

Patanjali Yoga and Scientific Value System

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Eight Limbs of the Yoga

1) *Yama and Niyama*

These constitute the very first steps one has to take in the long journey towards Self-realisation. They are like kindergarten classes, with which any secular education commences. In this sense, most of us are tiny toddlers in the field of spirituality.

Yama consists of *Ahimsa* (non-injury), *Satya* (truthfulness), *Asteya* (non-covetousness), *Brahmacharya* (continence or self-control) and *Aparigraha* (non-receipt of gifts).

Niyama comprises of *Shaucha* (external and internal purity), *Santosha* (contentment), *Tapas* (austerities), *Swadhyaya* (study of scriptures) and *Ishwara-pranidhana* (surrender to the Divine). There is no necessity here to go into details, since they are well explained in books on Raja Yoga, especially the one by Swami Vivekananda.

For our current study here, the most important is the last, viz., surrender to the Divine. Patanjali does not insist on faith in one particular form of God, as in sectarian religions. What is needed is the appreciation of the fact that there is a higher power which governs our lives and one should consciously or otherwise offer one's prayers to it.

2) *Asana and Pranayama*

These are physical practices enjoined by Patanjali to train one's body and mind, which

are the media available to us for Self-realisation. *Asana* means simply a firm posture, in which one can sit for long periods of time in meditation, without feeling bodily discomfort. The multifarious *Asanas* now in use are all meant to make the body supple and healthy, so that one can do yoga more effectively.

Pranayama is one of the most misunderstood of the yogic steps. It has been equated to breath control. It is much more than that. It is the voluntary control of energy within the body. Again, details are available in *the Complete Works of Swami Vivekananda*.³

3) *Pratyahara and Dharana*

These are mental exercises, which help in withdrawing the mind from the external world and in turning it inwards. As mentioned in the *Kathopanishad*,⁴ it is only a rare soul who is bold enough to turn his gaze inwards to realise the *Atman* within. This process is two-fold. The first step is to shut out the external world. The mind, however, by nature, abhors vacuum. Hence, the external world so shut out must be replaced by something internal and this process needs a support. The particular object on which the mind is now focused or concentrated is purely the business of the individual concerned. It is a matter between the individual and the Maker, and has nothing to do with the religion, sect, gender or age of the person concerned. Raja Yoga, in this sense, is all encompassing and gives total freedom to an individual.

4) *Dhyana and Samadhi*

The last two stages are Dhyana (meditation), which is the unbroken or uninterrupted flow of thought on the object of contemplation, and Samadhi, which is the ultimate state of oneness with the absolute. These are concepts which cannot be described in words, but only experienced.

How Scientific is this Yoga?

Discoveries in science follow a particular methodology called the Scientific Method. This commences with the observation of natural phenomena, followed by a process of reasoning to find out why things behave the way they do. Based on such logical reasoning, a possible hypothesis is developed. This is only a tentative guesswork and needs to be validated. The hypothesis is then used to deduce results, which can explain phenomena that have either not been seen at all, or even if seen not understood. The final validity is, of course, through controlled experiments. According to Feynman, 'the test of all knowledge is experiment.'⁵

Let us consider the Ashtanga Yoga in the light of the above. The origins of this Yoga are lost in the hoary antiquity of the past. We do not know when these discoveries were made and what the stages of the growth were till the findings were codified in the Yoga Sutras. All we are left with is a set of instructions which need to be followed scrupulously to achieve the end results. We also have records of statements of many great souls who have trodden this path and certified the validity of these instructions. In this sense, Patanjali's Yoga is an experimental science. The laboratory, in which this science can be studied, is our own body and mind. Like any other treatise on physical sciences, the Yoga Sutras also challenge us to perform these experiments and check if the

conclusions are correct. The study of any physical science requires the help of a competent teacher. Similarly, Yoga needs the help of a realised soul, so that the novice does not make any mistakes. These mistakes can prove costlier than those made in a science laboratory, since they may affect the psyche of the subject himself. Hence the greater need for guidance.

We will now examine how Yoga satisfies the criteria for being considered scientific. We saw above that there are four criteria against which science is weighed—Universalism, Communalism, Disinterestedness and Organized Scepticism. It needs now to be demonstrated that Yoga also displays these characteristics.

1) As discussed earlier, *Universalism* implies being independent of race, colour or creed. Ashtanga Yoga is a practice from which none is barred. Even though there have been some misconceptions that Yoga is a purely Hindu practice, it is now generally recognised that it is a common heritage of the human race. It is in the second half of the last century, when Yoga practitioners started travelling West, that this realisation has dawned on the westerners. The foundations for this had already being laid by Swami Vivekananda in the United States more than a hundred years ago, through his lectures and commentary on Patanjali's Yoga Sutras. Today, there are millions of practitioners of Yoga in the West, who have realised the truly universal character of this practice and have adopted it irrespective of their personal creeds, gender or colour. There are Yoga schools even in the Middle East and some Islamic countries like Turkey, testifying to the truly universal character of this practice.

2) The second characteristic, *Communalism*, requires that knowledge should be freely accessible and public. This is obviously true of all ancient scriptures, whose wisdom is the

common property of humanity. The intention of the ancient sages of India in compiling existing scriptural knowledge was not to gain wealth or fame, nor mislead the public. Their only interest was the welfare of human beings. However, of late, there have been instances, especially in the United States, of people trying to take patents on Yogasanas. The motive is obvious. But, all such attempts have come to naught, thanks to the vigilant public. Yoga is public property, but still comes with a proviso. It is always safer to learn it through a teacher, just like any other science.

3) *Disinterestedness* implies that knowledge should not be manipulated for personal ends or profit. This does not mean that one cannot take to Yoga as a career. In today's environment, where the individual has to take care of himself or herself, earning one's own livelihood in an honest way has the approval of society. But, what is meant here is that Yoga should not be misused to promote an ideology, as was the case with science during the time of Hitler and Stalin. This can happen only when Yoga becomes a possible political weapon. The chances of something like that happening are rather remote, and we hope that they remain remote!

4) The last characteristic is *Organised Scepticism*, which simply means, 'Do not take anything for granted just because somebody says so.' This was a dictum Sri Ramakrishna was very fond of and always encouraged his disciples to follow it. Patanjali, along with the sages of the Upanishads, is also of the same opinion. He gives a set of instructions in his aphorisms, without going into too many details, to be followed by sincere aspirants. This is the reason why his aphorisms are terse and can be properly understood only after much practice. The best commentators on these Sutras are those who have actually verified it through long

practice. There is no place here for dogma or blind belief.

In spite of all these logical assertions, there is still a resistance on the part of the international intellectual community to accept Raja Yoga or Vedanta as scientific. This is true especially of the practitioners of conventional scientific disciplines. The only way one can probably convince these sceptics is to present these esoteric sciences in the language of material sciences, like physics, chemistry, and biology. We have cited Feynman earlier who said that the test of all theory is experiment. This is the methodology followed in science, namely experimental investigations under controlled conditions with the use of the latest techniques of data analysis. Is it possible to adopt the same method to demonstrate that Raja Yoga too is scientific?

One major reason why a large number of people around the world are going in for Yoga today is its emergence as an alternate system of health care. This role has been recently recognised, so much so that the Government of India has a Department of Alternate Medicine, dealing with Ayurveda, Yoga, Unani, Siddha and Homeopathy (AYUSH) as systems of therapy. This has been made possible by a good number of medical doctors recognising the value of Yoga Therapy as an adjunct to their allopathic practice. This is true not only of India, but of the West also, where more and more people are being attracted to this non-invasive technique of treatment.

In view of these developments, a time has come when scientific investigations need to be undertaken to quantify the benefits of Yoga. Swami Vivekananda Yoga Anusandhana Samsthana at Bangalore has been engaged in this task for the last two decades.⁶ As a result, more and more intellectuals and thinkers have started recognising the rational and scientific

nature of Raja Yoga. This effort needs to be strengthened and replicated around the globe, for the greater benefit of humanity.

Concluding Remarks

When we compare the scientific method adopted by scientists with the instructions laid down by Patanjali in his Yoga Sutras, we are struck by the remarkable character of the latter. The Sutras do not ask us to subscribe to any particular religion or godhead to the exclusion of others. They do not ask us to take their words on faith or authority. They challenge us to conduct the experiments upon ourselves. They

do not prescribe any conditions about age, gender, colour, creed, etc. They are universal and international in character. It is the universality and the non-dogmatic character of Yoga, which has attracted attention wherever it has been propagated. If there is any one spiritual discipline which can be considered to satisfy all accepted values of a scientific system, it is Patanjali's Yoga Sutras. It is no surprise that it has been received enthusiastically and practiced all over the world.

This Yoga is the contribution of Indian culture to the international community, of which we can justifiably be proud. □

(Concluded.)



References

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5. Feynman, Richard, *Lecture Notes on Physics*, vol. 1, p 1-1, Addison-Wesley Press, 1958.
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Is Yoga Scientific?

'Is religion to justify itself by the discoveries of reason, through which every other science justifies itself? Are the same methods of investigation, which we apply to sciences and knowledge outside, to be applied to the science of Religion? In my opinion this must be so, and I am also of the opinion that the sooner it is done the better. If a religion is destroyed by such investigations, it was then all the time useless, unworthy superstition; and the sooner it goes the better. I am thoroughly convinced that its destruction would be the best thing that could happen. All that is dross will be taken off, no doubt, but the essential parts of religion will emerge triumphant out of this investigation. Not only will it be made scientific—as scientific, at least, as any of the conclusions of physics or chemistry—but will have greater strength, because physics or chemistry has no internal mandate to vouch for its truth, which religion has.'

—Swami Vivekananda, (CW 1:367)