

# Systematic Framing of the Natural Sciences

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As we presented a systematic framing of the Islamic knowledge heritage; We added another framing of the natural sciences, so we attributed them in ( The Approach to Science and Religious ) to three different systems, namely **منهج العلم والفهم الديني** Understanding the procedural, hypothetical and metaphysical speculative systems.

The procedural system is based on experiments and induction without hanging and metaphysical assumptions. It works to extract the results indicated by observations and experiments and abstract them to generalize them within the general laws, and after that, they are tested to know the extent of their validity and efficiency. These laws may take a specific mathematical formula, and the typical example of this system is Newton's theory, as represented in the mathematical law of gravitation.

This method differs from what the second hypothetical system resorted to in its reliance on imaginary and experienced assumptions and even supposed mathematical formulas. This trend emerged at the beginning of the twentieth century as it appears in the theory of relativity and quantum mechanics, and it still exists to this day.

With this, the second system did not come to overthrow the first, as we may find in it remnants of the first sometimes so that Einstein's theory of relativity was based on Newton's gravitational hypothesis, although it was interpreted differently, as it was based on some of the assumptions of this theory, especially concerning the principle of inertia. Or the first law of gravitation within what is known as the special theory of relativity. Thus, it sometimes appears that there is some overlap

between the two systems, that the first system includes some assumptions on which the deductive character is based, such as Newton's first law, even without realizing it, as Newton describes his conclusions as being purely inductive without assumptions. However, these assumptions remain narrow and do not compare with the fluency made by the second system, as the latter is characterized by the element of intuitive assumptions, imagination, and open mathematical interpretations far from direct experiences. It depends, however, on the horizon of waiting for observations and experiments.

The second system has two opposite approaches according to the cognitive process, one of which is based on imagination and the other on mathematics, and the two are mostly intertwined, merged, and paired. The first is characterized by imaginative contemplation and a wide degree of freedom and unleashing of imagination without relying on a specific method to form hypotheses, represented in Einstein's relativity. The other is an abstract mathematical formalism, which began with Maxwell and culminated in the wave quantum.

The two approaches often overlap, but from the epistemic point of view, the imaginary approach begins with imagination and meditation to make a hermeneutic interpretation of the physical reality and then finally wears it in the appropriate mathematical form, so the result becomes what we call the (imaginary-mathematical) approach. Contrary to that, the mathematical method begins with the formal mathematical dimension and ends with an imaginary, hermeneutic interpretation, and we call it the (mathematical-imaginary) approach.

Thus, the first approach begins with imaginary premises about the physical reality to end up with mathematical results, while the second approach usually takes the opposite direction, which begins with mathematical premises and ends with imaginary results, and sometimes there is an overlap between the two cases so that development is an accumulated construction of imaginative and mathematical concepts, some of which are based on each other.

But in principle, we note that the first starts from hermeneutics and ends with epistemology, while the second starts from epistemology and ends with hermeneutics. In fact, they both practice two different types of hermeneutics or interpretation.

This system still exists even though it left a third system competing with it, the metaphysical speculative system.

The latter adopts both approaches on which the second system is based, i.e., the (imaginary-mathematical) and the (mathematical-imaginary) method, except that it is concerned with topics not subject to testing and investigation, which are closer to philosophical issues than to scientific ones. It is noted that the assumption factor is contained in both the second and third systems, which makes them immersed in the pool of open interpretation and hermeneutics, in contrast to the first system.

In general, these systems do not separate from each other. The second system adds something new that is not mentioned in the first, just as the third system also adds something new that is not mentioned in the first and the second.

## The reference

<https://www.fahmaldin.net/index.php?id=2574>