

12 SCIENTISTS ON THE 21ST CENTURY

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CONTENTS

FOREWORD JÓZSEF PÁLINKÁS	7
WERNER ARBER THE REASONABLE EVOLUTION	9
ALBERT-LASZLO BARABASI WE ARE AT THE THRESHOLD OF UNDERSTANDING COMPLEXITY	19
CATHERINE BRÉCHIGNAC SCIENTIST'S SOARING VISION	27
CATHERINE CESARSKY THE SKY IS COMMON FOR EVERYBODY	37
MIHALY CSIKSZENTMIHALYI IT IS TIME TO UNDERSTAND WHO WE ARE	49
MOHAMED H. A. HASSAN THE FUTURE OF OUR PLANET LIES WITHIN THE FUTURE OF AFRICA	57
ROLF-DIETER HEUER SCIENCE IS A UNIVERSAL LANGUAGE	67
LÁSZLÓ LOVÁSZ UNDERSTANDING THE WORLD THROUGH MATHEMATICS	75
LU YONGXIANG IN SEARCH OF TRUTH AND INNOVATION	87
ERWIN NEHER IT'S MAINLY CHANGES THAT PEOPLE NOTICE	97
FERENC PAVLICS SPACE EXPLORATION TO HELP SAVE THE EARTH	107
AHMED H. ZEWAIL PERSPECTIVES ON KNOWLEDGE AND HUMANITY	117

THE INTERVIEWED SCIENTISTS

ARBER, WERNER, Nobel Prize in Physiology or Medicine (biochemistry), Basel, Switzerland, former President of the International Council for Science (ICSU), Co-Chair of the International Steering Committee of the World Science Forum 2009

BARABASI, ALBERT-LASZLO, Director of the Center for Complex Network Research, Northeastern University, and an associate member of the Center of Cancer Systems Biology (CCSB) at the Dana Farber Cancer Institute, Harvard University Boston, Massachusetts, USA

BRÉCHIGNAC, CATHERINE, President of the International Council for Science (ICSU), President of the French National Center for Scientific Research (CNRS), Paris, France

CESARSKY, CATHERINE, astrophysicist, former President of the International Astronomical Union (IAU), High Commissioner for Atomic Energy, Paris, France

CSIKSZENTMIHALYI, MIHALY, psychologist, Distinguished Professor of Psychology in the School of Behavioral and Organizational Sciences at Claremont Graduate University and Director of the Quality of Life Research Center (QLRC), Claremont, California, USA

HASSAN, MOHAMED H.A.* , Executive Director of the Academy of Sciences for the Developing World (TWAS), Trieste, Italy, President of the African Academy of Sciences, Nairobi, Kenya

HEUER, ROLF-DIETER*, Director General, European Laboratory for Particle Physics (CERN), Geneva, Switzerland

LOVÁSZ, LÁSZLÓ*, Director of the Institute of Mathematics, Eötvös Loránd University of Sciences, Budapest, Hungary, President of the International Mathematical Union (IMU)

LU, YONGXIANG*, engineering sciences, President of the Chinese Academy of Sciences, Beijing, Vice Chairman of the National People's Congress

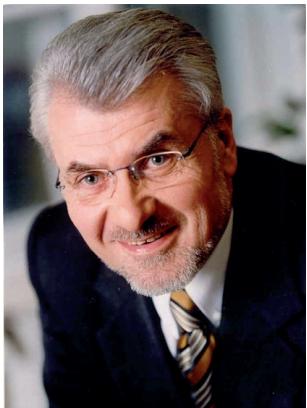
NEHER, ERWIN, Nobel Prize in Physiology or Medicine, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany

PAVLICS, FERENC engineer, designer and chief engineer of the Lunar Roving Vehicle – LRV used in the Apollo Program, Santa Barbara, California, USA

ZEWAIL, AHMED H., Nobel Prize in Chemistry, Linus Pauling Chair Professor of Chemistry, Professor of Physics, and Director of the Physical Biology Center for Ultrafast Science and Technology at the California Institute of Technology, Pasadena, California, USA

* Member of the International Steering Committee of the World Science Forum 2009

FOREWORD



In 1999, on the eve of the new millennium, Budapest, Hungary hosted the first and so far the only ever World Conference on Science. The event was organized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Council for Science (ICSU). The Hungarian Academy of Sciences and the Government of Hungary were the local organizers and hosts to the Conference.

Held every two years in Budapest, Hungary, the World Science Forum is one of the tangible results and an offspring of the 1999 World Conference on Science.

Initiated in 2003 by the Hungarian Academy of Sciences and organized in partnership with UNESCO and ICSU, the World Science Forum will be convened for the 4th time in 2009.

At the 1999 World Conference on Science I served as Co-Chair of the Hungarian Organizing Committee and as State Secretary of Education, representing the Hungarian Government, I went on to head the Hungarian Delegation during the intergovernmental proceedings of the conference. It is a great honour and a real pleasure for me to welcome you now both as President of the Hungarian Academy of Sciences and as President of the World Science Forum 2009.

I sincerely hope that the World Science Forum 2009 will once again provide a unique opportunity for major stakeholders to engage in dialogue on the role of science in the 21st century. I'm convinced that the meeting will result in a better understanding by scientists of the true challenges and the needs of society while all participants will recognize more clearly both the nature of science and some of its unique strengths that we can rely on in meeting the global challenges that humankind faces.

WSF 2009 is a unique event and a special opportunity since it coincides with the 10th anniversary of the 1999 World Conference on Science,

and focuses on the theme of *Knowledge and Future*. Besides taking stock of the achievements of the past ten years, WSF 2009 will also look forward and, hopefully, outline the role of knowledge and science amid the complex, global conditions of the 21st century.

It is our hope that this collection of interviews will provide a special, celebratory intellectual contribution to all of the above goals. The present collection is intended to summarize the thoughts and ideas of twelve world-famous scientists and science politicians on our world and on the role science can play in helping us to understand how our world works and how to make it a better place for all of us.

The key questions relate to the global challenges of our times and the opportunities offered by science in general and the scientific fields of the interviewees in particular. The book is a collection of eloquent and elevating thoughts, and we trust that it will also be seen as a tangible example and proof of the responsible thinking that is typical of most scientists.

The scientists interviewed for the book were chosen more or less in a random way. Some of those asked to contribute are Members of WSF's International Steering Committee, while others had been recommended by colleagues or members of the editorial team. "The worthy are many, the chosen are few" – as the saying goes. Many, many more people should have been included but as always the constraints of time and resources have intervened. Nevertheless, I hope that the 12 individuals selected offer a fairly representative insight into the professional activities, world-view, and deeply humanistic mindset of the great scientists of our time. It is our intention that this collection of interviews should be the first of a series, and for each forthcoming World Science Forum we shall publish another similar collection with a new set of interviewees.

I would like to thank the interviewed scientists for having been our partners and allies in this great intellectual effort and "world-tour". I do thank them for their time, thoughts, and cooperation. At the same time, I would also like to express my gratitude and appreciation to the editorial team and also to the interviewers for their work.

I wish you a pleasant read, with the hope that you will find not only bright thoughts for your joy and entertainment but also much useful knowledge and many new ideas for your work and everyday life.

József Pálinskás

President of the Hungarian Academy of Sciences
President of the World Science Forum 2009