

SPIRITUAL DIMENSIONS OF SCIENTIFIC COGNITION



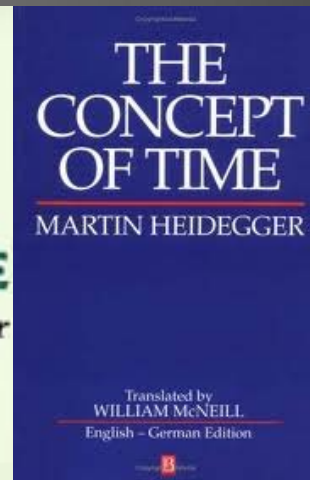
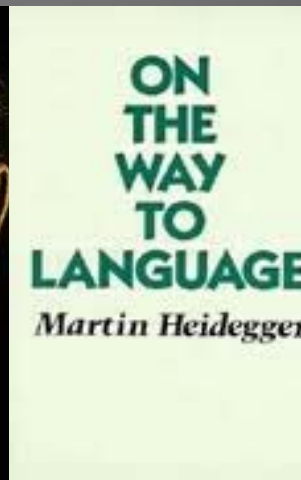
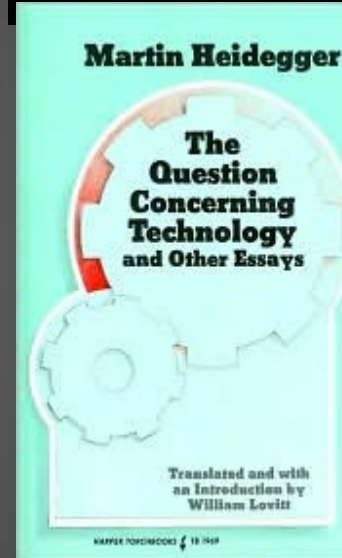
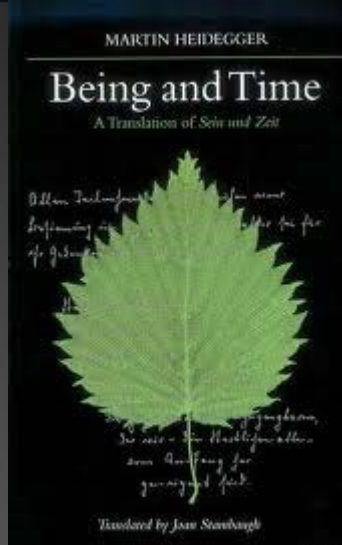
ALEXEY BUROV

CERN, Sep 12, 2011

“Ethics and psychology are grounded in metaphysics. When it comes to saving man’s essential nature, psychology – whether as such, or in the form of psychotherapy – is helpless; ethics as a mere doctrine or imperative is helpless unless man first comes to have different fundamental relation to Being – unless man of his own accord, so far as in him lies, begins at last to hold his nature open for the essential relation toward Being...”

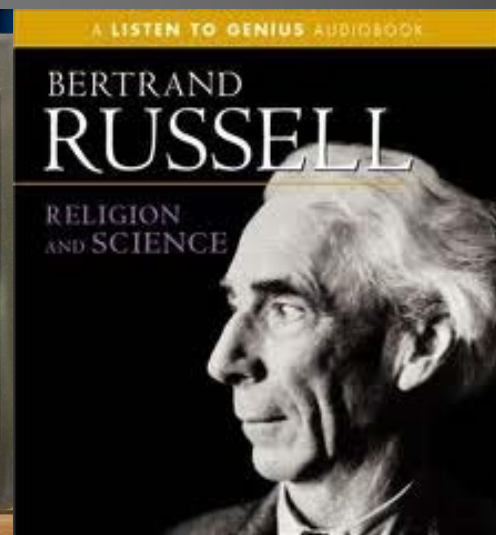
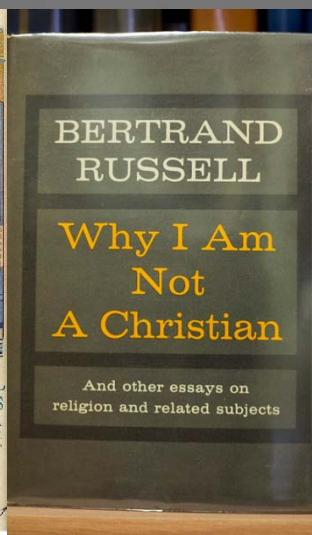
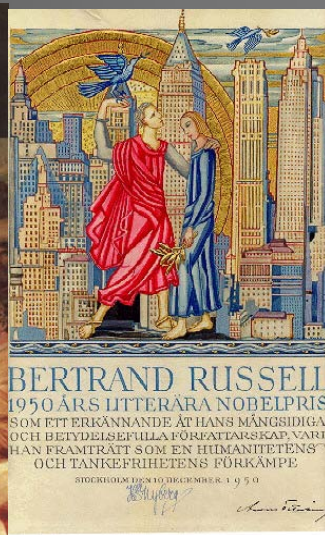
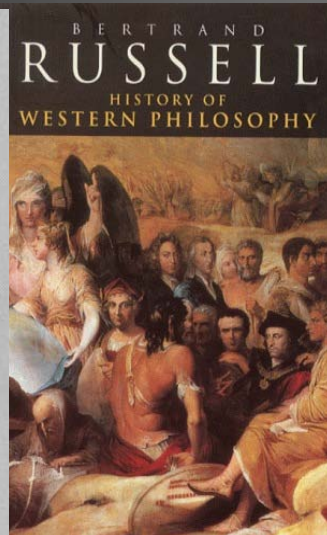
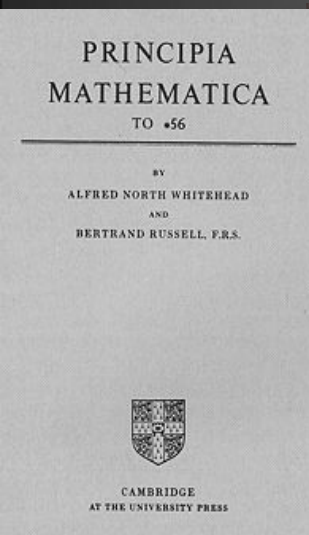
“The most thought-provoking thing in our thought-provoking time is that we are still not thinking.”

Martin Heidegger, “What is Called Thinking?”, 1954



“A science may affect human life in two different ways. On the one hand, without altering men's passions or their general outlook, it may increase their power of gratifying their desires. On the other hand, it may operate through an effect upon the imaginative conception of the world, the theology or philosophy which is accepted in practice by energetic men. The latter is a fascinating study, but I shall almost wholly ignore it, in order to bring my subject within a manageable compass. I shall confine myself almost wholly to the effect of science in enabling us to gratify our passions more freely, which has hitherto been far the more important of the two.”

Bertrand Russell, “Icarus or the future of science”, 1924.



What is Science?

Science can be defined as the cognition of universal or pure reason.

- **Both theoretical concepts and scientific facts must be independent of personal, cultural and biological properties of theorists and observers.**
- **Scientific reality is what is seen through special glasses of the “scientific observer”: data of standard devices.**
- **Science is a sort of knowledge, designed to be maximally transferable to any sufficiently developed extraterrestrial reasonable beings. It is a knowledge of pure abstract reason.**

What is out of Science?

From scientific reality are excluded, a priori:

- **Good and evil**
- **Beautiful and ugly**
- **Sublime and vulgar**
- **Wisdom and folly**
- **Meaning of life, values and sacraments**
- **Birth of new ideas, creativity**

In one word, what is excluded is the spiritual sphere. Humans, seen through scientific glasses, cannot be distinguished from animals.

This is not a drawback of science – it is just its limit, other side of its power. Due to this limit, only our bodies can be scientifically seen. Man as a spiritual being is neither observable, nor thinkable scientifically. The same is true for any real or imaginary personalities. For God, in particular.

Scientific Doubt and Scientific Faith

- Science is looking for new knowledge. Thus, it always assumes incompleteness, possible errors and limits of the existing theories.
- Doubt in the existing knowledge is absolute. Any knowledge is considered as temporary and approximate representation of the ultimate truth.
- There is no trust in the kingdom of science. However...
- Science is based on its values, on the strong faith in these values – as any big and difficult human affair.
- Strength of this faith is a necessary condition of science. These values can never be scientifically proven, as none of values can.
- Moreover, as any faith, it contradicts to the global scientific doubt.
- Thus, at the very core of science we see a paradox. How to solve it?

Faith Reason paradox, in general

- A reason without faith is powerless. It is the faith, which moves mountains.
- Any faith without reason is blind. Without reason, a faith cannot be purified from poor or illicit beliefs. The sleep of reason produces monsters.
- Faith and reason need each other – and they contradict each other.
- Since a faith belongs to the core of our life, generating its meaning, every effort to see it better, to improve it and purify is extremely important.
- Thus, the solution of the faith-reason paradox is a reflection on our faith.
- This reflection requires ever-renewed efforts to see our faith in a light of both personal experience and the human history.
- Let's try to do this for the faith of science...

A. Einstein on the scientific faith

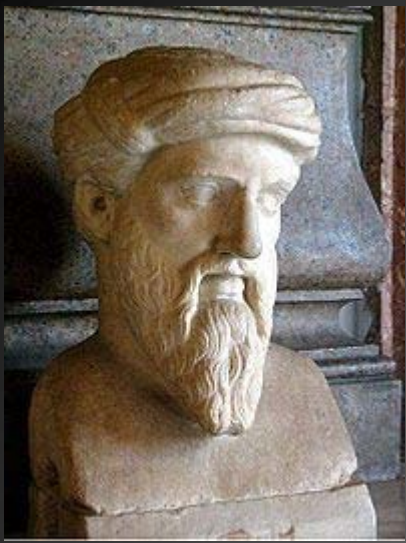
“ I maintain that the cosmic religious feeling is the strongest and noblest motive for scientific research. Only those who realize the immense efforts and, above all, the devotion without which pioneer work in theoretical science cannot be achieved, are able to grasp the strength of the emotion out of which alone such work, remote as it is from the immediate realities of life, can issue. What a deep conviction of the rationality of the universe and what a yearning to understand, were it but a feeble reflection of the mind revealed in this world, Kepler and Newton must have had to enable them to spend years of solitary labor in disentangling the principles of celestial mechanics!

Those whose acquaintance with scientific research is derived chiefly from its practical results easily develop a completely false notion of the mentality of the men who, surrounded by a skeptical world, have shown the way to kindred spirits scattered wide through the world and through the centuries. Only one who has devoted his life to similar ends can have a vivid realization of what has inspired these men and given them the strength to remain true to their purpose in spite of countless failures. It is cosmic religious feeling that gives a man such strength. A contemporary has said, not unjustly, that in this materialistic age of ours the serious scientific workers are the only profoundly religious *people.*”

Cosmic religious feeling as the Scientific Credo

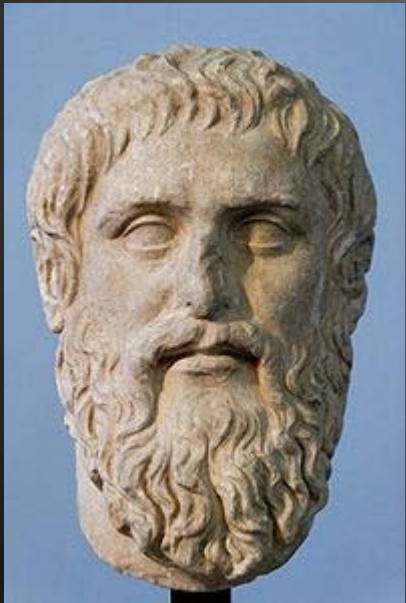
- There is the Rationality - Logos behind all phenomena.
- The Logos kingdom is all-scale and total – from tiniest particles to the entire Universe.
- The Logos is beautiful.
- The Logos can be visible to human minds - it is the scientific cognition.
- Science, as a human communion with the Logos, is one of the noblest ways of life.
- Quantum Mechanics: The Cosmos is a product of not only Logos, but also Chaos.

Brief History of “Logos”



Essentially, this credo can be already found in Pythagoras teaching. Terms Cosmos (world as a harmony) and Logos (world rationality) were coined by him. The idea of human salvation through Logos is his as well. Later these concepts played central role in the Platonism and Christianity.

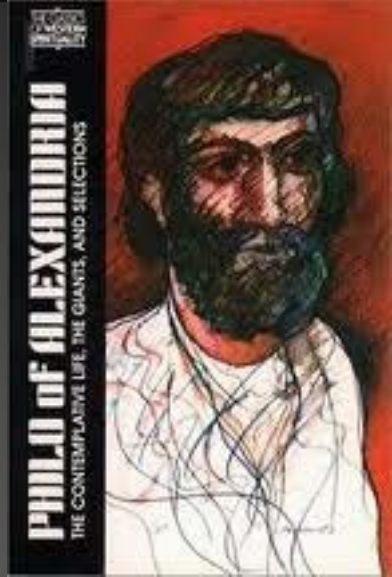
Πυθαγόρας, 570-495 BC



Plato and platonics: Cosmos resulted from the primordial Chaos, formed by Creator, through His emanation of Logos and Soul. Human soul and reason have the same divine origin. This was also a belief of stoics (300 BC and after).

Πλάτων, 428-348 BC

Philo of Alexandria (20 BC-50 AD) suggested a harmony of Jewish Scriptures and Greek philosophy. Logos is "the first-born of God", "the Logos of the living God is the bond of everything, holding all things together and binding all the parts, preventing them from being dissolved and separated." He identified Logos with Jewish Chokmah, Sophia, or Holy Wisdom.



John 1:1-1:18 “Ἐν ἀρχῇ ἦν ὁ λόγος, καὶ ὁ λόγος ἦν πρὸς τὸν θεόν, καὶ θεὸς ἦν ὁ λόγος” – “In the beginning it was Logos and Logos was with God and Logos was God... And the Word / **λόγος** / was made flesh and dwelt among us... full of grace and truth.”

3:16 "For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life.”



*St. John, c.1-c.100 AD,
by El Greco*



Plotinus (204-270 AD)



Descartes (1596-1660)

- Neoplatonic Plotinus (204-270 AD) taught about Trinitarian God: One - Mind - Soul. Human happiness is a focus on the highest, i.e. Forms and The One.
- Christianity essentially inherited Platonic metaphysics, with its consequences
 - World is created as rational. Platonic God loves theories.
 - Human ability to see this rationality has the same divine source.
- For R. Descartes, trust in God was a precondition to trust our ability to think and observe.

- I. Newton: “It is the perfection of God's works that they are all done with the greatest simplicity. He is the God of order and not of confusion.”



W. Blake, I Newton (1795)

After his life, success of his physics worked against his belief in personal God.

- It was Benedict Spinoza who first clearly proclaimed religion of the totally ruling Software – impersonal Substance - instead personal God.
- His Substance was omnipotent and omnipresent, leading to total determinism and refutation of the free will.
- Ironically, his main book was called “Ethics”, but ethics was actually negated by this book, as it is negated by any coherently deterministic worldview.



B. Spinoza (1632-1677)

All the values lost their power when the old God was killed and impersonal Substance was enthroned instead.

What forced him to do that?

What forced him to do that?

Spinoza at some moment of his life started to believe that there must be only one explanatory principle of the World. He saw that there were two of them: Reason and Person. Thus, one of them had to be sacrificed.

That is why human and divine personalities were negated by him.



Consequence:

“The reason and will which constitute God's essence must differ by the breadth of all heaven from our reason and will and have nothing in common with them except the name; as little, in fact, as the dog-constellation has in common with the dog, the barking animal.”



P. S. Laplace, 1749-1827

- Some leading philosophers of Enlightenment (XVIII sec) assumed the Spinoza's worldview, or the totality of the inanimate scientific Logos.

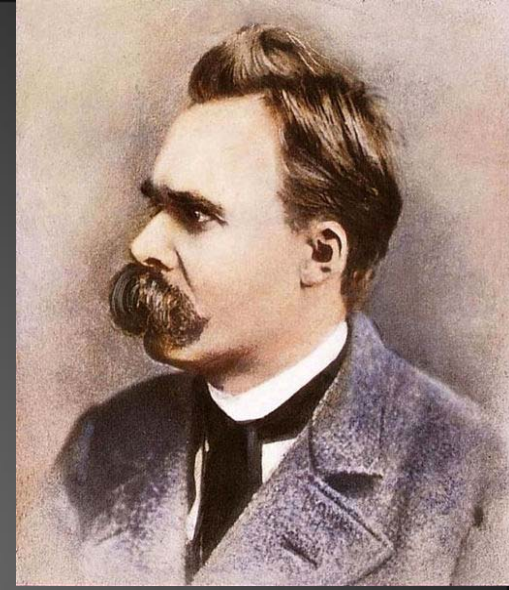
“Laplace’s demon”:

“We may regard the present state of the universe as the effect of its past and the cause of its future. An intellect which at a certain moment would know all forces that set nature in motion, and all positions of all items of which nature is composed, if this intellect were also vast enough to submit these data to analysis, it would embrace in a single formula the movements of the greatest bodies of the universe and those of the tiniest atom; for such an intellect nothing would be uncertain and the future just like the past would be present before its eyes.”

A Philosophical Essay on Probabilities, 1814

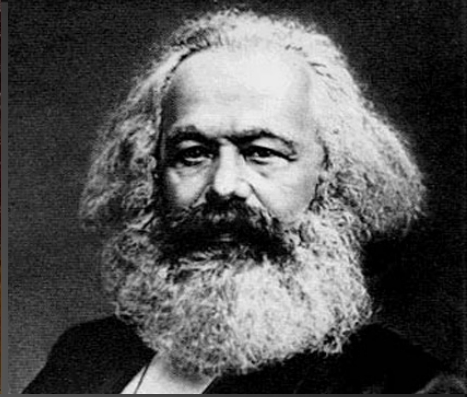
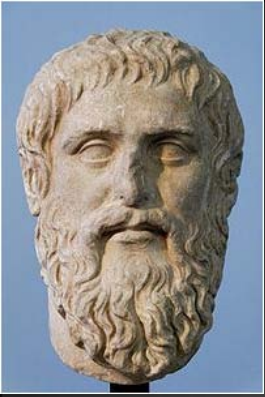


C. Darwin, 1809-1882



F. Nietzsche, 1844-1900

- After the Darwinian exclusion of God from life and human reason (1859), Nietzsche coined his diagnosis: “God is dead”. Saying this, Nietzsche actually meant more than death of God. He also meant death of all big values: Truth, Justice, Love, Beauty, and yes – Reason. Thus self-negation of Reason was spoken.
- Dehumanization of the Universe was finished. Metaphysically, man lost his divinity and fell down into a world of objects among objects. Any resistance to that became either obscurantism, “wishful thinking” or a white lie.



Plato

Saint-Simon

Comte

Fichte

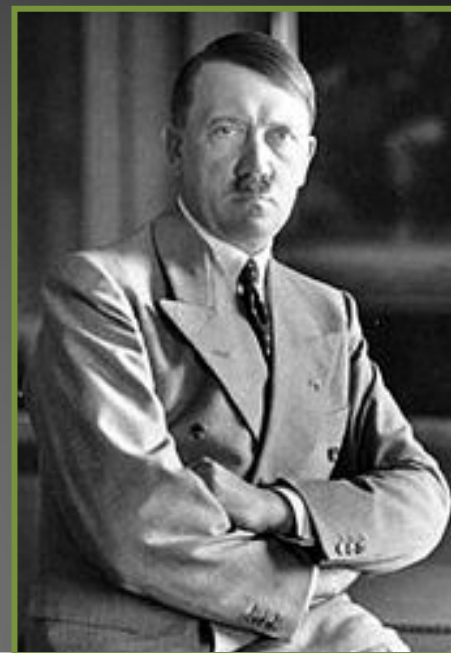
Hegel

Marx

If man is an object among objects, the society is a machine to be optimized.

Some old details have to be eliminated, of course....

Accomplished...



Scientific Communism

National Socialism

Scientific Worldview vs Scientific Credo

- Personal reality is excluded from the scientific worldview – but not from the scientific Credo.
- In particular - The Cosmic Logos can be visible to human minds...
- On what ground can we believe in that, when there is nothing common between infinite impersonal Logos and a tiny randomly born human being?
- Also: Seeing Logos is the highest, noblest value...
- How can we hold this belief if all the values are just wishful thinking or something implemented in us by local reasons of our small world? This belief looks even more absurd, if the cosmic Logos is considered as a specific random realization of the fundamental Chaos, as it is assumed for some Multiverse theories.
- If both Logos and us are just some realizations of the fundamental Chaos, the faith in cosmic reason, its beauty and our sacred communion with this grimace of Nothing is more absurd than any of the known cults.

Metaphysical Truth

- Any credo, value, sacrament may stay strong only if it is rooted in a worldview. “Ethics and psychology are grounded in metaphysics” [MH]. If not, it either dies or goes into a painful cognitive dissonance with a worldview, leading to a personal split and social catastrophes.
- Thus, Metaphysics is fundamental to psychology, ethics and politics.
- Any metaphysics, which discourages spiritual evolution is wrong.
- Mt. 7:19 “Every tree that does not bear good fruit is cut down and thrown into the fire”

Cognitive Dissonance

- A humanistic claim that the values would remain simply through a help of a proper propaganda, or due to the inborn goodness of people, or Darwinian selection, was impressively illustrated by a history of the previous century.
- With empty heavens under his head, man is running to collectivistic cults, Dionysian madness, drugs, suicide, or just degrades in a meaningless shallow life.
- In the Spinozian world, all the values are contingent nonentities, as man is. Cognition is not excluded. A soap bubble, even one reflecting sunlight, is still just a bubble. In the Spinozian world, there is no difference between humans and bubbles.
- To save our human world, a theme of cosmic hostility is actually tabooed. We have to pretend that the king is wonderfully dressed. We have to lie to each other for the sake of our life and civilization.
- It does not help though. Our values are fatally humiliated by the scientific cosmos. True values cannot be accepted out of fear, even if it is a fear for the humankind. Values, accepted under a gun, can neither inspire nor give a strength at the face of tragedy.

Einstein and Russell

“The individual feels the futility of human desires and aims and the sublimity and marvelous order which reveal themselves both in nature and in the world of thought. Individual existence impresses him as a sort of prison and he wants to experience the universe as a single significant whole.” *A. Einstein, “Religion and Science”, 1930.*

“Brief and powerless is Man's life; on him and all his race the slow, sure doom falls pitiless and dark. Blind to good and evil, reckless of destruction, omnipotent matter rolls on its relentless way; for Man, condemned today to lose his dearest, to-morrow himself to pass through the gate of darkness, it remains only to cherish, ere yet the blow falls, the lofty thoughts that ennoble his little day; disdaining the coward terrors of the slave of Fate, to worship at the shrine that his own hands have built; undismayed by the empire of chance, to preserve a mind free from the wanton tyranny that rules his outward life; proudly defiant of the irresistible forces that tolerate, for a moment, his knowledge and his condemnation, to sustain alone, a weary but unyielding Atlas, the world that his own ideals have fashioned despite the trampling march of unconscious power.” *Bertrand Russell, “A Free Man's Worship”, 1903*

The Duoverse

- In fact, the current Worldview shows not one, but two universes, in a painful inconsistency with each other.
- The scientific world, reflecting the inanimate Logos, negating a person with its values – and the human world, trying to keep all its values – heroically and illegitimately.
- These two worlds are in a deep conflict with each other. The World is painfully split between the Macrocosm and Microcosm. It is not a Universe, but a Duoverse.
- God was killed for the sake of a new idol – reason. Thus started the Duoverse.
- The Duoverse is centuries-long, generations used to live in that, considering the old integer Universe as ridiculous, anti-scientific or obscurant. But is that true indeed?

Back to the Universe

- The Duoverse can be overcome by realization of fundamental limits of the scientific cognition, the universal Reason, unable by its very nature to accept a person.
- There is no other way to restore high cosmic meaning of human personality, keeping also highest value of science, as coming back to Logos as an emanation of living God, opened as Good, Beauty and Truth, Who is not a retired Watchmaker, but our loving and open to us Father and Savior.
- There are no scientific arguments pro or contra living and acting God. The philosophical arguments will be considered in my next talk “Proofs and refutations of God's existence”. Here I am trying to put my first argument: God's return to the worldview can restore integrity of the world and the person, freeing from the painful state of internally hostile Duoverse, return our true values, the meaning of life in their cosmic power – and cognition within them.
- The God's acceptance is not “wishful thinking”. On the contrary – it is reconciliation of the human world, Microcosm, with the scientific world, Macrocosm, saving us from a poor split state, where all the noble values are indeed nothing else but “wishful thinking”.

“Ethics and psychology are grounded in metaphysics. When it comes to saving man’s essential nature, psychology – whether as such, or in the form of psychotherapy – is helpless; ethics as a mere doctrine or imperative is helpless unless man first comes to have different fundamental relation to Being – unless man of his own accord, so far as in him lies, begins at last to hold his nature open for once for the essential relation toward Being...”

***Martin Heidegger, “What is Called Thinking?”,
1954***



