



UNIVERSITY
OF PATRAS



International Center for
Sciences and Hellenic Values

AN INTERNATIONAL CONFERENCE

ANCIENT & CONTEMPORARY GREECE WORLD

THE INFLUENCE
OF GREEK THOUGHT
ON PHILOSOPHY,
SCIENCE AND
TECHNOLOGY

Ancient Olympia,
28-31 August 2016

Editor:

STEPHANOS A. PAIPETIS
Professor Emeritus, University of Patras

An International Conference
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PREFACE

The present volume includes the works presented at the International Conference “Ancient Greece and Contemporary World”, Ancient Olympia, 28-31 August 2016. The Conference was the result of at least twenty years of effort of several colleagues at the University of Patras, coming from all areas of Letters, Science and Technology. This Conference is the fourth in a series of conferences¹ with similar scope, aiming at investigating all these that ancient Greece has still to offer to humanity. It is not an exaggeration to say that answers to many of the critical problems of the modern world may be hiding somewhere in the great achievements of civilization. A civilization that remains a timeless source of knowledge, inspiration and ideas, helpful even to face contemporary threats against life on our already heavily burdened planet.

The Conference was based on two fundamental concepts, i.e.: (a) As the individual is not able to conceive existing knowledge as a whole, they tend to artificially break down human knowledge into many isolated disciplines by adopting extreme specialization. Thus they are deprived from a holistic world view which results to substantial loss of new knowledge and, in the extreme case, they turn into technocrats (*τεχνοκράτης* = a highly knowledgeable and very productive person within a very narrow scientific or technological area who remains unaware of the potentially negative consequences of their own activities) and, (b) The ancient Greek world should not be approached by the various disciplines separately, albeit from the aspects of each one in coordination or interaction with the others, so that an integrated world-view could be produced.

The scope of the Conference included three general areas, i.e. Philosophy, Science and Technology. Distinguished scientists from the respective fields from a total of 10 countries were invited, and offered contributions of significant importance. The response to the call for papers was more than satisfactory. Out of a large number of papers submitted of papers were submitted. Eventually, a total of 58 characterized by original, high level content of knowledge were accepted for verbal presentation. These formed the final program which was organized as following: Philosophy (Political Philosophy, Art, Mythology), Science (Medicine, Biology, Geology, Mathematics, Physics, Astronomy and Astronomical Instruments and Ancient Technology. This is the sequence in which they are presented in this volume.

Due to the interdisciplinary character of the Conference, substantial effort was made toward the coordination of speakers in order to encourage communication and discussions between delegates of diverse fields. The undersigned wishes to express his satisfaction, since the said efforts were crowned by absolute success, and the discussions following each presentations were extremely interesting and fruitful.

Moreover, most important was the presence of H. E. The President of the Hellenic Republic Professor Prokopios Pavlopoulos, who, responding to a request by Professor Venetsana Kyriazopoulou, Rector of the University of Patras, accepted to place the

1. Two of them had the same title “Ancient Greece and Contemporary World”, 1997 and 2002 respectively (Proceedings published by the University of Patras) and another two, titles, «Extraordinary Machines and Structures in Antiquity», 2001 and “Science and Technology in Homeric Epics” (Proceedings published in Greek by “Peri Technon”, Patras and in English by Springer).

Conference under his auspices and deliver the main speech, during a magnificent Opening Ceremony, at which important personalities of the academic, political, cultural etc. communities were present. In particular, the presence of Mr. Frans Timmermans, Vice President of the European Commission, was an outstanding event.

Finally, most substantial and full of important messages related to the timeless Hellenic presence in history and to what should be the common aim of all Hellenes was the speech of Mrs. Aikaterini Panagopoulos, National Ambassador of Greece to the Council of Europe for Sports, Tolerance and Fair Play and main sponsor of the Conference. Furthermore, Mrs. Panagopoulos announced the establishment of a new research institution, title "International Centre for Sciences and Hellenic Values", whose aim shall be the realization of the goals set at the present Conference. The ambition of the Organizers is that via this research Institute, a broad national and also world cooperation will commence, which combining research and the exploitation of ancient Greek wisdom and ideals, will exhibit Timeless Greece and its contribution to humanity, providing new solutions and model cultural tools, so desperately needed in the present adverse times.

I want to express the deep appreciation of the Organizers to all those who contributed to the success of this important Conference, and firstly to Mrs. Aikaterini Panagopoulos, who, by accepting the basic principles of the Conference and by exhibiting her full trust towards the Chairman and the Organizing Committees, as well as her full support from every possible aspect, managed to turn an initially ambitious idea into tangible reality.

Sincere thanks are also due to the Rector of the University of Patras Professor Venetsana Kyriazopoulou for her multiple contribution. Professor Kyriazopoulou agreed that the University would be the main Organizer of the Conference, and submitted the request to the President of the Hellenic Republic to place the Conference under his auspices. By her physical presence at all of the relevant functions, and also by her prestige and authority she supported the Conference immensely. Equally warm thanks go to Professor Demosthenes Polyzos, Deputy Rector, for his valuable support, especially through the administrative and financial mechanisms of the Research Committee of the University of which he is in charge.

Every member of the Organizing Committees contributed its best, however, I wish to emphasize the important contribution of Professor Stavros Papamarinopoulos of the University of Patras, who, with great enthusiasm and zeal assisted substantially with the selection of invited speakers and the preparation of the technical program of the Conference.

Out of the members of the Local Organizing Committee, catalytic was the role of Mr. Georgios Panagiotopoulos, financial and administrative consultant and that of Mrs. Teta Giannarou, Public Relations and Communication Officer, with both of whom we shared what I call a "creative agony" during the preparation of the Conference. In particular, the former managed to solve lots of crucial problems with unparalleled ability and inventiveness, while the latter not only provided solutions to lots of issues beyond her main duties, but also managed to find time to contribute to one of the most interesting works presented. Finally, quite substantial was the contribution of Dr.

Christos Kehagias, distinguished philologist and Lecturer of the University of Athens as consultant of the present in issues of Philosophy, History and Language.

The list of acknowledgments could be endless, but space is limited, therefore, we close with a grateful reference to the International Olympic Academy, for their impeccable hospitality, and also to the local authorities, i.e. Mr. Georgios Georgopoulos, Regional Deputy Governor for Eleia and also the Majors of Ancient Olympia and Elis, E. Kontzas and Ch. Christodoulopoulos respectively and to ensure them that we shall remain at their side with the great task of safekeeping the sacred places bestowed on them.

S. A. Paipetis, Professor Emeritus
Chairman of the Conference

CONFERENCE OPENING CEREMONY

MONDAY 29 AUGUST (10.30-12.30)

- Address by the Chairman of the Conference, Professor Emeritus S. A. Paipetis.
- Address by the First Vice-Chairman of the European Commission Mr. Frans Timmermans.
- Address by the Commissioner for Immigration, Internal Affairs and Citizenship Mr. Dimitris Avramopoulos.
- Address by the Rector of the University of Patras Professor Mrs. V. Kyriazopoulou.
- Address by Prof. A. Kounadis, Academy of Athens.
- Address by the National Ambassador at the Council of Europe Mrs. Aikaterini Panagopoulos, announcement of the founding of the International Center for Science and Hellenic Values and commencement of signing the Founding Charter by Thymios Kotzas, Mayor of Ancient Olympia, Georgios Georgopoulos, Deputy Secretary General of Eleia Regional Area and Christos Christodoulopoulos, Mayor of Elis, who will deliver symbolic addresses
- Speech by H.E. the President of the Hellenic Republic.
- Departure of H.E. the President of the Hellenic Republic.
- Welcome party and continuation of signing the Founding Charter.

The present volume includes the works presented at the international Conference "Ancient Greece and Contemporary World", held in Ancient Olympia on 28-31 August 2016. This Conference came as the sequence of at least twenty years of effort of several colleagues at the University of Patras, originating from all disciplines. In fact, this Conference was preceded by four others¹ with similar scope, which made us realize that the ancient Greek civilizations, besides what has already offered to humanity, there is still a lot it has to offer. To the extent that, without a shred of exaggeration, we can reasonably claim that many of the answers to the critical problems of the modern world may exist hidden somewhere in the great achievements of that civilization. A civilization that remains a timeless source of knowledge, inspiration and new ideas, important in encountering the current threats against life itself on our already unbearably burdened planet.

The Conference was organized based on two basic ideas: (a) The separation of knowledge into many isolated disciplines is artificial and is due to man's inability to conceive knowledge in its totality, the result of which is *ákratē* specialization, which deprives him from a holistic view of the world and causes substantial losses while searching for new knowledge, while, in the extreme case leads to the creation of the so-called *τεχνοκράτη*, e.g. a person very knowledgeable on a very narrow scientific or technological area, in which can be very productive, however, being unconscious of the potentially negative consequences of his own activities and (b) The ancient Greek world should not be approached by the various disciplines separately, but, on the contrary, it must take place from the aspects of each one in coordination or interaction with the others, to such an extent that an integrated view of things will be produced.

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