

Difference between Science and Religion ? A Superficial, yet Tragi-Comic Misunderstanding ...

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Dedicated to Marie-Louise Nykamp

Abstract

It is shown that, contrary to customary perception, at their very roots, both science and religion are based on certain mere sensations of truth which are not validated, and instead, are accepted upon belief as being in fact true.

“History is written with the feet ...”

Ex-Chairman Mao, of the Long March fame ...

“Of all things, good sense is the most fairly distributed : everyone thinks he is so well supplied with it that even those who are the hardest to satisfy in every other respect never desire more of it than they already have.” :-) :-) :-)

R Descartes, Discourse de la Méthode

“Creativity often consists of finding hidden assumptions. And removing those assumptions can open up a new set of possibilities ...”

Henry R Sturman

1. The Main Thesis

The main thesis which is presented in the sequel is the following :

The customary perception of the difference between science and religion is based on a superficial view. Contrary to that view, at their very roots, both science and religion are based on certain mere sensations of truth which are not validated, and instead, are accepted upon belief as being in fact true. In the case of science, and specifically of the so called hard science, when proceeding in its further development, various rather precise and demanding validation methods are employed. As far as religion is concerned, none of such, or for that matter, other similarly rigorous validation methods are ever considered necessary, let alone made use of.

The above summarizes the essence of the difference between science and religion.

We can note that, in view of the above main thesis, there is a similarity between, on one hand, science and religion, and on other hand,

science and philosophy.

2. Details on the Main Thesis

Let us start with the example of hard science offered by Mathematics, as it turns out to be simpler and clearer from the point of view of the above main thesis.

Ever since Euclid in ancient Egypt, and then truly adopted and developed in modern times, Mathematics is a collection of so called "axiomatic theories". This simply means the following. Any specific theory in Mathematics starts with a set of sentences, called "axioms", which are supposed to be true, and consequently, not any kind of proof is required, let alone, given for them. How and why such statements are chosen in a given theory in Mathematics is not important for the present purpose, and can easily be found argued in vast detail in various appropriate texts in Mathematics. Now, after choosing the "axioms", one applies usual Logic and proves various so called "theorems", which are the logical consequences of the "axioms".

Clearly, here, another crucially important component is introduced in Mathematics, and introduced without any particular validation, except upon belief, namely, usual Logic. And no matter how many reasons we may have in believing in the validity of usual Logic, the fact remains that there is no known proof about that assumed validity. And to further highlight that situation, in recent decades, Theoretical Computer Science has led to a most useful applications of other kind of Logics. Among them are a Logic which allows self-reference, while another Logic allows contradiction or inconsistency.

This situation in Mathematics clearly shows that, indeed, on the level of both axioms and Logic, one accepts things based upon belief ...

As it turns out, the situation in all other hard sciences is essentially the same, except for some additional common features that are clearly illustrated in the case of Physics, which we consider here briefly.

Modern theories of Physics are in part also "axiomatic theories" in

the above sense. The essential addition, when compared with Mathematics, is that the "theorems" of theories of Physics are subjected to a further, *second* validation process which is not there in the case of Mathematics. Namely, for the "theorems" of any specific theory of Physics it is only necessary - but by no means sufficient as well - that they are the logical consequences of the "axioms" of that theory. Indeed, the additional and sine-qua-non condition required is that none of such "theorems" should be contradicted even by one single "physical experiment" relevant to the branch of Physics described by the respective theory.

And in case such an experimental contradiction happens, the respective theory of Physics is placed under a question mark.

3. When Did the Conflict between Science and Religion Start ?

Regarding the relationship between science and spirituality, it is most remarkable, although hardly ever recalled, that in ancient Greece, and even earlier, in Hindu tradition, there had not been the slightest perception about any possible conflict.

Furthermore, the same happened for quite a while in Christianity. After all, the philosophy of Aristotle was to a large extent brought together with Christian theology.

A similar beneficial coexistence existed in Judaism, as recently for instance as the 12th century, in the works of Maimonides. Also, in its early centuries, Islam enjoyed the same kind of fruitful interaction between science and religion.

It appears, therefore, that a major conflict emerged between science and religion due to the fact that the Aristotelian view of the universe got accepted by Christianity, and specifically, by the Catholic Church, since that acceptance happened before Reformation. And according to Aristotle, Planet Earth was at the very center of the universe, with absolutely everything else out there moving around it ...

This view, needless to say, created and supported the idea of the

unique and most special status of Planet Earth and of humanity ...

And then, when Copernicus and later Galileo dramatically challenged that status of Planet Earth, they did - willingly or not - challenged massively a whole lot of most fundamental church dogmas related not only to the physical structure of the universe, but also to the most important tenets of the Catholic Church ...

Not much later, with the massive development of modern science and technology, the extraordinary and ever growing practical successes of science led to a gradual and increasing diminishing of the status of religion among more educated humans, and slowly, even among many of the rest ...

It is worth noting here that Mathematics - an epitome of hard science - has been known for millennia priori to the emergence of any conflict between science and religion.

What brought that conflict about was the setting aside of the Aristotelian astronomy by taking away the unique status of Planet Earth.

And what further aggravated that conflict, and relegated more and more religion to a marginal status, was the fact that in all hard sciences, with the exception of Mathematics, a sine-qua-non stage in the validation of "theorems" was that they are not supposed to fail even one single "experiment".

And any religion, or for that matter, spirituality, does of course fall significantly short of such a requirement ...

Therefore, it is very very far from offering sufficiently reliable methods to deal with larger and large numbers of more and more diverse "experiments" of effective everyday importance and utility ...

4. Superficiality Causing Tragi-Comedy ...

The consequences of the superficiality mentioned in the main thesis have, so unfortunately, been far too numerous and negative ...

And due to the fact that the mentioned superficiality is still so strongly and widely ingrained, it is likely that such consequences may further

occur ...

Needless to say, the arrogant self-righteousness and implied disdain for the other side, an attitude so strong and widespread on both sides, can only aggravate the situation ...

As for attempts, not a few of them lately, to ... bring at last together science and religion ..., they could possibly benefit from less emotionalism, more brevity, and a focus which may indeed be upon what is essential ...

As for the part of "bringing at last together", it is most important to note that, as mentioned briefly, science and religion, and in general, science and spirituality, have been in earlier times coexisting in a mutually beneficial way ...

Needless to say, given the nature of the issue, both fundamental and complex, many views can arise about that "bringing again together" ...

The above lines are, therefore, one such attempt, and possible well meaning, even if critical, comments on it are welcome ...