

SRI AUROBINDO'S PERSPECTIVE ON THE FUTURE OF SCIENTIFIC STUDY

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Science and scientific study are high points of the world-civilisation today. We all enjoy the benefits of what the sciences have discovered and laid at our disposal as products or conveniences of the modern world. There is a large consensus on what science is and what scientific study implies in India and abroad. Generally, when we hear any reference to Indian perspective on science, it is about a perspective from India's ancient past, but in this essay I explore more specifically the perspective on scientific study that Sri Aurobindo envisages for India and the world in the future. This future perspective, of course, looks to the ancient for its source and aims to synthesise within itself the present as well.

Modern science originated in the western world, where there is a neat divorce between philosophy, religion, and science in the search for truth. Each had its golden days in the course of European history, but science has come out triumphant by asserting itself over the other two. It claims greater rigour and certitude in its results, sticks to a certain area of life where it can apply its vast generalisations without further complications, and has defined its methods. We stay in the outer, surface life of body, mind, and emotions, we stick to facts that are sensory and visible, and we limit our scope to the tangible world that our intellectual mind and the man-made tools can quantify or access.

The results are there for all to see. However, with time, the areas of application of science have grown and from the domain of the physical sciences (physics, chemistry, biology), it has encroached more and more on other areas of human interest where the same methods are applied. The new areas have been more subjective and once again science has had to divorce from a part of its quest and sub-divide into hard and soft sciences, where the hard sciences are deemed capable of accessing the answer to a given question, whilst the soft sciences can find only a relative answer. The latter have in turn retaliated by producing extensive literature on the functioning of science, its methodologies, its human organisations, and through different vantage points shown how scientific knowledge is produced, and highlighted the grey areas of incertitude in the quest.

Philosophers like Popper have shown how there is dogma in science too. Where there is dogma, there is the scent of religion and hence, for any theory to be truly scientific, it has also to be refutable, and paradoxically to become less certain: debatable, disputable and disprovable, just as it had to be verifiable. This brings to the fore another divorce of science, a more subtle divorce, between the phenomena and the theories. Even if a phenomenon seems to work always in the same manner, the intellectual theory that explains why it is so can change with the advance of science. It is called progress! The idea of progress is intrinsically linked to the idea of science as different from religion, since religion demands faithfulness to teachings of the past.

In *Conversations with Sri Aurobindo*, (Pavitra, p. 145), Sri Aurobindo says, "Again scientific hypotheses have no character of truth. Very often it is possible to give two different theories explaining the very same facts – so they have equal value. In such a case probabilities are more important than truth."

In fact ambiguities and dead ends seem to plague the sciences more and more, where the impossibility to understand or explain has led to a further divorce between the sensible reality and the abstract models. Instead of explaining phenomena, science has started substituting them with mathematical models that describe but don't explain in any way. Hence each new discovery leads to a set of changes in the mathematical model. The theory is ad hoc and on top of it, does not say what the phenomenon is, of what it is made and why it is working. It only describes it. The only concrete reality is that the physical phenomenon works.

There are times when even a mathematical model does not describe the physical reality, then an unknown is invented or postulated (often in the form of a new particle, a new force, or a new principle), an unknown which makes the reality as it is but about which we cannot say anything since it is unknown. It cannot even be detected. Its existence is only there to justify what cannot be explained by physics or by mathematics. Dark matter is one such example but there are several others. So the once reliable hard sciences are having a hard time answering fundamental questions of reality. They are not alone.

The soft sciences too have similar problems. We find different frameworks of study and analysis in each of them, and they too vary in time according to the theories in vogue in the world at that point of time, or the personal taste of the scholar for one particular mode of analysis. So we have structuralism, and deconstruction and psychoanalysis, or just sets of concepts that act like the mathematical models and provide a lens to categorise any phenomenon, or to string a collection of facts together. The fact that they become obsolete and replaced with new models does not seem to disturb anyone, since it reflects the progress of science.

What characterises this approach to science is the slow ascension towards less tangible realities. We start with the physical domains, we shift to more psychological

realities, and all through scientific study implies a hypothesis that is supported by sources or instruments external to it. We then shift to the most subjective area of interrogation, we are in the presence of a writer, an author, a philosopher, or an artist, his analysis of the world, of society, of the human being and of self, is delivered as it is, without justifications external to himself, that normally science would have demanded. His word seems to be authoritative, and any of the sciences will use it as evidence to a claim. A consensus seems to grow around his expertise, his authorship. The validity of his claim is not always questioned even though it would be possible to do so. We have moved from down to up, from the material world to areas intangible or unintelligible sometimes, but there is here some searching for truth and saying something about it which is being accepted. This is the best that the present fragmented notion of reality can produce. We will now see how, in contrast, the Indian perspective evolves from the top downwards.

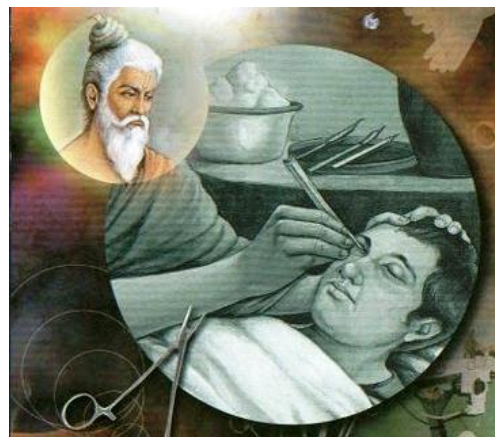
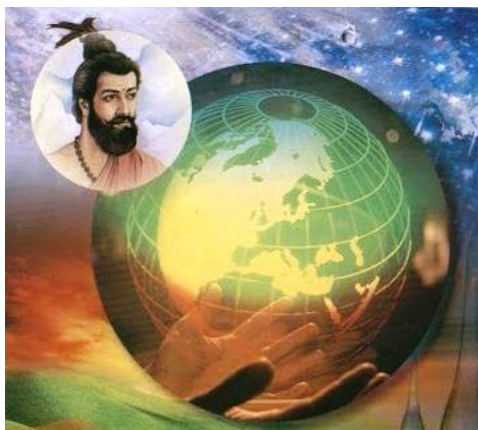


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The ancient Indian perspective on science did not have to struggle with these divisions and fragmentations. Philosophy, spirituality, religion and science were not at war and only confirmed each other's findings. The outlook in the search for truth went top down and not the other way round like in modern science. The discovery of the Spirit came first and led to the discovery of Dharma, the inner law of all things, and that led to Shastra, the science that was formulated from the laws. We see here a very unitary knowledge where the same principles, the same methods are applied to a scope extending from God to matter and often down to the unconscious reality. The same principle explains different levels of existence down to the level of physical science. The methods and experimentation have the same rigour at all levels of reality, except that the

more subtle realities require a more subtle experimentation and the use of a subtler instrument of the mind, called intuition. It seeks the truth and nothing less and that too with certitude. And whatever theory has been formulated about a reality has to apply to all levels of that reality from the physical to the supra-physical layers. Its vast applicability and its being in harmony with all else would prove its veracity.

The Vedic period mentioned three layers of interpretation or analysis where each layer actually involves many more levels of interpretation in our contemporary terms. This triple analysis was primarily for the interpretation of Vedic texts, but actually applies to all realities. First was *adhyatmika*, which might cover for us the spiritual, philosophical, religious, yogic and psychological seed motives of the reality. This reality contains the non-material powers and is greater than them; it is “the Self or Spirit, *ātman*, and everything that has to do with this highest existence in us is called the spiritual, *adhyātma*” (Sri Aurobindo, CWSA, vol. 18, p. 18). Next came *adhidaivika* that probably covers the levels of occultism, occult laws, the working of nature’s forces, and some types of yogic experience, cosmogony, cosmology, some areas of Indian psychology and the science of rituals. The material world is moved by “non-material powers manifesting through the Mind-Force and Life-Force that work upon Matter, and these are called Gods or Devas; everything that has to do with the working of the non-material in us is called *adhidaiva*, that which pertains to the Gods...the *adhidaiva* is the subtle in us; it is that which is represented by Mind and Life as opposed to gross Matter; for in Mind and Life we have the characteristic action of the Gods” (Sri Aurobindo, CWSA, vol. 18, p. 18). At the third level of analysis, the *adhibhautika* level, we are dealing with the material and physical consciousness and on the area of external Nature, and all the known modern sciences, hard or soft would figure at this level. “Our material existence is formed from the five elemental states of Matter, the ethereal, aerial, fiery, liquid and solid; everything that has to do with our material existence is called the elemental, *adhibhūta*” (Sri Aurobindo, CWSA, vol. 18, p. 18).

We note here how the same reality is studied from many perspectives and from a multitude of levels. Sri Aurobindo would call this the synthetic turn of the Indian mind, its cosmic viewpoint on reality, which is actually a very exact description of the operation of Indian science. From our modern viewpoint, we can marvel at the inter-disciplinary, trans-disciplinary and cross-cultural nature of the approach. This synthetic view of reality can be best compared to Indian painting, where the same panel will include many different points of perspective that harmoniously and simultaneously co-exist with the narrative in time that the painting is depicting. This might lead us to distinguish the levels and the domains. There can be many levels in the same domain, many perspectives in the same theme, and that theme or domain will also be a moving reality in time, changing, unfolding. The complexity of reality is apprehended in a comprehensive manner. Sri Aurobindo has also used this approach, hence we find him

giving us the essence of a phenomenon, its paradoxes that arise from its different levels, its difficulties and dangers with all its attractions for yesterday, today and for tomorrow. This immediately unveils the phenomenon as profound in the most perfect manner, rationality contributing to the richness of understanding, rather than understanding through impoverishment of the phenomenon.

We also observe here a certain correlation between the triptych of Spirit, Dharma and Shastra and that of the three modes of analysis, namely *adhyātmika*, *adhidaivika* and *adhibhautika*. In its unfolding, a phenomenon is like an organism with a soul, mind and body: analysed as a seed-idea, it is an unfolding process or expression and external manifestation. A close scrutiny of and deeper study of these correlations on three different levels would certainly yield much for the future of scientific study in the light of Sri Aurobindo. It points to the unitary nature of truth and knowledge, and how what applies to scriptural interpretation can also be a means of seeing history, evolution, the evaluation of a civilisation, and many other areas of scientific interest.

So what are the chances of our understanding a theory that goes beyond the mind and delves into realities that are outside the scope of modern science? Can we go higher, deeper, and larger? To this Sri Aurobindo replies:

The knowledge that science possesses is one thing – and not a large one – the scientific attitude is another. The capacities of observation, of study, of reserving one's judgement and building a conclusion only after all available data have been gathered, of keeping the mind open to any suggestion, any clue about a higher truth, this attitude is indispensable to the occultist also... But the criteria of the physical plane are not valid on the vital plane. The vital plane is the world of spell and deceit and power. The methods of modern science are good so far as the physical plane is concerned; they are not acceptable for the higher ones. For these planes, the ancient method of developing the higher knowledge under the guidance of the Guru has its *raison d'être* (Pavitra, p. 135).

Through this we see that just as we learn to go into a fresh scientific enquiry under the guidance of the person who oversees a doctoral thesis, we learn through a Guru on how to access higher planes of knowledge and conduct an enquiry into them. The modes of perception and discrimination will vary as we rise to higher levels. This opens up two questions for us: (1) Since, according to Sri Aurobindo, science is going to study the occult phenomena and the occult worlds in the future, why did the Indian yogis not complete the occult knowledge with the physical knowledge in the first place? (2) How can we, mental creatures with no intuition and no higher knowledge, throw ourselves into scientific discovery in the Indian perspective?

One of Sri Aurobindo's answers to the first question is: "The Hindu Yogis who realised these truths did not elaborate on them and turn them into scientific knowledge. Other fields of action and knowledge having been opened before them, they neglected what for them was the most exterior aspect of the manifestation. There is a difference between the scientific mind and the cast of mind of an occultist. There is little doubt that someone who could unite these two groups of faculties would lead science towards great progress" (Pavitra, p. 141).

The yogis were satisfied with the higher vistas of the spiritual and the occult knowledge and did not bother with the exteriority of physical knowledge. However, to our modern minds, seeking the truth from down to up, the occult is the next plane that beckons: bridging the physical and the occult is an imperative necessity. A scientist who harnessed that capacity would take science very far.

But this is not the only reason why the Indian yogis did not arrive at a still larger synthesis; there is a second reason for it. In *The Renaissance in India*, Sri Aurobindo throws further light on this aspect of the future of science. Here he is using the term psychic science for the occult sciences:

Indian metaphysics did not attempt, as modern philosophy has attempted without success, to read the truth of existence principally by the light of the truths of physical Nature. This ancient wisdom founded itself rather upon an inner experimental psychology and a profound psychic science, India's special strength, – but study of mind too and of our inner forces is surely study of nature, – in which her success was greater than in physical knowledge. This she could not but do, since it was the spiritual truth of existence for which she was seeking; nor is any great philosophy possible except on this basis. It is true also that the harmony she established in her culture between philosophical truth and truth of psychology and religion was not extended in the same degree to the truth of physical Nature; physical Science had not then arrived at the great universal generalisations which would have made and are now making that synthesis entirely possible. Nevertheless from the beginning, from as early as the Vedas, the Indian mind had recognised that the same general laws and powers hold in the spiritual, the psychological and the physical existence (Sri Aurobindo, CWSA, vol. 20, p. 124).

This extract beautifully summarises the cosmic scope of Indian science, what we need to do and where we need to go, as also the three levels *adhyātmika* (spiritual), *adhidaivika* (psychological), and *adhibhautika* (physical existence). We cannot continue working from down to up if we want to have any certitude in our theories. The philosophy, the general laws and powers function from above downwards, and are the

same on every level. Thus since the yogis have already developed the synthetic knowledge in the Vedanta for us, we can proceed from where they left. Also since physical Science has made a progress that did not exist at that time, we can push upwards from there too and come to a great synthesis of the future.

This extract also replies to the second question asked: even though we do not possess the higher capacities that would be necessary, we can pick up the spirit and the laws laid down by the yogis and elaborate a synthesis that becomes possible at this juncture in time. For this we first have the large synthesis of philosophical and yogic knowledge of the past that Sri Aurobindo has provided us, with an especial push towards the future, giving us all the needed clues to move forward. If we can translate these laws into language and structure that can accommodate the understanding of the physical sciences, then we come to a great future synthesis. Secondly, Sri Aurobindo himself has led the way by giving us concrete examples.

For example, in *The Renaissance in India*, he lays down the principles of the study and evaluation of culture and civilisation and goes on to brilliantly apply those principles to provide us with a deep all-round study of the subject. He is treating civilisation and culture like an organism, just as elsewhere he has talked of the soul of a nation and treated the nation as a person. This is in line with the unitary nature of knowledge; similar laws apply to the singular human and the collective human, and as in other studies to collectives of humans trying to organise themselves around a principle of harmony. In another example, at the end of his book *Hymns to the Mystic Fire*, in the supplement called "The first Rik of the Rig-Veda" (*SABCL*, Vol. 11, pp. 439-458), Sri Aurobindo has given us a detailed study of just this one line: "Agni I adore, who stands before the Lord, the god who sees Truth, the warrior, strong disposer of delight." In his word-by-word analysis of the line, he seamlessly moves through all the levels of science possible, ancient sciences, supra-physical sciences, modern and physical sciences, without the slightest irrationality, and with the greatest ease. It constitutes for me a great model of what a scientific analysis of the future could be, and how it could integrate and synthesise all the levels of reality from the highest to the lowest. We find here points of view from varied sciences: material perception, subtle physical perception, the essential truth, the nature of the Supreme, Vedic psychology, mythological study, historical study, physical science, physics, biology, the point of view of divine consciousness, the point of view of human consciousness, the perception from the yogic consciousness, modern psychology, epistemology, philology, metaphysics, grammatical perspectives, occult sciences, textual analysis, symbolism, etymology, social development, and very many more that I am yet to understand. It is a masterpiece and its close study would reveal much to us.

On a concluding note we could say that the objective of any science past or present is the search for truth. The scope of the scientific endeavour defines its methods.

If Indian scientific pursuit has had a greater scope and more capacities and methods involved, it has also had the right approach to truth by reading the supreme first and foremost, and coming slowly down to the level of life in the world with the aid of the same first principles, as all levels will find their *raison d'être* in their relation to the Origin. In this it can provide a valuable input to modern science, by giving it theories in truth and a reliable scheme of values. However, Shastra is not the last word in the realm of science and an even greater synthesis is in the offing which will require a bridging of the gap between modern science and the verities of Shastra and of Vedanta through the systematic bridging of occult and physical sciences. Possibly, a greater knowledge of the *panchabhūtas* (the five elements of the *adhibhūta*), foremost among them being ether, would provide the link between physical science and other higher forms of knowledge, permitting a smooth passage from one level to the other. This would require us to grow beyond our present mental capacity and develop higher faculties of knowledge, a widening of our efforts, and a greater strength of formulation.

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