta has always been conceived of as a science, a way of knowledge to be approached with reason and experimentation through Yoga and meditation leading to the direct perception of truth. Other Indic systems of thought like Buddhism and Jainism have shared similar views.

Veda itself means knowledge, deriving from the Sanskrit root 'vid' meaning to know, to see or to cognize. The Vedas are called Vidyas which means ways of knowledge or perception (a term cognate with Latin video!). The Vedas we might say are the Vidyas or videos of the sages shown on the inner screen of the meditative mind. They were said to have been cognized by the human mind in tune with the universal Being or Brahman.

The Vedas address all aspects of existence through Dharma, the natural laws that uphold the universe, which reflect not only matter and energy but life, mind and consciousness. As such, the Vedas constitute what could be called a science in the modern sense of the word and much more. We can find among the Vedic sciences a whole range of sciences from astronomy and chemistry to psychology and surgery, extending to astrology and to the science of Yoga itself. We can call this integral approach to both the spiritual and material sciences as 'Vedic science.'

Unlike medieval Europe, traditional India never saw a conflict between science and spirituality. It never suppressed science or art in favor of religion. Rather its arts and sciences developed in harmony with spirituality. However, it did discriminate between the material and the spiritual sciences.

The Higher and Lower Knowledge

This the Mundaka Upanishad makes this clear. "Two sciences are to be known, the higher and the lower. The higher is through which the eternal is known." The lower knowledge consists of the outer forms of knowledge through which the transient factors are known, the aspects of name, form and action. The higher knowledge is Self-knowledge through which the nameless, formless being is known.

This division of the higher and lower forms of knowledge reflects the Vedantic definition of reality as that which is eternal and the transient as an illusion. Because of this orientation, historically in India the inner or spiritual science gained the greatest attention, though the outer sciences were not neglected.

The lower sciences, moreover, can similarly be divided into two groups. The first are the usual material sciences like astronomy and medicine such as formulated in modern science. Second are what could be called 'occult' sciences like astrology and Vastu, which modern science has generally neglected or rejected, which suggest subtle influences of intelligence pervading the forces of nature. While the Vedic mind never saw a real division between these two types of outer

sciences (for example, Vedic Jyotish includes both astronomy and astrology), since the modern mind does, it is important to note this distinction.

Science as Yoga

However, the distinction between the outer and inner sciences was never meant as a radical division. *In the Vedic view, one can approach the outer sciences with an inner vision and turn them into inner sciences as well.* In this way, the outer sciences can become inner sciences. That is why we find such diverse subjects from astronomy and mathematics, to music and even grammar defined as paths of Yoga or spiritual paths. We find the same groups of Vedic seers working with and developing the outer as well as the inner sciences from the most ancient times, not finding working with one to necessarily be contrary to working with the other.

It remains possible to approach such outer sciences as physics as spiritual paths or paths of Yoga. They can be part of an inner science of Self-realization if one uses them to connect to the universal Being and Consciousness within the world and within ourselves. Much of modern physics is heading in this direction as it looks for an underlying consciousness to explain the underlying unity of the laws of physics.

Some scholars have said that this Indian emphasis on spirituality prevented the outer sciences from developing in India, since the outer sciences were not given the same priority. But we must remember that the dark ages in India came later than in the West, with repeated foreign invasions and conquests disrupting the country from 1000 AD to 1800 AD. Had this not occurred India would have likely played a greater role in the development of modern science. Today we find many scientists coming out of India and many of these feel quite in harmony with Yoga, Vedanta and Buddhism as well as with modern science.

The Correct Means of Knowledge

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.

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.

The Meditative Mind as the Best Instrument of Science

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.

The Conscious Universe

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.

The Need for both Outer and Inner Sciences

Clearly, the outer or material science has its value in helping us to understand and utilize the forces of the outer world. It gives us better technology which can make our lives easier. But when it comes to the inner world, scientific knowledge is often either indirect or misleading. For the inner knowledge, we need to cultivate the yogic sciences with their understanding not only of the physical

universe but of the subtle forces behind the senses and of our true nature beyond time and space.

After all the ultimate questions of human life, whether at a personal or a scientific level, are - "What in us can survive death?" and "How can we gain immortality?" Religions ordinary try to answer such question by faiths, telling us to believe in something of this nature but not showing us how to directly perceive it for ourselves. Yogic science and similar forms of mysticism show us how to know the immortal and eternal in our own minds and hearts. This means that however practical the outer sciences may be for dealing with the external world, our deeper human quest is best addressed through the inner sciences.

Important Vedic Sciences

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.

Yogic Science

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.

Ayurveda

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 different 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.

Vedic Astrology

If we live in a conscious universe, then the lights of the stars which illumine our world must reflect some power of consciousness as well. Jyotish or Vedic astrology is aimed at helping us understand how the lights of the stars and planets affects our own bodies and minds and the fate of our world as a whole.

Time is not simply a force of physics but a power of intelligence and a process of the manifestation of consciousness. Vedic astrology helps us understand the

karmic influences coming to us from the greater universe as channeled through the sun, moon and planets of the solar system. It holds that time is not simply neutral or a mere continuum but reflects various rhythms which project forces that affect the life and karma of living beings.

That time is projecting karma through the movement of the luminaries or heavenly bodies is an idea that seems illogical to modern science. But if we recognize that the universe is pervaded by consciousness, we can recognize that light ultimately is a power of consciousness, which means that astronomy must recognize astrology.

Astronomers have often complained that astrology is illogical. Yet actions that go beyond time and space or the ordinary laws of physics are part and parcel of the new physics. With its quarks and quasars, its uncertainty principle and quantum mechanics, physics does not appear any stranger than astrology. Such subtle connections of the new physics may provide some eventual credence for astrology as well.

Conclusion

Once we recognize the place and value of both the outer and inner sciences, we can learn to use both to improve our lives on all levels. This should be our real work as a species and it can be a great adventure of discovery and transformation. This universal pursuit of knowledge can be used to set aside our political and religious differences, which are not a matter of truth or direct perception but of clashing beliefs and opinions. The ultimate unity of science *and* spirituality can provide a light forward to a true global age of peace and harmony. In such a world the inner technologies of Yoga will be found to be as important as the latest advances in technology, if not more so.