

NEW MONOGRAPH BY ANGUEL STEFANOV

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In his book “Changing Views of Space, Time, and the Universe,” Anguel Stefanov illuminates some questions connected with the increasing number of cosmological views as well as the thesis about extensive and broad changes in the human picture of the cosmos (Greene, 2011). He directs his attention to the way of the growth of the human knowledge and puts two questions (why and how) which afford him to elucidate the problem. Answering the how question, where two epistemological approaches are described, the first one follows the direction “from observation to theoretical generalization” (Heraclites) and the second one is “from conception to explanations of the empirical realm” (Parmenides) (Stefanov, 2025, p. 5). Stefanov’s book is organised by nine chapter-problems that analyze the growth of human knowledge and, in particular, views of space, time and the universe.

In the part named “Space and Time as a Classical Concepts,” he surveys concepts time, space and spacetime (Minkowski) and presents original philosophical analysis distinguishing between philosophical (Kant) and scientific (Newton) meanings of the concepts time and space. Stefanov’s research presents and clarifies the complicatedness of the philosophical approaches to the problem, where he wrote: “We do not perceive space and time in the same way we perceive material objects. ... Thus, physicists were in need of another theoretical structure to represent space and time, which is different from the two classical concepts of space and time, keeping them apart from each other.” (Stefanov, 2025, p. 10).

The next part of the book sets an examination of two conceptions about time and proposed the revised version of Augustine’s time confessions. The central problem for this section of the book is the question about the nature of time. Based on McThagart (1908) work and especially on the idea about two conceptions – the dynamic one and the static one – Stefanov writes: “What is important for my analysis is the main theoretical backbone of the two conceptions about time: the dynamic one taking seriously the flow of time, and the static one, laying time to be a real dimension of the four-dimensional spacetime.” (Stefanov, 2025, p. 12) According to him the methodological significance of the Augustine’s thoughts is actual to the debate about the nature of time in present days. Definitely, this part of the research is interesting and philosophically important, because it presents different difficulties

(ontological, epistemological, metaphysical) in front of the two conceptions. Based on the Kantian ideas, Stefanov concludes: “A general answer is that when we perceive fragments of the world, when these fragments become, to use the Kantian way of saying, “things for us”, and they are given by our forms of sensibility as spatial and time representations, then time starts to “flow”; or in other words, perceptual time becomes mind-dependent.” (Stefanov, 2025, p. 15)

The problem of the substantive nature of the spacetime is discussed in the fourth part of the book. To defend this thesis, Stefanov uses arguments from theories in physics and belonging to them theoretical terms as dark energy, gravitational waves, electric and magnetic fields, four-dimensional space-time (Minkowski spacetime) – “If spacetime were relational, then it could not possess non-relational properties, which are accepted to be possessed by material systems.” (Stefanov, 2025, p. 18). He defends the thesis about the substantive nature of spacetime and applies original and relevant arguments based on the theories of Einstein, Hawking, Minkowski. In addition to this, in this part of the work, he gives some thoughts concerning ideas about the emergent character of spacetime – “spacetime has not a fundamental existence” (Stefanov, 2025, p. 20). His analysis of the ideas of contemporary physicist as Musser and Rovelli, brings him to an original conclusion about the problem of ontological status of spacetime.

In the next part of the book, the starting points of the Stefanov’s analysis are based on two conceptual directions – the first one is the view that gravitation is force field (quantization; Standard model of elementary particles) and the second one is the idea that gravitation is not a physical force field (gravitation is geometrical field). In this part of the book, Stefanov presents and examines Petkov’s ideas regarding spacetime problems and asks the question: “Why, and how material objects warp spacetime?” (Stefanov, 2025, p. 28). Here he gives the original approach on how to resolve the existing puzzle in the field of contemporary physics.

A new interesting problem that is presented in the book is about Einstein’s “biggest blunder” (“What was Albert Einstein’s “biggest blunder” of his life? Einstein’s realism”). In this part of the text Stefanov gives his philosophical analysis of the epistemological and scientific status of Einstein’s term called cosmological constant and connecting with this the problem of Einstein’s realism.

Another interesting topic presented in the book puts the problem of the accepted paradigm in cosmology today. Stefanov brings out the original thesis that contemporary cosmological theories are out of a well-structured paradigm. To support this claim he presents several arguments. The first one is connected with the investigations of Edwin Hubble and Knut Lundmark (other galaxies beyond the Milky Way – Andromeda and the Magellan clouds) and the way in which they start to change classical views (classical cosmological paradigm) about boundaries, limits and stationarity of the universe. Stefanov points a specific epistemological role of the Olbers’s paradox to the process of changing views and marks this paradox as the methodological step for starting the period of the post-paradigmatic period of cosmology. In addition he

supports his view by the Einstein's cosmological constant. To defend his thesis about post-paradigmatic period of cosmology, he maintains that the introduction of different cosmological theories (the conceptual framework) are an indication that the classical paradigm has been abandoned.

Another interesting idea is the epistemic role of the philosophical and aesthetical predilections to the processes of building new cosmological theories – “the construction of contemporary cosmological theories could be affected by philosophical and aesthetical predilections, which although being set as not exactly scientific kind of prerequisites, exert methodological influence on scientific theorization.” (Stefanov, 2025, p. 53); “By these reflections I tried to show that philosophical and aesthetical predilections, valthough set in a background worldview, can exert an influence on the formation of cosmological theories.” (Stefanov, 2025, p. 62).

The final part of the book focuses on the problem called “The anthropic principle”. In this part, Stefanov presents and analyses different versions of the anthropic principle and their interpretations. He writes: “Strictly speaking, AP is not a scientific principle, because nothing as a concrete scientific result follows from it.” (Stefanov, 2025, p. 83). In this part of the book he demonstrates his philosophical ideas connected with the existing most supported variants (scientist, philosophers) of the anthropic principle.

The book “Changing Views of Space, Time, and the Universe” presents important and interesting questions and topics in the field of contemporary philosophy. The importance and the significance of Stefanov's book does not need to be defended, because the text clearly speaks of it. Regardless of the complexity of the topics presented in the book, it is written in a brilliant writing style that is clear and easy to understand, and performs the author's argument in a way that is facilely to follow.

REFERENCES

- Greene, B. (2011). *The Hidden Reality. Parallel Universes and the Deep Laws of the Cosmos*. Random House of Canada Limited.
- Stefanov, A. (2025). *Changing Views of Space, Time, and the Universe*. LAP LAMBERT Academic Publishing.

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