

VEDIC SCIENCE: THE HUE OF SAFFRON IDEOLOGY

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“Ancient Sanskrit literature is full of descriptions of flying machines — Vimanas.... [T]he scientist sages Agastya and Bharadwaja had developed the lore of aircraft construction. Aeronautics or Vaimaanika Shastra is a part of Yantra Sarvasva of Bharadwaja. This is also known as Brihadvimaana Shastra...The knowledge of aeronautics is described in Sanskrit in 100 sections, eight chapters, 500 principles and 3000 slokas. Great sage Bharadwaja explained the construction of aircraft and way to fly it in air, on land, on water and use the same aircraft like a submarine....”

—Capt. Anand Bodas and Ameya Jadhav; *Ancient Indian Aviation Technology*

“A study of the work ‘Vymanika Shastra’ is presented.... It appears that this work cannot be dated earlier than 1904 and contains details which, on the basis of our present knowledge, force us to conclude the non-feasibility of heavier than craft of earlier times.”

—H.S. Mukunda and Others, *Indian Institute of Science, Bangalore; A Critical Study of the Work “Vymanika Shastra”*

The above extreme appreciation of matters of the fact is not quoted to reflect upon the richness of Indian discourse on what is science. The former is a quote from a paper presented at the 102nd Indian Science Congress held at the University of Mumbai in January 2015. The latter is the scholarly and ‘scientific’ refutation already worked upon by scientists in their respective papers in 1974.

The question is about the vagaries and quirkiness of people in and with science in 2014-15. The government governed by a Hindu ‘cultural’ organisation, headed by a Prime Minister believing that Ganesha had a trunk face, courtesy plastic surgery (Lord, the Mighty is next up for appropriation), an HRD Minister who believes that a Minister of the Union of India can engage with palmistry and occult without breaching the Directive Principles of the Indian Constitution for scientific tempera-ment and is advised by the Bharatiya Shiksha Niti Ayog headed by Dina Nath Batra for *corrective* steps to Indianise (‘Hinduise’/‘saffronise’) the dismal Macaulayvian (producing radical and rational people) education system of India. At

a time when the top scientist, who co-ordinated the most successful indigenous Mars probe for the country, performs a special *pooja* in Tirupati before the launch so as not to leave anything for 'chance', the people should 'realise' that, if Vedic Science does not help us to fly high, then nothing else can save us from the fall from grace (caused by '*Mlechcha*' Muslims and the European Christians). Thus, to rescue us, the 'mightiest' cultural organisation tells us to go back to the Vedas, or at least to the *Vedic Science*.

Before engaging with the idea of *Vedic Science*, one has to clearly understand the idea of science. It is difficult to engage someone who does not comprehend the idea of science and will simultaneously find it difficult to fathom the problem with the idea of *Vedic science*. We belong to a subcontinent where we presume that everybody knows what *Vedis*?

Veda: Belief as Knowledge

Etymologically *Ved* comes from the root word *vid*, means 'to know'. Trying to understand *Ved*, one should realise that *Ved* depends on a particular method of knowing, which is called verbal testimony—*Shruti*—as a source of knowledge. If *Ved* is a text, or a compilation, or a reportage of the times and approach to the issues of music, hymns, *mantras*, then they derive their sanctity from the method of knowing called *Shruti*. Every story, for instance, as in *Satya Narayan Katha*, uses a narrative which starts like 'I am going to tell you that story which I listened to once upon a time' or 'I am going to tell you that story which I listened from another person who has listened it from yet another one'—so as to establish a lineage. So the listener gets the legitimacy of the source of that knowledge by verbal testimony. This is how *Vedic* knowledge establishes the lineage through verbal testimony and gets the sanctity. It is believed that *Ved* is divine revelation. You don't learn it from experience or reason. It is not a compilation of Brahma's or Vishnu's or Shiva's experience. It is a revelation, like Quran or Bible. For the sages who were meditating, it got intuitively revealed. The person who has written them or has compiled them does not abide by the idea of reason or experience. This form of knowledge is getting explicit by the methods of revelation and verbal testimony.

Even if we look at *Vedic* knowledge as the repository of ancient knowledge in the Indian culture, it only signifies the idea of India which arises from a very different standpoint. We are not talking about the India which includes the peninsular India or North-East India, but an India which has a very different identity—historically and geographically. (Basham, 1959) This typical idea of India is derived from the understanding of Indo-Aryan history, where Aryans came from outside. Even though there are different theories about whether Aryans came from Mesopotamia, Iran or the Middle East, it was the Aryans who discovered the Vedas or wrote them. This historical perspective underscores the difference between the identity of India of the pre-*Vedic* era from what we now call the federal geopolitical structure of India. It restricts its boundaries to a typically North Indian or North-West Indian spatial identity and to the region where Pali, Prakrit and Sanskrit were spoken as languages. We are

not including other cultures and languages in this idea of India. *Ved* is an Indian text only in this part of India. Other parts of India have similar texts which are not pan-Indian in nature and are restricted to a particular region that shares cultural homogeneity, like the Sangam literature in peninsular India.

Thus *Ved*, which as a typically North Indian or North-West Indian text, shares knowledge achieved through verbal testimony. It is believed that the compilation of this particular form of knowledge happened at least 200 years before pre-*Vedic* era. Before commenting upon the temporal aspect of these texts, it should be considered that we generally understand the concept of time from the way it has been conceptualised by the Europeans, *Anno Domini* and Before Christ. Nevertheless the 'Indian' measure of time is characterised by the *Yugas*—*Satya Yuga*, *Dwapar Yuga*, *Treta Yuga* and *Kali Yuga*. We are not trying to check the veracity of this way of measuring time, but it is important to understand that when we say 2000 years before, it means 2000 years within this *Kali Yuga*. That was when these compilations took place, spread over a long period of 2000 years. How a sacred text can be written in the *Kali Yuga* is another interesting commonsensical and commonsensically blasphemous question. Even Shankaracharya, as late as in the eighth century, contributed to the compilation of the Vedas. Thus, there were people who contributed to the Vedas 1000 years ago and 200 years ago also. So it's not that it was something which was definitely written some 2000 years ago.

It is often flaunted by some people that the *mantras* in the *Vedic* texts are formulas to understand the world. These *mantras* are indeed explanations of the phenomena of the world, but explanations of a very different nature. For instance, the practice of Indian philosophers taking up the example of a pot to explain the idea of space clearly illustrates this approach. Through the example of the pot, they argue that the existence of the pot explains the idea of space existing inside and outside the pot. This is a very speculative way of thinking and elucidating concepts. But this is also a form of explanation; they are trying to explain it with the help of allegory or an example of a pot. But if the same question is asked to a scientist, she will explain it in a very different way. So, instead of talking explicitly about god [as is usually believed], *Ved* has explanations of natural phenomena as perceived and experienced by the contributors. It is a kind of explanation of the origin of the world. So *Ved* is a repository of knowledge, and is something which could be an extremely indigenous form of knowledge if we claim it like that.

But the problem is that we can't even claim *Ved* as an indigenous body of knowledge, even if we ignore the historical narratives surrounding the existence of *Ved* and believe that the idea of India is more plural with multiple 'Indias' existing within India. For instance, indigenous knowledge could be anything, even the way in which members of tribal shepherds in India hold the knife while fleecing the sheep without cutting one's own finger or the way potters shape clay into vessels may be taken as indigenous knowledge. This amount of knowledge

has not been made part of the *Vedic* knowledge. But *Vedic* knowledge is very exclusive in the sense that it excludes many forms of knowledge practised by native Indians and Dalits. There is a specific form of knowledge which constitutes the *Vedic* knowledge. Thus, this makes it only a partial representation of the Indian knowledge system.

Science: *Scientia* and *Scientism* (L.)

A simultaneous look into the idea of science and the notion of *Vedic* knowledge will help us unravel the misnomer attributed to *Vedic* knowledge as a scientific system. In 1981, P.N. Haksar, Raja Ramanna and P.M. Bhargava jointly released a statement on scientific temper at the Nehru Centre in Bombay on July 19 which was later on reprinted in several issues of the *Mainstream* weekly. According to them, “science is a regenerative process of creating and collecting information to understand nature and man, and the relation of man with natural and social environment. Scientific temper is not just a collection of knowledge or facts; it is also not rationalism, although it promotes knowledge and rational thinking. It is an attitude of mind which calls for a particular outlook and pattern of behaviour. It is further an application of scientific methods to acquire knowledge and permeate through the society and influence the way people think and approach their political, social, economic, cultural and educational problems. Thus the spirit of inquiry and the acceptance of the right to question and be questioned are fundamental to scientific temper.”

Scientific temper is compatible with observation and insight, reasoning, intuition, systematic work and creative impulse. It is an attitude of mind which helps to develop the ability in man to unravel the mysteries of the surroundings. Thus, it is a part of human culture, philosophy and existence. It considers knowledge as an open-ended and ever-evolving system. Scientific temper in a society helps people think rationally and objectively thereby creating an egalitarian, democratic and secular environment for growth and prosperity. (Prasad, 1982)

However, the idea of science as it functions today is more like a didactic language game. The problem of science is that it is a new language game which emerged out of a specific socio-historic context. What we understand as the idea of science today emerged in the 19th century in a particular socio-political context. (Rao, 1997) Looking back to the history of how the present identity of the concept of science evolved helps us to understand the structural idea of science which makes it different from knowledge. (Lakatos and Musgrave, 2004) The exponents of this socio-political movement were mainly inspired by the French Revolution that propagated this idea that science is very much different from philosophy as they vied with each other to have a separate identity. Terms like *scientia* or *scientism* reflect this idea that science as a systematic system of knowledge relies on rational, logical, experimental, and empirical methods based on observations, facts, findings and analysis. Even Social Sciences, Language and Mathematics fit into this definition, as all these disciplines share common characteristics. Even *Vedic* knowledge is systematic; it has its own logicity.

There is logicity even in a story, say in *Alice in Wonderland*, as it follows a basic premise which is to be followed further by a major premise. It is not that *Vedic* knowledge is bereft of deductions, inductions, assumptions and analysis. Nor has it been claimed that *Vedic* knowledge is no knowledge. It, in fact, *is* knowledge. It *is* a form of knowledge. The moment we call it science, or a systematic knowledge, we are defining systematic knowledge in a very different way. Being systematic has a different implication in science. We observe a problem, and then look multitudes of the same problem, and then see as how that multiplicity affects the observation of the problem. It also includes collecting similar and dis-similar experiences of that problem alongside analysing them. As part of the systematic process of science, we conduct an experiment controlling all its extraneous variables thereby reaching analysis. This is the Positivist idea of science. (Chalmers, 1999)

Being systematic does not mean only that you get the same result. Science works within a paradigm. And to be scientific, understanding the paradigm is essential. We have hundreds of names for Pea plant in different languages and dialects. But someone from Botany will call it *Pisum sativum*—the scientific name of the Pea plant. For a person who is trained in the paradigm of Science, *Pisum Sativum* will mean the same across the world. It is like the functioning of an idioglossia—denoting private languages spoken and shared by only a few people. Should it anyway mean that science is the largest and longest body of private language? Isn't that science too is suffering from idioglossia? Such a question, however, may require a separate debate. But the point here is that science abides by a paradigm which pre-determines what the system, according to it, is.

The Ideology: Vedic Science

There are two different blocks in this discussion —Veda and Science. Before going into the problem and anomaly of putting these two—Veda and Science—together as *Vedic* Science, it is important to discuss the term ideology. Any concept understood by any person is an idea. As we share it, it takes the form of knowledge. Thereafter, such forms of knowing get together to institutionalise knowledge. But the difference is that if you understand an idea with or without believing that there could not be any other idea, it becomes an ideology. Why any religion should have a problem with the existence of any other religion? Because the paradigm of every religion states that its god is the most powerful one, which makes it impossible to accept the existence of another form of god. Needless to mention, the question of relative supremacy has already arisen. Even in Hindu mythology, where there are 33 billion gods, every god has *his* own department. Similarly, if you believe that the world is created through Big Bang, you cannot believe that it was created by *Bramha*. These are two different paradigms. Like oil and water, these paradigms do not converge or intermingle.

There are paradigmatic differences within Sciences also. When Physics believes that matter is the elementary reality, Biology says that cell is the basic reality; they do not contradict each other or win over each other. On the contrary, they are just different paradigms. Different

paradigms propagate different ideas, but it is the human intervention that makes them ideology. So ideologues could exist in Physics as well as in Biology. Such ideologues do more harm to science than good. When compared to each other Religion, *Vedic* knowledge and Science abide by mutually different paradigms. Thus, *Vedic* knowledge, as a form of knowledge, exists with its own legitimacy within its own paradigm.

But why do people add the suffix 'science' to *Vedic* knowledge? Why does *Vedic* knowledge need legitimacy from science? Somebody who is hell-bent on calling *Vedic* science is in fact seeking legitimacy for *Vedic* knowledge. They are doing it with a purpose explicitly and implicitly motivated by their ideology. What then is the ideology behind seeking legitimacy from science? If somebody believes in god, that is a question of faith. You can't alter faith by scientifically explaining that there is no god or by presenting 'scientific' evidence for the existence/non-existence of god. For believing in god we need not see god. When a teacher says that Paris is the capital of France, students believe it, even without demanding to see it, since the teacher, as far as many students are concerned, has the power of verbal testimony. Even if you go to Paris, you may still seek where is Paris in Paris, because Paris exists as a concept too. Similarly god exists as a concept, which does not demand a scientific explanation and verification.

The problem in fact is theoretical. Could the appendage of science, make anything science? For instance, when we attach the term 'science' with 'social' (as in Social Science), does it become science? Or when we say Political Science, is it actually a science? Not necessary always. Even by adding the term 'science', *Vedic* knowledge will not become science, as it does not abide by the Positivist paradigm. All other disciplines other than those following the paradigm of Positivist science belong to a natural domain. They can be, on account of the methodology, called natural sciences, based on a specific sense of a discipline. In a manner of speaking, we don't want to lose the glory of the *Vedic* knowledge by calling it science. Therefore, why seek legitimacy from a discipline which emerged only 200 years ago to validate a form of knowledge which existed much prior to it? This is a tricky ploy to exploit the deeply ingrained idea of Positivist knowledge as the most legitimate one. Our concept of knowledge has been constructed/shaped in such a way that the moment we call anything science, it gains legitimacy. Thus, science seems like a penultimate ploy lending legitimacy to anything and sell it—right from Yoga packages to toilet cleaners. So if you need validity for any blind claim, you present it as science. That is what the ideologically and perhaps commercially motivated idea of *Vedic* science signifies.

This ideology, which seeks to establish legitimacy for *Vedic* knowledge by calling it science, tells you that if you believe that *Ved* is the scientific knowledge, you must also believe that Indians (Hindus) had a superior idea of knowledge and further Indians would regain the supreme capacity to rule the world which could be proclaimed by the great Hindu movement in times to come. When they seek legitimacy to *Vedic* knowledge, they are being motivated

by a specific ideology—*Hindutva*. What is implied is an urge that if you believe *Vedic* knowledge as superior, you must vote for a particular political party which would struggle to make sure that *Ved* be called science. It keeps you reminding how ignorant we are about the greatness of our ancient wisdom and also that it was the *mlechcha* Muslims and foreigners who came to India and ruined it. So let's go back to the *Vedic* era and reclaim glory to the Hindu world. Let us believe that there will be some superior Hindu leader who will rule across the world and will get you the legitimate right of being Hindu—the most intelligent, supreme, superior race in the world. Similar ideology proclaims about the idea of soul as scientific and presents scientific evidence for its existence, and establishes that if you believe in the existence of *Atma*, you should believe that it will take you to *Paramatma*, but there are some specific tasks which should be done, or the *Atma* will not reach *Paramatma* and one of these tasks is to vote for the BJP. This is the agenda of the ideology that motivates them to seek legitimacy for *Vedic* knowledge as science.

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