

On the Origin of the Universe: Chaos or Cosmos?

Wiesław M. Macek^{1,2}

¹ Faculty of Mathematics and Natural Sciences
Cardinal Stefan Wyszyński University
Wóycickiego 1/3, 01-938 Warsaw, Poland

² Space Research Centre, Polish Academy of Sciences
Bartycka 18 A, 00-716 Warsaw, Poland
(E-mail: macek@uksw.edu.pl)

Abstract. I would like to consider the Universe according to the standard Big Bang model, including various quantum models of its origin. In addition, using the theory of nonlinear dynamics, deterministic chaos, fractals, and multifractals I have proposed a new hypothesis, Ref. [1]. Namely, I have argued that a simple but possibly nonlinear law is important for the creation of the Cosmos at the extremely small Planck scale at which space and time originated. It is shown that by looking for order and harmony in the complex real world surrounding us these modern studies give new insight into the most important philosophical issues beyond classical ontological principles, e.g., by providing a deeper understanding of the age-old philosophical dilemma (Leibniz, 1714): *why does something exist instead of nothing?* We also argue that this exciting question is a philosophical basis of matters that influence the meaning of human life in the vast Universe.

Keywords: Chaos, Cosmos, Universe, Creation.

References

1. Macek, W. M., The Origin of the World: Cosmos or Chaos?, UKSW Scientific Editions, 2020, ISBN 978-83-8090-686-0, e-ISBN 978-83-8090-687-7.