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EVOLUTION:
FROM COSMOGENESIS
TO BIOGENESIS

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INTRODUCTION

This Volume is the written material of the symposium "Evolution: Cosmogogenesis... Biogenesis...", held between 28th and 31st May, 1990, in Budapest. This symposium had been organised under the aegis of the Geonomical Scientific Committee of the Hungarian Academy of Sciences, by the Evolution of Matter Subcommittee of the said committee. The Geonomical Committee is an interdisciplinary body for general overview of the natural sciences to develop new long-range connections among different disciplines; the Subcommittee started in 1989, tries to follow (or trace back) the steps of self-organisation of matter from the Beginning to the present, and the result of its first symposium is this Volume.

However, no constructive method is known to view "Natural Science" as a unit; the global picture is built up from blocks constructed by the separate disciplines. Still, an overview may give answers to old questions. For example, on all levels of organisation the actual path of evolution may be and is regarded alternatively either as accidental or as predetermined. Such questions have connotations not only professional but philosophical, religious, eschatological &c. as well, but we do not want to leave the grounds of strict natural science. Our present purpose is to show up the available most coherent picture as a starting point of any deduction.

As an example, for terrestrial evolution of matter we mention that life uses mainly the most abundant elements of the Universe. These abundances may or may not be accidental, but the answer can come only from other disciplines. Similarly, the conditions resulting in Earth had been produced by cosmologic, galactic and (presolar) stellar evolutionary steps, which, therefore, should be simultaneously studied.

Generally the lecturers of the symposium are experts of their own fields. The Organising Committee (the Editors) took the responsibility of selecting the actual persons, but the texts are the lecturers' sovereign works. The plan of the symposium tried to establish some links or overlaps. Some separated extra comments of the Editors may appear after texts (in the gothic italics of the present Introduction), with a signature E. Of course, for these comments the lecturers are not responsible.

We hope that the Volume will promote some further multidisciplinary activities. The Editors thank the Theory Department of the Particle and Nuclear Institute of the Central Research Institute for physics for technical help. The edition was partly supported by the OTKA fund N° 1772.

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