What is Rationalism?

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Plato's Question

Plato to Eudoxus:

"*By the assumption of what uniform and orderly motions can the apparent motions of the planets be accounted for?*"

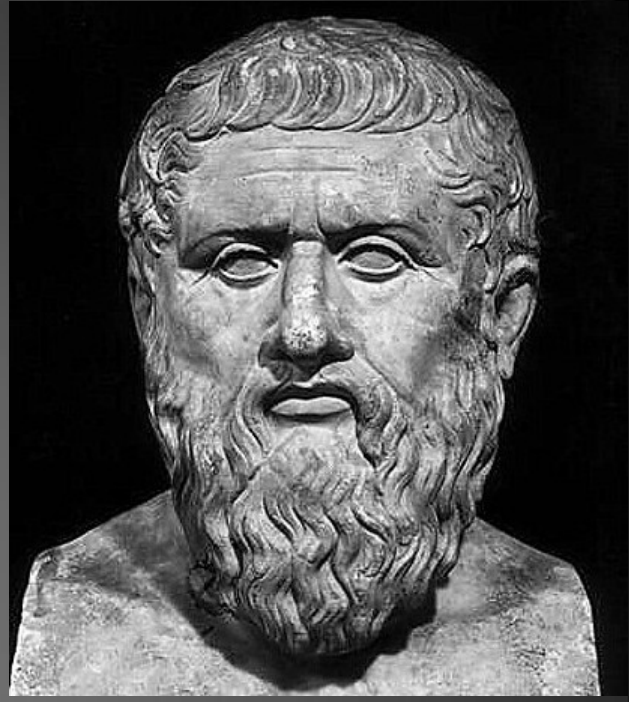
The rationality principle is already implied by the question.

Solutions of

Plato–Eudoxus–Aristotle–Callipus–Ptolemy,

as well as

Philolaus–Aristarchus–Copernicus–Kepler–Newton–Einstein were different attempts to find this central principle.



Πλάτων, 428-348

What is Implied

Sufficiency of human abilities to potentially unlimited growth of global cognition.

How could that be possible?

1. The universe has to be globally comprehensible, progressing with effort.

2. The human mind has to be able to increase its global understanding of the world. Value of global cognition has to be high.

3. This global cognitive conformity of the universe and man is something very special; it may take place only if it is specially provided by the upper level, their origin or Creator. This fixes both possibilities and high value of global cognition.

This cognitive unity Nature-Man-God constitutes the core of rationalistic ontology and ethics, the Rationalistic Triangle.

Music of Reason

How and by what means and ways can the universe be understood?

In Plato's question we see the belief in mathematics; in his dialogues, trust to reason and to beauty.

Combining the two, we may say that we see the belief in the beautiful music of reason (*Jean Dieudonne*) as a guide to the global cognition.

"*Beauty is Moira and Eileithyia for every Genesis*" (Symposium)

Mathematics, from its birth, is about beautiful patterns of perfect ideas, it is indeed a music of reason.

Hard, critical and detailed thinking about thinking, the development of logic and dialectic, was a big part of ancient Rationalism:

terminology, definitions, axiomatization, classifications, including a classification of mistakes,

methods of reductio ad absurdum and mathematical induction,

Later: principle of sufficient reason, laws of nature and experimental verification, critical attitude to self-evidences.

Moira and Eileithyia for Genesis on the laws

First, the laws are endowed with a peculiar mathematical beauty, uniting in themselves formal simplicity, richness of solutions and one or another kind of symmetry, often as if suggesting itself as a hypothesis to a mind gifted with intuition. This special beauty is sometimes called elegance of the laws of nature. Thus, elegance has a decisive significance to a birth of a hypothesis, the most mysterious part of discovery.

Secondly, the same elegant mathematical law captures a tremendous range of parameters (distances, time intervals, energies, etc.), at that with a fantastic precision, up to twelve digits. This quality of the laws can be called universality.

Finally, the laws happen to be friendly to life's appearing and developing up to intellect; following the established terminology, this quality can be called anthropic.

The combined presence of these three qualities allowed for their discovery by great minds, and for that reason, it seems that the most appropriate term, uniting all three, is discoverability. A universe whose laws satisfy the Discoverability Principle (DP) of being *elegant, universal and anthropic* we suggested to call Pythagorean.

It could be even that the laws of our universe constitute the simplest possible set, compatible with the DP. The only explanation of this amazing quality of the laws is that they come from the highest mind that created our universe able to not only be inhabited by intelligent beings but cosmically cognized by them.

A.&L. Burov, https://pythagoreanuniverse.com/

Irrationalists

Who was against the Rationalist agenda?

All teachers of the narrow horizon: empiricists, skeptics, cynics, epicureans, gnostics…

Among many schools of ancient thought we can find

— atheistic or irreligious, who also were careless or skeptical about global cognition;

— theistic irrationalists, careless about global cognition of universe too;

— theistic rationalists;

Whom we cannot find there: atheistic proponents of global cognition.

This strange teaching appeared only recently, when — paradoxically enough — the rationalist agenda proved to be unbelievably fruitful.

Among the founding fathers of Physics from Galileo till Heisenberg, there were only rationalists in the described sense, no atheists at all, with a single exception of young Dirac, who finished his life as a regular church-goer.

“Lost in Math”, by Sabine Hossenfelder

Why should the laws of nature care what I find beautiful? Such a connection between me and the universe seems very mystical, very romantic, very not me.

“The sense of beauty of a physical theory must be something hardwired in our brain and not a social construct. It is something that touches some internal chord,” he [Gian-Francesco Giudice, head of CERN theory dept] says. “When you stumble on a beautiful theory you have the same emotional reaction that you feel in front of a piece of art.”

It’s not that I don’t know what he is talking about; I don’t know why it matters. I doubt my sense of beauty is a reliable guide to uncovering fundamental laws of nature, laws that dictate the behavior of entities that I have no direct sensory awareness of, never had, and never will have. For it to be hardwired in my brain, it ought to have been beneficial during natural selection. *But what evolutionary advantage has there ever been to understanding quantum gravity?*

(from LiM)

What is Scientism?

Scientism is a loss of philosophical culture, loss of metaphysics, with a following reduction of everything to physical laws and chance as terminal causes: “Physics is everything”.

It holds the value of global scientific approach without understanding its meaning, limits and history. It looks like the Tower of Babel on top of an abandoned temple.

On the scientific Mount Olympus, global scientific cognition lost its sacramental vision, reducing its value to a matter of animal curiosity and some byproduct utility. Can it have a long-term future, if its roots are lost?

Why did it happen? Is it going to stay or decay? Is it a story of the prodigal son or rather of the Tower of Babel?

Questions they do not ask

S. Weinberg: “most scientists are not atheists to speak of because they don’t think about it enough to be atheists.”

This is a definition of scientism. Its followers do not ask the main questions about the universe, physics and humanity:

1. Why are the discovered physical laws described by discoverable equations?
2. Why are the classical laws of nature described by elegant equations?
3. Why was it possible to discover them up to 45 orders of magnitude and 12 digits of precision?
4. Is this discoverability compatible with darwinian “fittest survive”?
5. What is a value and meaning of the fundamental science?
6. Why should people support fundamental science, if very few understand it?
7. What are the arguments pro and contra of God as Highest Reason and Heavenly Father? Does Physics provide some of them?

When they are forced to answer, they force physics to speak for philosophy, thus making a caricature from both.

Discovery of the laws of nature,

working with extremely high precision

within 45 orders of magnitude,

this biggest success of humanity,

is the impressive fruit of Rationalism.

Such fruits tell the truth of the tree.

There is only one reasonable ground for the laws

being discoverable and highly valued:

The laws of our universe were chosen by the Creator

to enrich our communion with Him

by the important modus of human creativity

and cosmic contemplation

of very special intellectual beauty discovered by genius people.

Would God be happy then to see the scientific Mount Olympus

occupied by those to whom this idea is totally foreign?

Would He want to keep the laws discoverable by such a community?

Many Thanks!