

In developing own methodology in the optimistic days of the Renaissance, Natural Sciences inherited from previous epochs the fundamental triad “matter – space – time”. However, the significance of these three metaphysical categories in the culture of our civilization is not the same. The methodological base of Natural Sciences is the definition of time scales and time measuring since the gross aim of Natural Sciences is the investigation of **Present** in order to predict the **Future** and to explain the **Past**.

Thousands of skilled professionals are dealing with the problems of measuring and recording time and devoted hundreds of volumes in all languages of the world to these topics. Surprisingly, in spite of such general concern, readers will not find a clear and consistent definition of Time in textbooks or encyclopedia. All a knowledge of modern physics about the properties of the time easily fit on a few pages.

Over the centuries, all disputes about Time were determined by several main questions:

- I. What is the ontological status of time – is it an essence as empirically comprehensible as space and matter, or is it just an illusion – a useful invention perfected by generations of skilled watchmakers and stargazers?
- II. If time is not an illusion, what are its main characteristics – is it continuous, like the boundless ocean, or similar to the sand dunes of a desert, composed of myriads of tiny particles?
- III. What is the cause of the by everybody perceived irreversibility of time, and is the speed constant with which the “time pace” inevitably brings our future?
- IV. If physicists succeeded in the 20th century to open Antimatter, whether we can fruitfully discuss the existence of also Antitime and Antispace?

However, the innumerable discussions have not yet given definitive answers to these questions, as if confirming a long-standing Aristotle’s pessimism – “Of all the unintelligible Time is most unintelligible”.

In modern Natural Sciences, not excluding theoretical physics, as in the early classical mechanics, unnatural reversible Newtonian time, based on the model of the medieval concept of geometric time by Nicholas Oresme, is still used. This “original sin” of Natural Sciences has unintended consequences and creates a set of paradoxes and methodological problems for science.

Since reversible Newtonian time is a corner stone of a conceptual foundation of Natural Sciences, replacing it with the irreversible “physical” time corresponding to all observations of nature is likely to be a lengthy process. However, even the first steps of the **Irreversible-Time Physics** in 21st century allow being optimistic about the prospects for the development of the concept of irreversible physical time. Modern high-precision astronomical observations have allowed discovering of a new phenomenon – the **Cosmological deceleration of time pace** with the evidences not only in deep space, but also in the Solar system and on Earth. Recent studies of high energy micro-particles allow suggesting the existence of **Antitime and Antispace phenomena** in Microcosm.

Picture on the cover of the site – Icelandic landscape with ancient volcanoes Kikjufell. www.astronet.ru and www.imagesinspiredbynature.com – J. Bourdman-Woodend.