

SCIENCE AND SPIRITUALITY IN THE NEW MILLENIUM

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SUMMARY

This article discusses the question as to what might be the most important driving force for Man in this new millennium. We examine man’s deepest quest, Spirituality, in the context of both Science and Religion, since Spirituality usually lives in the Halls of Science wearing a mask, and waves with every swirl in the banners in the Pastures of Religion.

1.INTRODUCTION

The surging worldwide interest in the synthesis of Science and Religion is not surprising. In the last couple of centuries, Science has made immense strides, growing exponentially, and impacting all sectors of human life. It has done much to improve man’s living conditions and reduce pain and suffering. However, it has also given to man the means for total self-annihilation. There are ecological side effects, and many are scared of the genetic Genie that might be coming soon upon us. There is more wealth in the world, but the overall misery remains the same in terms of social and economic

tensions. Man has not matched the progress in science with ethical progress needed for life in the emerging global village. A revolution in values is needed. Traditionally, Religion has provided some of this. But, taken too narrowly, this also increases misunderstanding, and promotes conflict.

Moreover, there has been a tilt toward material values as opposed to ethical, because of Science providing Man with a lot of goods. Too big a proportion of the 24 hours that are available to us each day, is spent on problems associated with finding, hoarding, and managing the materials. Consequently, there is lesser time for contemplation on Man's other needs. Indeed, considering the increase in violence among children, and many other similar social indicators, there seems to be an erosion of values. Thus, because of these and other reasons, Science is blamed by many as the primary source of our problems..

On the other hand, inter- and intra- religious quarrel and misunderstandings are raging all over the place, often exploited further for social and political gains. Religious intolerance, even between sects inside the same religion, continues to be a great source of tension. Hence, to many, Religion seems to be a major trouble-maker.

However, to most people, both Science and Religion have a large number of attractive features. The rational methods of Science are attractive, and many would like to combine them with ethical and other spiritual values that Religion offers.

A deeper examination reveals that the above is, indeed, a worthwhile goal for both Science and Religion. As a matter of fact, they already stand linked together by Spirituality, A realization of this by Science would make it grow even faster and in the proper direction, and a realization of this by any given religion would help it to weed out

the harmful growth and help it join with (The Higher) Science in its march towards the Eternal.

In the present article, we examine Spirituality in further depth, and its role in the above synthesis.

2. SCIENCE

Science is a study of the universe around us, as it appears to us through our senses, or the extension of the senses in the form of measuring instruments. It also deals with the making of machines which can help us in what we wish to do, by helping us to do it, do it faster, do it at a larger or smaller level, or at a level requiring a larger or smaller precision, etc. Often, Science deals with the prediction of natural processes of interest to us, or the taming of (or dominance) over nature for our convenience.

The 'scientific' (or, 'rational') approach is, naturally, highly regarded. A good scientific researcher is wedded to the truth behind his subject matter. If he finds from his work that the truth contradicts previous opinions held by his peers, elders, or teacher(s), he still proclaims his results and argues in their favor. Indeed, otherwise, Science cannot proceed further.

Science is, often, 'utilitarian' in its efforts. Pursuit of science, in most sectors, requires varying amount of funds. Thus that which is considered to offer more material reward in the short or long run, is favored. Sometimes, this reaches extremes, where the 'long' run (even when it is really quite 'short') is lost sight of, and only the very short run, even private interests, are allowed to be pursued. (The hue and cry in the research on medical prescription drugs is well known.) Science, thus, becomes \$cience ('dollar-science'). In many schools of science, pursuit of 'scientific truth for its own sake' has

become a matter of the past, and they are more or less 'school of Science'. There was a time when pursuit of science, in most places, was a joy. Now, there are some, where it is largely a drudgery.

Besides the above, Science is also accused of becoming 'suiscience' (suicide science) in view of giving to man the nuclear and biological holocaust products for mass destruction, even though the decisions for the same are largely outside the realm of Science.

On the other hand, there have always been, and there still are, fairly large number of scientists, whose attitude towards life and the world is quite spiritual. Many of them are quite selfless workers, whose mind lives in the pursuit of scientific truths, neglecting sometimes their worldly needs. Often, society punishes the scholar-scientist and rewards the businessman-scientist. For example, of two students A and B doing M.D., A being bright goes for Ph. D. and becomes a researcher, and B being dull somehow finishes and starts practice. Ten years later, B is monetarily far richer than A. In spite of this, driven by conscience or intellectual interest, many prefer the life of plain living and high thinking. The lack of worldly interest is not uncommon. Some of the great scientists are also good examples of the same. It is said that Einstein (when he first came to USA from Germany and joined Princeton), on being asked how much he wished to be paid, mentioned a ridiculously low salary. Similarly, Goedel did not want to attend a conference in his own honor. The mathematician Paul Erdos, was almost a sage, having few worldly possessions.

3. RELIGION

It has been said that all people have a religion, it being the mode by which they actually live. The atheist has the religion of believing in 'no-God' (even though he can not prove his position to be correct). A Buddhist may deny the existence of God, claiming still to belong to the religion of Buddhism. Indeed, in most cases, a religion is a belief-system, considered by its adherents to be divinely inspired. It has rituals, with attendant philosophies, leading to desirable goals, these often being a pleasurable life in this world and also in the world to come. For this reason, many religions may often amount to the materialism of both worlds. This is an ironical contrast with the religion of the atheist who might practice materialism of only this world.

Besides opulence, other lures are there. For example, a senior aspirant may ask for a seat on a high throne in paradise, from where he may boss over the commoners. A person may try to convert an outsider into his fold, for he may believe that this would help in his own sins being forgiven, or secure him a promotion in this or the other world.

A religion may have a rather rigid notion of 'God'. These often come in the form of limitations or other peculiarities. For example, even though God is considered all-powerful in almost all religions, some do not give Him the ability to personify. Others consider Him unable to be in an icon. In some circles, one may have a God who is considered omniscient and merciful, and yet who knowingly creates souls who do mischief in the world and are thus permanently sent to hell by Him. But, such a God would have a tyrannical sport, contradicting the fact of His being merciful. In other circles, one may have gods and goddesses who often seem to have (the limitation of having) desires and aversions like we mortals do.

In spite of the above, the religions have played an enormously significant and beneficial role in the history of man. To varying degrees, they have taught ethical and moral values, without which society could not survive, This , in turn, is because they usually carry various forms of spirituality, which we discuss next.

4.SPIRITUALITY

Spirituality is concerned with the eternal nature of the Self, the inherent Reality (at the deepest levels) of all entities. The 'Self ' is beyond concepts. It is not a sub-concept of any concept, including the concept of existence. The Self cannot be said to be existent or nonexistent, true or false, real or unreal. The 'Self' and the 'no-Self' are the same. The Self is also called 'The Whole'. The Self is all there is. When we rise above concepts, it is seen, like a Moebius strip, to have only one side. In other words, it is above duality, or the conflict of the pair of opposites.

It must be added that this lack of duality does not mean that you necessarily dissolve your individuality. You only need to relinquish your false ego. In particular, in order to live in the state of eternal devotional service to the Divine, you may need to have the duality in which you have a separate identity. Indeed, the spiritual world is not a point to which every seeker must converge. Rather, it is a whole world in which different entities find a place according to their own mental makeup.

The quest for Reality is the most awesome and wonderful adventure that there is. As your mental contact with sense-objects diminishes, you experience the profound joy of the inner self, a peace which 'passeth understanding'. The depths of the Ocean of Reality are calm, and exist in a state of sameness. You can merge with this ocean and have the experience of the Ocean from the Ocean's viewpoint. But, you may also exist as

a separate drop, and enjoy It from the drop's viewpoint. The experience of each drop is 'valid' in its own right. The Universe of Reality, the Whole, has all viewpoints in it. As a whole, It is subject to no axiom, and obeys no logic. However, it has sub-universes, each with its own axioms and its own logic. Each of this has its own place, its own importance, in the Whole. But, the Whole is not a sum of its parts. Note that in order to ask a question, or to have an argument, you need to be in some well-defined sub-universe endowed with an axiom system and a logic. Then, you can try to conduct your query and reach an answer. But, this answer may not be valid, and the question itself may not even be meaningful, in a different sub-universe. Thus, the questioning approach has serious limitations.

From the above, it is also clear that any fixed and limited belief-system is to be discouraged, if the quest of the Self is to be continued, for any such system must correspond to a particular sub-universe, to the exclusion of the others. The seers have realized this fact. For example, the Isha Upanishad says (in Sanskrit): *andham tamah pravishantee yay avidyaam upaasatay/ tato bhooya iva tay tamo yaa-uh vidyaa-yaam rataah* (They who worship non-knowledge, enter into dense darkness. However, they who remain absorbed in (what they consider to be) 'knowledge', reach a denser level of darkness.) The soofee poet Ghaalib writes (in Urdu): *Eemaan mujhay rokay hae jo kheenчай hae mujhay kufr/ kaabaa meray peechhay hae galeesaa meray aagay.* (Though faith is holding me back, disbelief is pulling me forward. Kaabaa (the Muslim holy place) is behind me, and the Temple of the Unknown is in front of me.)

Spirituality is also concerned with the manifestations of this nature or reality at more superficial levels. It deals with the study of this reality at all levels, and with any

and all practices that help in such study. It is thus also the set of all experiences connected with such study and practice. Any life style that is conducive to such study, practice, and experience is termed 'spiritual'.

The spiritual journey is the journey towards the realization of the self, the ultimate reality. This journey does not admit of halts (at fascinating harbors on the way, towards which you may develop attachment from time to time), nor of limitations from your own side as to where you are to go (caused by aversions to what you do not like). You listen to the Self, who directs you when you surrender and wish to be directed. You are content with wherever the Self takes you. Spirituality occurs when you stop resisting that which is unfavorable, and stop hankering for that which is favorable. You simply flow with the flow of events. You enjoy the fortunate, but do not get carried away by it. You also patiently bear the unfortunate, but do not complain. You only keep doing selflessly your duties towards Man, and towards your attainment of the Self.

You relinquish the fruits of all actions, and renounce them unto the Divine. Shaking off the worldly fever, not entertaining hopes for success, leaving behind the sense of mine-ness, get involved in the battle for Life. By so doing, you may later be surprised to find that even at the worldly level you are quite successful. The validity of this statement is not hard to see. By adopting the above stance, you gain in two major ways. The first is that you do not get elated by success. Since you are working selflessly, being oriented to the Divine, you keep pressing hard instead of 'resting a little bit'. Also, if you meet failure, you do not lose heart because of lack of personal attachment. You persevere. You excel the ordinary man in both cases. This accumulates, and you find yourself ahead. The second reason is more subtle. The spiritual activities tend to increase

the intuitive abilities of the practitioner This gives him a great advantage in day to day life, since he has a better grasp of the situations around him. It is really true that even in this world, it is generally easier to succeed following the straight path rather than the crooked one.

There is yet one more important worldly gain that spirituality confers on you. It teaches you to look at the positive side of whatever circumstances you are in. For example, suppose events occurred beyond your control and landed you in serious difficulties. In such conditions, most people lose heart, get depressed, and tend to move towards further failures. However, because of the positive attitude, the spiritualist does not 'take the loss' and thus does not allow himself to be victimized. He knows that although the negative events were beyond his control, his own response to the total situation is surely within his control. Looking at the positive side, he discovers new doors that he can open, doors that often lead to opportunities which could not have been easily envisioned before.

There are three philosophies, 'utilitarianism', 'pragmatism', and 'logical positivism', which have been in vogue during the last century, each of which purport to deny spirituality itself. It is like three colonies of land animals on the shore, trying to decry the ocean. However, although these theories relate to matters too small relative to the questions being discussed here, they do have a local importance, and as such they have had impact on the minds of many people who are too busy to look at them closely. We take these in order.

Utility is based on the economic concept of material value of some activity. However, the concept of utility presumes a criterion which is to be optimized and a

context over which the optimization has to be done. But, for the spiritualist, the criteria of interest are many and of varied kinds, and the context is far larger. For such a situation, a rational generalization of the utility principle would lead to what the spiritualist is supposed to do.

Pragmatism says that we need not worry about why things work. Just knowing how to make them work for our daily needs, is sufficient. It wants us to produce good 'cookbooks', using which all our material needs can be satisfied. It does not aspire for anything further. Topics like Reality are totally out. It is like a blind man de-emphasizing work on paintings. Although, in many practical situations, pragmatism would be wise, most people do have much broader visions. To a pragmatist, crossing the Atlantic alone in a small boat, may be a ridiculous idea. But, the adventurous sailor has an inner urge, which makes him feel compelled to do the crossing. The spiritualist is the most adventurous of them all. Pragmatism is sterile, and is a life wasted.

Under positivism, no 'metaphysical' statement can be meaningful, and 'spirituality' should be discarded. Positivism says that true knowledge can be obtained from science only, and that a scientific statement must be logical and must be verifiable by repeatable experiments. This attitude is inherently accepted as true, and teachers all over the world (even though unaware of 'positivism') have imparted that to the students, causing a growth of rampant materialism and shallow thinking. As a young man, even Einstein was impressed by it. But, later, he made his famous remark that positivism was essentially 'nonsense'.

On the surface, the main thesis of the positivist appears to be fine and innocuous. Yes, of course, we do not want to be illogical, and we should want to be able to verify

scientific assertions. There seems to be nothing wrong in this. But the trouble lurking in it is seen at much deeper levels. A full discussion of what is wrong with this theory would necessarily be too technical, and is thus outside the scope of this article. However, for the sake of completeness, I would briefly touch upon some of its inherent inaccuracies and misunderstandings.

The first point to emphasize is that Science does not proceed with thoughtless experimentation and subsequent analysis of data to see what turns up.. As Einstein said to Heisenberg, theory precedes experimentation. In positivist language, Einstein is saying that metaphysics precedes scientific lab work. Thus, the positivist is looking at things upside down. Another point is that all of, or even the greater part of, knowledge that comes from Science, comes by intuition or direct perception of the nature of truth. This process is entirely spiritual in nature. The positivist is wrong in assuming that knowledge comes to us only through our five senses and the extension of these by machines.

As the author has argued elsewhere, there is the Law of Intrinsic Confounding in Experimentation, which basically says that all experimentation has an inherently *subjective* character. This is so because the methods involved in the experiment, and the 'site' of the experiment are partly forced upon us, and partly chosen by us using 'theoretical' judgment, which again amounts to using 'metaphysics' (repugnant to the positivist). 'Repeatable experiments' are a part of statistical philosophy, which is at much shallower levels. The Higher Truths related to the Self do not come that way. It requires faith and receptivity. This is reflected in the following statement of the great spiritual leader B. Siddhanta: "Partial gnostic attempts of empiricists would never permit them to come in touch with the Absolute, unless they have got a submissive mood, a conciliatory

habit, of audiencing the transcendental sounds invoked to their ears.” This statement is supported by the author’s scientific work on the Nature of Reality, which maintains that our universe has the form of a logic-tree. The role of faith and receptivity become clear by the logic-tree paradigm. In the light of these, the positivist’s assertions tend to become meaningless.

Positivism started in the so-called ‘Vienna Circle’, whose members had no contact with any great spiritual leader. They did not know what spirituality is all about, and thus they talked in ignorance. *They do not see the importance of Consciousness and the crucial role played by it in Science.* As the author has stated elsewhere, in view of Goedel’s theorem, irrespective of how much Science develops, there will always be unanswered questions left. The scientific method is not capable of fathoming Reality at a non-negligible level. *At higher levels, Reality is seen by direct perception alone.* There, the five senses do not come into play, and the observer-observed interaction tends to melt away. Thus, relatively speaking, positivism is concerned with the more trivial issues, and is irrelevant to advanced quests.

5. SPIRITUALITY: IN SCIENCE, AND IN RELIGION

How do Spirituality and Science stand relative to each other? Briefly put, Spirituality is the larger Self of Science, which the latter is generally unaware of, and sometimes shyly regards as fantasy. Both are dedicated to truth. But, Science is more mundane, detailed, and precise. Progress made by different workers is combinable. Spirituality is concerned with the Whole, the total Reality. At the mundane level, it almost is Science, particularly if the goal is selfless. It is more foggy, sketchy, and mystical, which is why the term ‘mysticism’ is sometimes used. Both use intuition quite a

lot, but in Spirituality, it is at every step. Spiritual progress by different seekers can be 'combined' to a slight extent, since they can give each other fellowship and compare notes. You can learn, and gain energy from, your spiritual guide. But, beyond this, each traveler is on his own. Each seeker has to fight with his own ego, bring his own mind under control, get rid of his own baggage of desires and aversions, and rise above the conflict of the pair of opposites. As success comes, the ego tends to rise, and the battle against the ego is more severe. Science has far less of such battles; its aim is more the control and domination of Nature. But, this aim of science would change, and Spirituality would eventually take over, IF society is able to make scientific progress without ethically degenerating and becoming self-destruct.

What about Religion? It is the organism in which Spirituality usually takes birth. Yet, what form the organism will take as it grows, is very variable. Often, Spirituality is hardly visible in the grown up form. In a few cases, the opposite occurs, and It shines through every cell.

Religion is, usually, a limited definition of 'God'. The Highest Spirituality is limitless. Religion pursues certain needs that are to be fulfilled. Spirituality rises above 'needs' to the state of needlessness. Religion is often a prescription for good times here and particularly in the next world. Spirituality is above the concept of good and bad time, and sees God in everything and everything inside God. It leads you to the vision that 'God alone is'. Religion can, and often does, contradict itself. Spirituality is when you see the source behind the contradictions, leading to a unified vision.

Spirituality is the experience of the Infinite. Its joy is indescribable. It is the exploration of the Inner Space. Even the least spiritual experience is a great experience.

You may find it in the hush of the wilderness, in the calm of the ocean on a moonlit night, in the rhythm of the restless waves, in the fragrance of the freshly bloomed flower. Spirituality is when Silence begins to talk to you, when you transcend language, when knowledge comes to you through your innocence. It occurs when you know that God is a greater well-wisher and caretaker of yours than you yourself are or could ever be, when you know that any moment of your life not spent in the service of God is a wasted moment.

Being all-encompassing, spirituality helps you at the physical and worldly level as well. That happens because of your faith in, and your act of surrender to, the Divine. What we call Nature is, indeed, the nature of the Divine. The faith and the surrender open up the avenues in Nature through which the Divine can help you. This fact has always been well known to spiritualists. However, now, it is also finding support in the author's mathematical work in this field. Spirituality is not just a bunch of emotions and fantasy. It is the Reality of our existence. Physics lives inside It only. The proof of the pudding is in the eating. So, try It. It will not fail you. It *will* respond. It has to respond. Indeed, It will respond with a mathematical precision.

Spirituality is sufficient unto Itself. It is the force of growth inside the seed. The 'sermon on the mount', for example, would live forever, with or without a St. Paul. Religion is only a vehicle, Spirituality the driving force. Religion is both horizontal and vertical. Only Its vertical part, is made of Spirituality. The horizontal part comes from personal and traditional choices, and worldly urges and associated struggles. The ascent to the Divine is vertical only. A religious man, devoid of spirituality, may consider members of his flock to be committing 'adultery' if they hobnob with people of a

'different' religious flock Spirituality does not admit of such 'differences'; It is beyond them. The messages in spiritual books, such as the Bhagvad Gita for example, are for all mankind, and for all times. They are in 'the nature of things'. That is why the Buddha became the 'Tathagata' (one who is in the nature of things). .

6.CONCLUSION

As a result of worldly urges, and devoid of spirituality, science and religion may join together in one group and may fight with science and religion allied together in another group. We see that all the time. What we need is the realization of spirituality in both. As the discussion in this article shows, spirituality is the prime factor behind each one of them. It is the true, the only, link between the two. In the interests of our continued existence, the strengthening of this link is of prime concern to all.

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