

# Dogmatic Science and Pragmatic Spirituality<sup>1</sup>

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A common view of religion or spirituality (*there is a subtle difference between the two – spirituality deals with principles and a religion is a formal expression of those principles; however, in this article, we do not make any distinction between the two*) is that it is dogmatic, and a common view of science is that it is very pragmatic. In this article, we would argue that science is equally dogmatic, if not more; and spirituality is no less pragmatic than science.

The usual blame on religion or spirituality for its dogma is based mainly on the following three points.

1. Religious books or scriptures are taken for granted, they cannot be questioned.
2. All religions demand strict adherence to rituals and practices.
3. The followers of any religion put blind faith on the saints or preachers of that religion.

But hold on... doesn't science also suffer from the same set of dogmas? The **scriptural dogma of science** consists of unquestionable textbooks and research papers published in journals or conference proceedings. Often people say, since this article is published in so and so journal, it is beyond question.

Similarly, the **ritualistic dogma of science** consists of standard practices and norms of the institute or schools of thought. Sometimes this dogma is evident by the bias of different institutes towards different brands of apparatus and instruments for their laboratories. Sometimes it is reflected by the particular textbooks followed; the syntax of the tabulation of experimental observation in lab notebook; the format of dissertation; or the mode of interaction between the faculty, the students and the staff members. Think about the difference between the cultures (academic, administrative and social) of any two prominent institutes

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teaching the same subjects (say Physics, or Engineering) – you will know. Actually, the difference in rituals amongst different religions is exactly similar in nature - the syllabus and the text books and the methods may differ, but the subject matter is the same!

The **dogma of faith in science** is exhibited first by the faith in one's teachers. Second, it is evident in the faith in renowned scientists. For example, if Stephen Hawking says that the universe started this way, then that's it! For majority, the universe would have no choice to have started another way. Third, the dogma is formalized by the faith in journal editors or program committee members of conferences. If they accept some paper, that becomes an icon of truth.

Let us now look at the common perception of pragmatism in science.

1. Science tries to solve practical problems; it tries to make our life more comfortable.
2. Science is based on logic and reasoning, cause and effect.
3. Science is “verifiable”, anybody can check the correctness of a result by step-by-step proof checking or experimentation.

Interestingly, if we replace the word “science” by the word “spirituality” in each of the above statements, still the statements hold. **The problem-solving pragmatism of spirituality** is very well-known, though not always well-acknowledged. Science tries to “fix” the outside world and spirituality tries to “fix” the inside world. Science may provide the comfort of, say, an air-conditioner. However, if the mind of a person is disturbed, say due to loss of someone beloved, can that person enjoy the soothing breeze of that air-conditioner at all? If the inside is in mess and the outside is perfect, that perfection does not carry much meaning; on the other hand, if the inside is robust and the outside is in mess, there is still hope to combat that mess in tranquility. Ultimately, our well-being is a balance of both the inside comfort and the outside comfort. Hence we can say that spirituality also tries to solve practical problems; it tries to make our life more comfortable.

**Logical pragmatism in spirituality** is well-stressed in the analytic scriptures of all sects. Spirituality is also based on logic and reasoning. For example, in *Bhagavad-Gita*, the principle religious text of the *Sanatan Dharma* (which is not the same as the so-called misnomer Hinduism), the entire philosophy is developed through questions and answers, arguments and counter-arguments. Just like a good science teacher, a good religious teacher / Guru does not demand blind faith, rather

he/she encourages questions from the disciples and clarifies their doubts through logical discussions.

Regarding **pragmatism of verifiability in spirituality**, it can be said that proof is in the pudding. Just like before accepting/denying that a chemical is acid/base, one is advised to do litmus test and observe the color changes, in the same way, the effects of all spiritual practices are verifiable. However, like scientific experiments, scriptural practices have to be followed sincerely, as per the exact specification.

Broadly, there are two approaches in science: **deductive** and **inductive**. The deductive method consists of *axiom, rules of inference, theorems* and *proofs*. Axioms are assumed truths that require no proof, e.g. the five axioms of Euclidean geometry, or, the six postulates of quantum mechanics, etc. Rules of inference tell which rules to apply in going from one step of a proof to another step of a proof.

The inductive method consists of *axioms, hypotheses, experiments* and *observations*; and finally, *conclusion*. A hypothesis is a proposed explanation for a phenomenon. Experiments and resulting observations either validate a hypothesis or reject it. For example, most of the deductive subjects belong to Mathematics. On the other hand, Chemistry, Biology, Psychology etc. are inductive subjects. Many people believe that all inductive subjects can be ultimately converted to deductive subjects and in turn everything can be explained in terms of mathematical equations.

However, there are some inherent limitations of deductive science. One particular limitation arises due to *Gödel's 1<sup>st</sup> Incompleteness theorem* (attributed to mathematician Kurt Gödel, 1931), which informally states that in any deductive system, that satisfies the requirement of effectiveness (i.e., the existence of an effective procedure for deciding whether any purported proof is a proof), and some minimal adequacy conditions (e.g, the capacity to represent certain elementary arithmetic, or combinatorial notions), there are sentences that are true but not provable in the system. If one throws in more structures in an axiom system **A** in order to extend it to another axiom system **B** so that **B** can prove all the true statements in **A**, still, *Gödel's 1<sup>st</sup> Incompleteness theorem* guarantees that **B** will have its own true but unprovable statements.

If one is not able to prove some logical statements related to mere arithmetic involving sum and multiplication, how can one hope to prove the existence of soul

or God or how the Universe started in a particular way, using purely deductive logic?

Another limitation of deductive system is expressed in *Gödel's 2<sup>nd</sup> incompleteness theorem*, which informally states that no deductive system, with the above-mentioned requirement of effectiveness and some minimal adequacy conditions, can prove whether it is consistent or not. *Consistency* of a system means that for any proposition (i.e., a statement that is either true or false) **A**, it will not prove both **A** and the negative of **A**.

Spirituality is not a deductive system, rather it is an inductive system. The assumptions of existence of soul and God are examples of two axioms of spirituality. An example hypothesis in spirituality can be that if one can connect one's soul with God, then one can achieve eternal happiness. An example of experimentation to connect the above two is the method of *Yoga*. After the experiments, according to the observations and analysis of the effects, one can either accept the hypothesis or deny the hypothesis.

Through the following questions and answers, we now investigate some common blames attributed to spirituality by science and show that science itself is worthy of similar blames!

*Q1. Religion is the root of all riots and fights in the world. Shouldn't religion be banned for global peace?*

Answer: Physics and chemistry are the root of all guns, weapons, bombs; and the root of all wars. Shouldn't then physics and chemistry be banned? Was Einstein's  $E = MC^2$  the main culprit behind America's throwing of two atom bombs in Hiroshima and Nagasaki? Or was it human's consciousness? One must not forget that the same formula works behind the electricity generated from nuclear power. Likewise, a knife can be both good and bad, depending on whether it is in the hands of a medical surgeon or in the hands of a murderer.

*Q2. Why follow a spiritual path? Can't every one invent one's own path through one's life's lessons?*

Answer: In science, does everyone re-invent the wheel? Does one first invent electricity and then starts using it? Of course, the answer is a big NO. If one wants to invent everything from scratch, one is free to do so, but it is not usually productive. Neither many things can be done from scratch in just one lifetime.

Similarly, in spirituality also, one is welcome to try inventing his/her own lessons, but it is a matter of efficiency versus time constraints.

*Q3. Why follow a spiritual master / Guru? Can't one follow a spiritual path on one's own?*

Answer: Well, then why is a lab instructor needed in a lab? Why does a doctoral student need a supervisor? Of course, few geniuses do not need anything. But for the common mass, a guide is always needed. In this aspect, there is no difference between science and spirituality.

*Q4. Doesn't spirituality promote superstition and weakness? e.g., stones, fortune-teller, caste system, untouchability?*

Answer: Does not mobile phone promote MMS scandals? Actually, postal systems were least problematic. Then came the email, with spams and other issues. Then came the mobile, with this MMS scandals etc. But then do we stop using mobile phone; or do we apply a protection mechanism? Similarly, in credit/debit cards, there are more frauds than in traditional cash-based banking systems. But does that mean that we stop using cards? Or should we use it with some security mechanisms? Similarly, the problems cited against spirituality are not due to spirituality per se, but due to misinterpretations and misuse. None of the scriptures of none of the religions vouch for the items mentioned in this question. These are coined by man, to make business. By proper spread of spiritual education, an effective protection mechanism can be built.

*Q5. Science gives tangible results, e.g. AC in the summer. Aren't spiritual results intangible?*

Answer: Well, happiness and sorrow are also intangible. And spirituality is the AC for the summer of the mind.

We have seen how spirituality is no less science than the so-called science itself. Unfortunately, schools, colleges, and scientific organizations have taken up a completely biased and narrow view on spirituality and in most of the cases they are even hesitant to formal discussions on these topics in the campus. Isn't it another unscientific dogma of science itself?