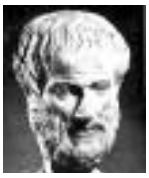

Newsletter

for the History of Science in Southeastern Europe

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SCIENCE, TECHNOLOGY AND CULTURAL DIVERSITY: FROM THE OTTOMAN EMPIRE TO THE NATIONAL STATES

Symposium, Mexico City, 9-10 July 2001

The first symposium on "Science, Technology and Industry in the Ottoman World» held in 1997 within the XXth International Congress of History of Science had attracted the attention of scholars and the proceedings book has been published (Science, Technology and Industry in the Ottoman world, Proceedings of the XXth International Congress of History of Science, volume VI, ed. E. Ihsanoglu, A. Djebbar and F. Günergun, Brepols, Belgium, 2000). In the frame of the same Congress has been organised by E. Nicolaïdis and C. Lertora Mendoza a Symposium on the transfer of the scientific knowledge from Europe to the other countries (The spread of the Scientific Revolution in the European Periphery, Latin America and East Asia, Proceedings of the XXth ICHS, Vol. V, Brepols, Belgium, 2000). At the meantime, a common project between France, Greece and Turkey (Laboratoire Techniques, Territoires et Sociétés / Ecole Natauionale des Ponts et Chaussées, Institute for Neohellenic Research / National Hellenic Research Foundation and Research Centre for Islamic History, Art and Culture — IRCICA) has been established on the transfer of technology and science from Western Europe to the East Mediterranean during the 19th century. As a first result of that cooperation and following the two above-mentioned Symposia, a Symposium has been organised by E. Ihsanoglu, K. Chatzis and E. Nicolaïdis within the XXIth International Congress of History of Science which was held in Mexico City during July 8-14, 2001. The theme of the Symposium, which took place the 9 and 10 July, was: «Cultural Diversity: from the Ottoman Empire to the National States».

Scientific activities in the Ottoman world comprise various scientific traditions, including the Islamic tradition inherited by the Ottoman Turks and carried on by Arabs, who were part of the Ottoman Empire, and then joined by European peoples, such as the Bosnians and the Albanians newly converted to Islam, as well as the tradition of different Christian peoples living in Anatolia and the Balkans, (e.g., the Greek Colleges were "new" science was

Some of the participants at the hall of the Symposium (Palazzo della Mineria), photographed by Ioli Vingopoulou.

taught), and the contributions of native Jewish scholars as well as those emigrated from Andalusia. The Ottoman world had the necessary grounds for the interaction of all these different traditions. The Ottoman Empire held vast lands in Europe and, as a result of the Ottomans' contact with European science from the very early ages, this new scientific tradition spread in the Ottoman land for the first time outside its own cultural environment where it originated. All these facts about the nature of Ottoman science have drawn the attention of historians of science in recent years.

Technology transfer from Europe to the Ottoman world has a long history that has not been elaborately studied yet. The Mexico symposium of 2001 dealt these issues, and the contributions of scholars from various disciplines and backgrounds enriched the field.

The final programme of the Symposium was the following:

Gabor Agoston (USA), "Ottoman and European Military Technology, 1450-1800: a comparison".

Michael Assimacopoulos - Yannis Antoniou (Greece), "State and professional identity : the rising of the engineers in the new Greek State".

Fotini Assimacopoulou (Greece) - Konstantinos Chatzis (France), "Les élèves grecs dans les Grandes Ecoles en France au XIXe siècle".

Salim Aydüz (Turkey), "The Development of the Ottoman Artillery during the Reign of Sultan Selim I (1512-1520)".

Cemil Aydin (USA), "Historiography on Ottoman Science and the Ideology of Turkish Modernization: an overview of the History of Science Literature in Turkey".

Yakup Bektas (USA), "Technology and Cultural Diversity in the 19th Century Ottoman Empire".

Atilla Bir (Turkey), "The Work on Vertical Sundials of Mehmed Said Efendi (1737)".

Sonja Brentjes, (Germany), "Renegates and Missionaries as minorities in the transfer of knowledge between Western and the Ottoman Empire in the 16th and 17th Centuries".

Patrice Bret (France), "Transfer et adaptation: Les origines du télégraphe optique en Egypte, de Bonaparte a Mehmet

Ali (1798-1828)".

Ekmeleddin Ihsanoglu (Turkey), "The problematique of teaching rational sciences in Ottoman Madrassas".

Mustafa Kaçar (Turkey), "The Work on a Geodesical Instrument of Mehmet Said Efendi"

Sevtap Kadoglu (Turkey), "Institutionalisation of Science Education and Scientific Research in Turkey in the 20th Century".

Peter Mentzel (USA), "Unity and Diversity on Ottoman Railways".

Nathalie Montel (France), "La dimension culturelle des objets techniques: les brouettes sur le chantier du canal de Suez, 1859-1869.

Efthymios Nicolaïdis (Greece), "L'organisation de l' enseignement des sciences chez les peuples chretiens de l'Empire ottoman".

Antoine Picon (France), "Les saint-simoniens et l'Orient".

Yakov Rabkin (Canada), "Science in the Post-Ottoman Realm: Congruence and Diversity".

Maria Terdimou (Greece), "The teaching of Mathematics and Greek Orthodox Church, 18th-19th centuries".

Ioli Vingopoulou (Greece) "Un alchimiste vagabond en Europe et le Proche Orient le XVIIe siècle"

The proceedings of the Symposium will be published in a special volume of Archives Internationales d'Histoire des Sciences.

THE NEW COUNCIL OF THE DIVISION OF HISTORY OF SCIENCE OF THE INTERNATIONAL UNION OF HISTORY AND PHILOSOPHY OF SCIENCE

The General Assembly of the Division of History of Science of the International Union of History and Philosophy of Science, held in Mexico City July 13, 2001, has elected the new Council of the Division. The Council is elected for four years and is as follows:

President: Prof. Ekmeleddin Ihsanoglu (Turkey), First Vice-President: Prof. Vladimir Kirsanov (Russia), Second Vice-President: Prof. Liu Dun (China), Secretary General: Prof. Juan José Saldana (Mexico), Treasurer: Prof. Efthymios Nicolaïdis (Greece), Assistant Secretary General: Prof. Fabio Bevilacqua (Italy), Past President: Prof. B. V. Subbarayappa (India).

Assessors: Prof. Chikara Sasaki (Japan), Prof. Mahmoud Hafez (Egypt), Prof. Carlos D. Galles (Argentina), Prof. Roman Duda (Poland), Prof. Mohammad Bagheri (Iran), Prof. Kirsti Andersen (Denmark).

The General Assembly also accepted Yougoslavia and Cuba as new members of the Union.

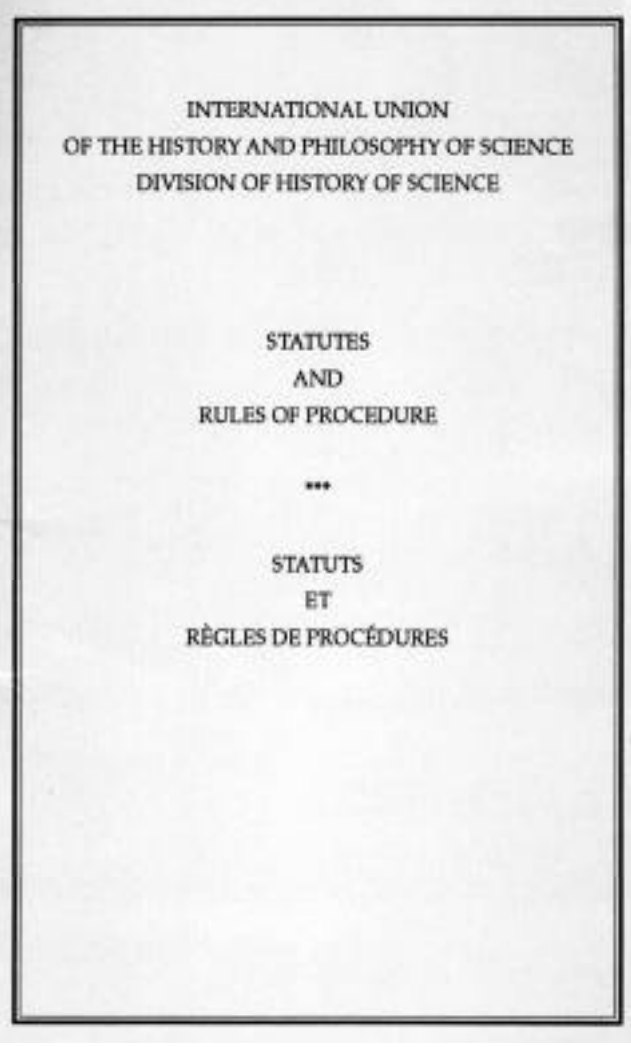
Information on the International Union of the History and Philosophy of Science, Division of History of Science can be found at the Website: http://ppp.unipv.it/dhs

From the "Statutes of the International Union of the History and Philosophy of Science (IUHPS)/ Division of the History of science (DHS)"

Aims

Article 1. The aims of the IUHPS/DHS are:

a) to establish and promote co-operation


INTERNATIONAL UNION
OF THE HISTORY AND PHILOSOPHY OF SCIENCE
DIVISION OF HISTORY OF SCIENCE

STATUTES
AND
RULES OF PROCEDURE

***

STATUTS
ET
RÈGLES DE PROCÉDURES

between historians of science eithe individually or as members of institutions and societies dedicated to History of Science and related disciplines;

b) to collect documents useful for the development of the History of Science, the History of Technology, the History of Mathematics, the History of Medicine and related disciplines;

c) to promote the development, the diffusion and the organization of studies bearing on teaching and research in the History of Science and related disciplines;

d) to organize International Congresses of History of Science and international colloquia, and to sponsor or support other approved meetings of a similar character;

e) to contribute to the maintenance of the unity of science in general and the establishment of links between the different branches of human knowledge.

IRCICA PUBLICATION

HISTORY OF THE OTTOMAN STATE, SOCIETY & CIVILISATION ENGLISH EDITION PUBLISHED

History of the Ottoman State, Society & Civilisation; Edited by Ekmeleddin Ihsanoglu; vol. 1 Foreword by Halil Inalcik; Ottoman State and its Civilisation Series, nos.: 4-5, Istanbul 2001. 2 vols. (XXXVIII + 827 p.: 126 photographs, 8 maps, 14 diagrams and tables; XXVI + 809 p.: 238 photographs)

Price: each volume US$ 60.- postage included

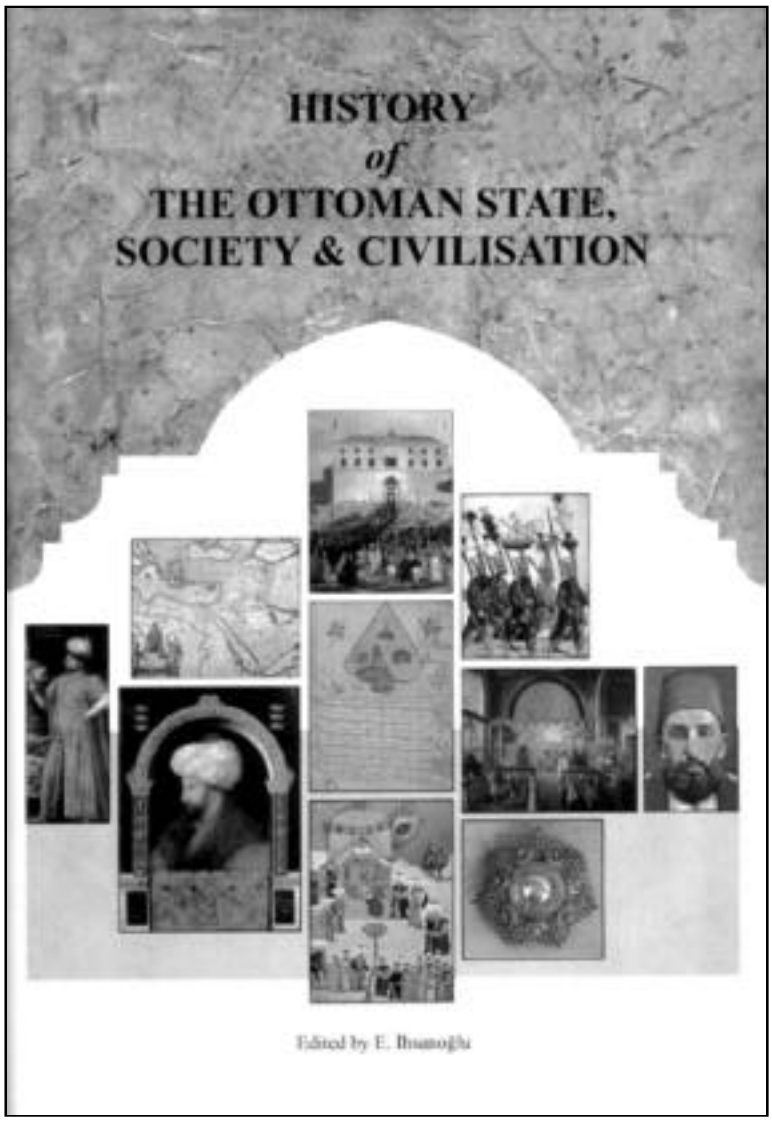
The English edition of IRCICA's publication on the History of the Ottoman State, Society & Civilisation has been published. The original Turkish edition was published in two volumes in 1994 and 1998, respectively. The Arabic edition was published in two volumes in 1999. The present book is a comprehensive study of various aspects of the six hundred-year old history of the Ottoman Empire from the formation of the Ottoman principality until the proclamation of the Republic of Turkey in 1923. The book resulted from part of a large-scale research project of IRCICA titled "History of Muslim Nations". It aims to give an objective account of the history of the Ottoman state and civilisation on the basis of the Ottoman archival sources, chronicles, and works published by contemporary scholars worldwide. History of the Ottoman State, Society & Civilisation comprises articles written by distinguished academicians and specialists who are experts in their fields. Volume one focuses on the history of the Ottoman state and society while volume two deals with history of the Ottoman culture and civilisation. The authors try to depict the analytical connections between historical facts and developments instead of presenting them with a purely descriptive approach.

The first volume includes the following articles: I. From the Founding to Küçük Kaynarca by Feridun Emecen, II. From Küçük Kaynarca to the Collapse by Kemal Beydilli; III. Ottoman State Organization by Mehmet Ipsirli; A. The Palace, B. The Central administration, C. The Provincial administration, D. The Learned Institution (Ilmiye); IV. Administrative Organization during the Tanzimat Period by Ilber Ortayli; V. Ottoman Military Establishment by Abdülkadir Özcan; VI. The Ottoman Legal System by M. kif Aydin; VII. Ottoman Society by Bahaeddin Yediyildiz; VIII. The Structure of the Ottoman Economy by Mübahat S. Kütükoglu: I. Ottoman Finance, II. Precious Metals, and Monetary and Price Policies, III. Commerce, IV. Communications and Postal Services, V. Industry.

The second volume contains articles on the following subjects: I. Ottoman Turkish by Nuri Yüce, II. The Turkish Literature in Anatolia by Günay Kut, III. Turkish Literature During the Period of Westernization by Orhan Okay, IV. An Exploration into Intellectual Life During the Period of Westernization by Orhan Okay, V. The Literature of Muslim Peoples in Europe During the Ottoman Period by Nimetullah Hafiz, VI. Religion by Ahmet Yasar Ocak, VII. Aspects of Intellectual Life in the Arab Provinces During the Ottoman Period by Leila Sabbagh, VIII. Ottoman Educational and Scholarly-Scientific Institutions by Ekmeleddin Ihsanoglu, IX. The Ottoman Scientific-Scholarly Literature by Ekmeleddin Ihsanoglu, X. Art and Architecture by Esin Atil, XI. The Art of Calligraphy in the Ottoman Empire by M. Ugur Derman, XII. The Art of Illumination in the Ottoman Empire by Ciçek Derman.

The second volume presents for the first

time a comprehensive study about language and literature, intellectual life, educational and scholarly-scientific institutions and scientific-scholarly literature. Chapter VIII in this volume begins with an examination of the scholarly activities during the period of the Anatolian Seljuks and treats in depth several Educational institutions during the Ottoman period such as the sıbyan schools, medreses, enderun, dervish lodges and convents. This chapter reviews the development of scientific institutions during the classical period as well as the educational and scientific institutions such as the mühendishanes and the hendesehane during the modernization period. Scholarly activities and institutions during the Tanzimat period and the imperial edict of 1856, the establishment of the first university (Darülfünun), Ottoman learned and professional associations, new scientific institutions such as the observatory, and the education of non-Muslims are also examined in this chapter. Chapter IX examines the development of Ottoman scientific literature in a historical perspective during the formation of the Ottoman state, in Mehmed II's period and its aftermath, and until the end of the 16th century, which witnessed the inception of the modern scientific tradition and activities of translation of scientific literature from Western languages. These two chapters related to science in the Ottoman Empire give detailed information on the development of scientific activities and literature until the First World War.



The book also contains a rich bibliography, a chronology, and a detailed index. It is hoped that History of the Ottoman State, Society & Civilisation will attract as much interest in scholarly circles as did the Turkish and the Arabic editions and that it will be a beneficial contribution to the field of Ottoman history.
Views of scholars in Ottoman history about this book: "I was delighted to hear that the two volumes on Ottoman State and Civilization are to be published in English. During the last two years I have often consulted your work, always with profit, and read it with pleasure. An English translation will be a major resource for scholars. I continue to be astonished at the achievements and output of your organization. Please continue- the world of scholarship is heavily in your debt." Bernard Lewis.

"The History of Ottoman State, Society and Civilization, produced and edited by E. Ihsanoglu, provides a major integrated approach to the political, administrative, and social life of a major power located between East and West. It is especially important in its highlighting of the complex Ottoman cultural achievements in the six centuries of its presence. This work, in addition to offering detailed information on subjects as diverse as systems of taxation, legislation, justice, finance, and industrial activity, is a unique invitation to scholars of comparative history to see institutions and issues in a world historical perspective." Stanford-Ezel Shaw.

"No doubt, for many years the need was felt

for a work on Ottoman history in several volumes; written by experts and penned within scholarly boundaries but read without difficulty by the general public. This work published under the supervision of E. Ihsanoglu – with its articles and perfect visual materials –... within its scholarly identity, it is an examplary book that contains the history of Ottoman political and administrative institutions and the history of Ottoman civilisation. It deserves every praise". Nejat Göyünç.

"The writers represent the third generation of Republican historians. Several of them received their PhDs from a European country and continued their academic careers in Turkey. Whoever is dealing with the subject will welcome its translation into one of the Western languages. Readers in the West can depend on and benefit from this work, as it possesses high quality writings." Klaus Kreiser.

"This comprehensive publication on the history of Ottoman State and Civilization constitutes a basic reference and a highly useful resource towards an accurate and in-depth understanding of that State." Abdul-Rahim Abuhusayn.

"In this work, for the first time, in addition to the political, administrative and economic history, Ottoman culture is given a place of equal value that it deserved. … an important work comprising monographs; a collective work rich in content." Gottfried Hagen.

ON THE INSTITUTIONAL HISTORY OF THE BIOLOGICAL SCIENCES IN BULGARIA IN THE 19th AND THE FIRST HALF OF THE 20th CENTURY

The formation of the natural-scientific thought in Bulgaria began under the Ottoman rule, with the publication of scientific and popular literature in translation and of the first training aids for teaching and studying natural sciences. The Bulgarian scientific community of natural science researchers was set up during the important period of affirmation of the national self-consciousness of the Bulgarian people. The Bulgarian Literary Society, the prototype of a research institution, was founded by Marin Drinov, Vassil Drumev and Vassil Stoyanov in Braila, Romania, in 1869. In its renowned history, it included all spheres of the natural sciences and laid the ground for the publishing of scientific periodicals in Bulgaria. The history of the natural sciences within the literary society is linked closely with the organisation and the functioning of the natural-medical branch, as well as with the periodical publications of the society: "Periodical Journal" and "Collection of Folklore, Science and Literature." The publication of the creative endeavours of the Bulgarian scientists, members of the Literary Society, promoted considerably the spread of new knowledge and lead to the establishment of a cultural and scientific background that would contribute to the development of the natural sciences in Bulgaria, after the liberation from the Ottoman yoke.

In 1878, the beginning of a new period in the Bulgarian history was celebrated, the third Bulgarian State was emerging. The young state concentrated its efforts towards the development of the economy, culture and science. In the eve of its freedom, Bulgaria had a solid intelligentsia with European education. The major drive to scientific development was the Ministry of the People's Enlightenment. In 1888, in Sofia, the Higher School was opened aiming at providing higher education in all spheres of science. Along with the setting up of the Higher School, the Bulgarian Literary Society was resuming its activities. In 1904, the Higher School was renamed Sofia University.

Biological sciences developed thanks to the influence of the Royal Institutes of Nature Sciences: The Nature Science Museum (1889), The Entomological Station (1905), the Zoo (1889) and the Botanical Garden (1890). These institutes published "News from the Royal Nature Science Institutes" in 16 volumes. Of great importance to the development of the natural science knowledge is the establishment of the scientific societies, such as the Bulgarian Nature Research Society (1896). It is on the basis of the Bulgarian Literary Society that the Bulgarian Academy of Science was founded in 1911.

Natural science institutes, which foundation is the result of state policy, play a major role in the development of biological sciences. Decisive to the functioning of these institutions is the experience of international researchers working in Bulgaria, as well as the level of education of highly qualified natural sciences specialists, educated in Western European and Russian universities. Thus, from the very

Lubomir Tsvetkov, one of the first to obtain a diploma from the University of Medicine of Sofia, in 1925.

beginning of their emergence in Bulgaria, natural sciences are on a level with the achievements of European science. The development of biology in Bulgaria, and of zoology in particular, is characterized in this early stage by a descriptive nature, since its aim is to cover the variety of species of the Bulgarian fauna. This branch is associated with the names of Georgi Shishkov, Georgi Christovitch and Nikola Nedyalkov, as well as also with the outstanding foreign scientists Porfirii Bahmetiev and Stefan Yurinitch. It is the research work of Bahmetiev in particular, that is pioneering, since studying the biology of the insects under various temperature conditions, he discovers and finds out the basis of the anabiosis - the biggest achievement of Bulgarian science in the beginning of the 20th century.

The activity of the members of the Bulgarian Academy of Science finds wide recognition by the international scientific body. According to the words of Lyubomir Miletitch, the Bulgarian Academy of Science is the national centre for the development of science in Bulgaria, while the Sofia University plays an important role in the development of fundamental and applied scientific studies. In the period between the two World Wars, there developed also the botanical, agricultural sciences and the genetics at the Botanical Institute and the Agricultural-Forestry Faculty at Sofia University. Out of the botanical sciences, there developed chiefly flora and systematics, as well as also the experimental trends of anatomy, morphology, biochemistry and plant physiology. The development of the botanical science in Bulgaria is associated with the names of the great scientists Stefan Georgiev, Stefan Petkov, Daki Yordanov, Boris Stefanov and etc.

A very important achievement of the Bulgarian plant physiology is the stimulation theory of Metodii Popov, that has been widely recognised abroad. On the basis of botanical studies, developed also genetics and plant selection, which are associated with the great Bulgarian scientists Ivan Ivanov and Dontcho Kostov. The achievements of Dontcho Kostov in the sphere of cytogenetics, the remote hybridisation and the immunogenetics are widely recognised and cited even till now. Besides the fundamental studies, developed also applied scientific studies. A central place in this process, is occupied by the agricultural experience stations and the Central Agricultural Research Institute (1910).

The functioning of the natural science institutes is a national priority and is also expressed in the activity of the numerous natural sciences societies, which, together with the Bulgarian Academy of Science, spread the achievements of biological sciences. Irrespective of the difficult period in which Bulgarian biology develops and thanks to the concern of the State and the activity of the scientific institutions, biological sciences reach considerable success, achieving wide international recognition and laying the ground for the development of modern science in Bulgaria.

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Dinko Mintchev,
Penka Ivanova
Interdisciplinary Group on History
of Science - Sofia

A PROPOSAL FOR INTER-DISCIPLINARY CO-OPERATION IN THE FIELD OF HISTORY OF SCIENCE AMONG ALL THE RELEVANT TEAMS OF SOUTH EASTERN EUROPE.

The President of the Bulgarian team of the History of Science, Prof. Miladin Apostolov, member of the Bulgarian Academy of Medicine, President of the Bulgarian Union of History of Science, publisher and editor-in-chief of the journal "Asclepios," sent us the following proposal:

"The Bulgarian interdisciplinary team of History and Theory of Science propounds the establishment of a Union of inter-disciplinary co-operation in the field of History of Science among all the relevant teams of South Eastern Europe.

We propose that the Union's seat be in Athens and that its presidency be held by the Greek team of the History of Science.

We believe that this Union will contribute to the broadening and deepening of the co-operation among all the History of Science teams of our field and will play a decisive role in the unification of European science and culture".

Answer of the Greek History of Science team of the NHRF:

"The Greek team of History of Science accepts gladly this proposal and considers it as highly positive for the development of co-operation among all the scientific teams of History of Science in South Eastern Europe."

We await for the answers and proposals of the other History of Science teams of Southeastern Europe.

ΔHE INTRODUCTION AND DEVELOPMENT OF SCIENTIFIC THOUGHT IN GREECE AND YUGOSLAVIA SINCE 18TH CENTURY UNTIL NOWADAYS. HISTORICAL DOCUMENTS-INTERACTIONS-INDICATIONS OF SIMILARITIES AND DIFFERENCES

We are happy to announce the approval by the Greek Ministry of Development of the financing of a Greek-Yugoslav joint research project on the history of science.

The Greek part participating in the project is the History and Philosophy of Science Programme of the Institute of Neohellenic Research, under the scientific co-ordination of Prof. Yannis Karas and members Prof. Efth. Nicolaïdis and Dr. G.N. Vlahakis. The Yugoslav part is the Serbian Academy of Arts and Science, under the scientific co-ordination of Prof.Miloje Saric and member Dr. Aleksandar Petrovic.

The project refers to the comparative study of scientific development in Greece and Yugoslavia, since the 18th century. The members of the project will search for Greek scientific manuscripts and printed books that, most probably, are still preserved in Yugoslav libraries and archives. Accordingly, the Yugoslav part will conduct respective research in Greece.

The thorough examination of the collected material will eventually reach to the appropriate conclusions about the similarities and differences between Greece and Yugoslavia, the role of the two countries and their interaction towards the formation of contemporary scientific thought in this part of the Balkans, where particular social, political and cultural characteristics prevail.

The outcome of our research will be included in an ad hoc database and will be presented in a special edition, in a conference organized for that particular purpose, and on a relevant internet website.

LEXICON OF THE CENTRAL EUROPEAN UNION OF THE TECHNICAL MUSEUMS

The members of the Central European Union of Technical Museums - Austria, Czech Republic, Slovakia, Hungary, Croatia, Slovenia

Sima Lozanic chemist (1847-1935) one of the Serb scientists included in the Lexicon.

and Yugoslavia have finished the work on a joint project, the Lexicon of scientists, engineers and architects who had significant influence in the development of science and technology during the 19th and 20th c. in Central Europe. Each member state of MUT selected for the Lexicon 50 scientists by the following criteria: (1) nationality; (2) scientist's contribution to the development of science and technology in his country; (3) scientist's contribution to the development of science and technology in Europe.

The Museum of Science and Technology from Belgrade contributed to this project by giving data on 50 Serbian personalities who enjoy a high national and international rank and are well known for their work in natural sciences and technology. The Lexicon includes also an extensive bibliography of their most important works and inventions, their portraits and other photographic material.

The German edition of the Lexicon, which is ready to be printed, includes the following Serb scientists and engineers: Arnoljeviç Ivan, engineer (1869 - 1951); Avakumovc Vojislav, mathematican (1919 - 1990); Boskovic Stevan P., geodesist, cartograph (1868 - 1957); Bozic Dobrivoje, machine engineer (1886-1957); Brasovan Dragisa, architect (1887-1965); Bukurov Branislav, geographer (1909-1986); Cvijic Jovan, geographer, (1865-1927); Dobrovic Nikola, architect (1897-1967); Hlitcijev Jakov, engineer (1886-1963); Glavinic Kosta, engineer, (1858-1938); Jaksic Vladimir, meteorologist (1824-1899); Jaric-Vukobrat Marko, physicist (1952-1997); Josimovic Emilijan, engineer and urbanist (1823-1897); Jovanovic Dragoljub, physico-chemist (1881-1963); Jovanovic Konstantin, architect (1849-1923); Jovicic Milorad, chemist, (1868-1937); Jovanovic Petar S., geographer (1893-1957); Karamata Jovan, mathematican (1902-1967); Kleric Ljubomir, engineer, mathematican, inventor (1844-1910); Krasnov Nikolaj Petrovic, architect (1864-1939); Kurepa Duro, mathematican (1907-1993); Lazarevic Dorde, engineer, (1903 -1993); Leko Marko, chemist (1853-1932); Lozanic Sima, chemist (1847-1935); Lukovic Milan, geologist, (1889-1972); Mihailovic Jelenko, seismologist (1869-1956); Micovic Vukic, chemist, (1896-1972); Milankovic Milutin, physicist (1879-1958); MIlojevic Borivoje, geographer, (1885-1967); Miskovic Vojislav, astronomer (1892- 1976); Mitrinovic Dragoslav, mathematican (1908-1995); Nedeljkovic Milan, meteorologist, (1857-1950); Pejovic Tadija, mathematican (1892-1982); Petkovic Vladimir, geologist (1873-1935); Petrovic Mihailo (Alas), mathematican (1864-1943); Pupin Mihailo, physicist, inventor (1854-1935); Pusin Nikola, physico-chemist; (1875-1947); Radojicic Milos, mathematican (1903-1975); Raskovic Mihailo, chemist, (1827 -1872); Saltikov Nikolaj, mathematican (1875-1928); Savic Pavle, physico-chemist (1909-1994); Stamenkovic Nikola, engineer (1858-1910); Stanojevic Dorde, physicist, astronomer (1858-1921); Stojkovic Atanasije, physicist (1773-1832); Tesla Nikola, electroengineer, inventor (1856-1943); Urosevic Sava, mineralogist, petrographer (1863-1930); Varicak Vladimir, mathematician (1865- 1927); Vujevic Pavle, meteorologist (1881-1966); Zlokovic Milan, architect (1898 - 1965); Zujovic Jovan, petrographer, geologist (1856 - 1936).

For the very first time, all the information about the most important Central European natural scientist and engineers will be published in one volume. This will help the scientific community to realize the real place of that region in the developing of the European science and technology. More significantly, the Lexicon will make possible a comparative analysis of Central European nations' history

of science and technology.
This project started four years ago and its development has helped the technical museums of the Central European Union to work together on exhibitions, conservation of museum objects, various conferences and other communications, exchanges of researchers, etc. We also think that this work opens the possibility for similar projects between Central and South Europe and enables closer integrations in the future.

Marija Sesic, Mirjana Jevremovic-Tanackovic
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ABOUT THE HISTORY OF THE BALKAN SCIENTIFIC RELATIONS

The history of the Balkan peoples has been connected to one another since the remote past. A satisfactory study of this complex history is impossible if we disregard the available facts. These witness a constant and deep relation between the scientists of the Balkan countries. Acquaintance with their work shows that neighbours in the Balkans inherited one of the most ancient European cultures. Their interaction influences to a different degree the whole cultural historical development of the Balkan region. Thus, each presentation and analysis of the communications and the common initiatives of Bulgarian and other Balkan scientists are most successful in the perspective of both their national history and their contribution to the world cultural depository.

The selected information illuminates the more interesting moments of Balkan scientific relations in some disciplines. The archival documents used are in the Scientific Archive (Bulgarian Academy of Science - BAS), the Bulgarian Historical Archive (BHA), in the St Cyril and Methodius National Library, and in the Central Historical State Archive (CHSA). These documents date from the liberation of the Turkish rule until 1944.

The exchange of articles, books, journals and copies of various proceedings characterizes the contacts between Bulgarian scientists and the scientists of other Balkan countries. In 1880, the National Library addressed a letter of thanks to the Yugoslav Academy of Sciences in Zagreb on the occasion of an "endowment of periodicals" (Rad and Starina) [1]. Later, in 1901, the Romanian diplomatic office sent to the National Library the book of Prof. Totchilesco of the University of Bucharest Archeological Excavations and Research Studies [2]. The works of V. Jagitch were received as a donation. F. Shishitch sent to Prof. V. Zlatarsky his works as well as the journal "Old Croatian Education" [3]. In the period 1907-1939, the exchange of scientific works took place between G. Katzarov and B. Zaria, G. Matescu and D. Tudor; between V. Zlatarsky and M. Lascaris; between G. Balastchev and Aristotelis and S. Matlis; between D. Detchev and Bologa; between J. Trifonov and M. Lascaris; between Iv. Geshov and A. Alivizatos [4]. The exchange of books by the University of Sofia was considerable. The exchange of University editions (annuals, proceedings, publications, documents, maps, almanacs), academic editions, as well as editions of the High School, of scientific institutes, of scientists and various personalities from the Balkan countries was considerable. This exchange took place on a resolution of the Academic Council and with the help of the University library [5]. The joint print and publishing of scientific works and encyclopedic dictionaries is also part of the Balkan scientific relations. In 1908, the Romanian scientist N. Jonescu, publisher of the journal "Romanul," proposed to the Balkan scientists a joint publishing of an encyclopedic dictionary about the Balkan peninsula. The Institute for Balkan Studies in Bosnia and Herzegovina with the letter from 1916, organized the publishing of "Contributions to the Cultural History of the Thracians" by Prof. G. Katzarov [6]. The Balkan Institute in Belgrade addressed in 1934 a request to Prof. Al. Balabanov to participate with a publication in "The Balkans, their Past and Present." The Belgrade editorial office of the "World Encyclopedia" in 1935, proposed collaboration to Prof. Zlatarsky [7]. A correspondence about formulating questions, evaluating and reviewing was exchanged at regular intervals. From this correspondence, the letters exchanged between F. Shishitch and V. Zlatarsky are preserved, as well as the correspondence between Fr. Grivetz and J. Trifonov about the work of Cyril the philosopher and Christian faith [8].

Information about field trips and participation to international congresses is an essential part of the scientific relations between Balkan scientists. In 1888, the Ministry of

Education thanked the diplomatic office of the Bulgarian Principality in Istanbul for the "help for inquiring and gathering from the Turkish municipal archives and libraries, documents and monuments of the history and culture of the Bulgarian land and people" [9]. M. Balabanov, lecturer in Ancient Greek in the High School, went to Athens in 1891 with "scientific purpose" [10]. G. Balastchev was sent on a scientific trip to the Russian archeological museum in Istanbul in 1900, in order "to start some archeological studies in Macedonia". V. Zlatrarsky was in Belgrade in 1904 "to examine the literature of Serb history and the manuscripts of the national library of the Yugoslav Academy" [11]. B. Filov studied in Greece, in 1911, "the preservation of the antiquities and the techniques of archeological excavations." The head of National Ethnographic Museum J. Georgiev was in Romania "to study the conditions of collecting the materials of the Bulgarian Revival" [12]. In 1917, L. Miletitch was on a trip to Romanian libraries and museums in order to inquire and gather the values of old Bulgarian manuscripts and other monuments." N. Mushmov examined in the Bucharest National Museum, in 1914, "newly founded Bulgarian coins" [13].

The participation of Bulgarian scientists of the humanities in international congresses was remarkable. B. Filov participated actively in the works of the First International Byzantine Congress in Bucharest. An important Bulgarian delegation participated in the Byzantine Congress that took place in Belgrade, in 1927 [14]. Bulgarian historians, lead by V. Zlatarsky, participated in the 3rd Congress of Byzantine Studies. In his report, A. Protitch shows some of the high opinions about Bulgarian Byzantine Studies: 1. Byzantine Studies develop very well in Bulgaria; Bulgaria is a young but promising country. 2. The great diversity of proto-Bulgarian antiquity is known beyond the borders of Bulgaria. 3. Bulgaria is one of the main promoters and spreaders of Byzantine arts towards Russia, Romania and Serbia [15].

The celebration of the anniversaries of eminent Bulgarian and Balkan scientists and the award of medals and academic ranks to them was a proof of the recognition of their achievements in science. In 1896, the founder of the Greek ethnographic science N. Politis sent a diploma to Prof. Iv. Shishkov, on the part of the Philological Society. The Montenegrin Prince Nicolay I awarded N. Gerov with the medal "Prince Danilov" [16]. In 1936, G. Katzarov was elected corresponding member of the Romanian Academy of Sciences [17]. V. Zlatarsky received in 1928, a letter from G. Novak with a request to participate to the recent 60th anniversary of Dr F. Shishitch, professor in national history at the University of Zagreb [18]. V. Zlatarsky received an invitation by the Yugoslav Academy of Sciences and Arts, and by the Serbian Royal Academy to participate at the 100th anniversary of the Croat historian F. Ratchky, its organizer and first president [19].

The varied and wide collaboration between the scientists of the Balkan countries is built in the first place on centuries long co-existence. This co-existence is the foundation for an active cultural exchange, a guarantee of real communication between the neighbour countries and their scientists in different fields.

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Assoc. Prof. Nicolay Savov
Center of Science Studies and History of Science

A NEW MORAL MOTIVE FOR CHARITY IN BULGARIA

Charity nowadays is of great importance. Charity is not about some imaginary amount but about civil virtues. The well-known theoreticians of science and art, Prof. Miladin Apostolov and Prof. Tzekomir Vodenitcharov have devoted a part of their works to charity.

An international and national charity prize named "Golden heart" was established in Bulgaria, in 2000, on a Prof. Apostolov's design. This prize is dedicated to the 200th anniversary of the birth of the Bulgarian writer Dr. Peter Beron (1800-1871); Peter Beron helped many Bulgarian pupils and students by awarding them scholarships. It is a non-governmental prize, with its own statute, and it has been bestowed on well-known scientists and donors, on behalf of the international annual journal on the history of medicine "Asclepius" and the Bulgarian society of history of medicine. In the beginning of 2001, this jury honoured the first prizewinners: Ms Stefania Aleksieva for her rich museum collection on the history of medicine in the Southern Bulgarian city of Yambol; Mr. Elias Zagouras, a Greek businessman and owner of "Adonis Mega Ltd," president of the Bulgaro-Greek-German foundation "Eleimon" (Charity); Prof. Tzekomir Vodenitcharov, for his intensive research and lecture activities, as well as for his great success in the field of health insurance; the academician Yiuri Pavlovitch Lisitchin, vice president of the Academy of Sciences and Art in Petrograd, member of the Russian Academy of Medicine Science, and world wide known humanist; Prof. Yannis Karas, Research Professor in the Institute of Neohellenic Research, Athens, for his participation in the organization of the national interdisciplinary groups for the history of science in the Balkans; Prof. Spyros Marketos, Head of the Department of History of Medicine, University of Athens, President of the International Hippocrates Foundation in the island of Cos, for his publications about hippocratism, neo-hippocratism and medical ethics; Dr Vasil Topuzov, founder and head of the National Museum of the Bulgarian Red Cross, editor of the journal "Charity" and author of the studies about charity.

Ms Stefania Aleksieva, Mr. Elias Zaguras and Prof. Tzekomir Vodenitcharov were awarded their prizes in the National Committee of the Bulgarian Red Cross in Sofia. The remainder prizewinners were awarded in the 5th National Congress on the history of medicine, which was held this October in this year in Blagoevgrad and Sandanski (Bulgaria).

The medal of the Golden Heart prize of the journal "Asclepius" and the Bulgarian society of history of medicine.

Undoubtedly, the "Golden heart" prize will stimulate scientific activity in the field of civil charity. It will encourage researchers in the fields of history of science, history of medicine, medical ethics and deontology. This prize will motivate in the first place the donators in the fields of medical research, health services and medico-social activities.

The "Golden heart" prize is directly connected with the prize "Golden Hippocrates," which stimulates neo-hippocratic contributions, scientific achievements and humanism of medical students and doctors in Bulgaria.

"Golden heart" is a product of the democratic and civil society. It is an expression of society's acknowledgment of charity in its multiple manifestations.

Penka Ivanova
General secretary of the Bulgarian society of history of medicine and "Asclepius";
Secretary of the International group for history of science in Sofia

THE ACTIVITY OF THE ROMANIAN TEAM

In 2001, pursuing the theme of European scientific unification, our team undertook research in the following directions: a) continuing investigations that began last year on the influence of the scientific German-speaking world in the 18th and 19th c. on the development of Romanian science; b) making a historical inventory, as complete as possible, of old science books that exist in Romanian libraries; c) clarifying the data concerning the presence on Romanian territory of the famous Greek doctors Jacob Pylorino and Emmanuel Timoni who introduced the method of inoculation (variolation) in Western medicine.

a) Without abandoning the preoccupation of establishing the exact medical relations between the German and Romanian world, Sebastian Grama, Adrian Mutza and Claudia Larion have studied the dissemination of chemistry knowledge in Romania. In the 18th c., given the absence of a proper chemistry school, this discipline was disseminated principally by the German pharmacists who were settled in various towns such as Brasov, Sibiu, Bistrita, Iasi, Barlad, Craiova and Bucharest. Biographical data were collected and the works of the Saxon pharmacists of Transylvania were partly translated and commented. We mention but Petrus Sigerus, Samuel Krautner and Michael Neustadter, who studied chemistry and pharmacy in Vienna, Bonn and Budapest. The research focuses to the extent their writings contributed to the development of chemistry education in Transylvania.

b) Marina Ion, a historian and bibliographer, is putting the finishing touches to a catalogue of old scientific books found in public and university libraries Romania. In 2001, the collection of the central library of the School of Medicine in Bucharest and the collection that belonged to the Princely Academy of Iasi, founded in 1707, were examined. This research aims at establishing where the respective books come from, so that conclusions may be drawn about the scientific and documentary connections with the donors, some of which were important 17th and 18th c. scholars. Thus, in the Bucharest library, some books were identified as authored by Bartholomaeus Angelicus (the Encyclopaedia Liber de proprietatibus rerum, Cologne, 1481); V. Trincavelli, (Opera omnia, Venice, 1599); Fabrizio d'Acquapendente (De visione; De voce; De audita, Venice, 1600); Hippocrates (Ta eyriskomena, Geneva, 1657); Thomas Willis (Opera omnia, Cologne, 1694); M. Malpighi (Opera posthuma, Amsterdam, 1698); Van Diemerbroeck (Anatome corporis humani, 1679); G.B. Morgagni, (Adversaria anatomice, Padua, 1719) and others. Since it is not very difficult to discover the name of the donors, we hope to be able to perceive more clearly the relations between them and the Romanian intellectuals of the 18th and 19th c. The presence in the collection of the princely Academy of Iasi of the book Opuscula anatomica nova (London, 1649), a collection of anatomy lessons given by the Paris professor Jean Riolan (1577-1657), seemed most significant to us for the existence at that "Scholae Graecae Iassensis" of a medicine course (an informative and not a specialty course) held, most likely, by Nicola Kerameus, doctor of theology and medicine in Padua and formerly professor in Iasi, c. 1665-1670.

c) The interesting discussions held at the Conference "The Unification of Scientific Europe," Athens, 11-14 October 2000, stimulated us to start investigating the presence in Romania of the Greek doctors Jacob Pylorino and E. Timoni, well known in the history of immunology. J. Pylarino, born in Lixouri, in the island of Cephallonia, published in 1715, in Venice, the opus Nova et tuta variolas, a book that rapidly circulated in the medical circles of Western Europe, and even in America (following the editions of Nuremberg, 1717, Boston, 1721, and Leyden, 1721). Pylarino led an adventurous life, traveling a lot in East and West, and became, upon recommendation of King Leopold of Austria, the personal doctor of Czar Peter I. Our investigations conducted in the State Archives of Romania, confirm the hypothesis of C.N. Sathas (Neoelleniki filologia, Athens, 1860, pp. 428-429) according to which, Pylorino had come to Wallachia in 1684, as the doctor of Prince Serban Cantacuzino and would have remained in Bucharest until 1687. In the collections of the Romanian Academy, we have discovered a copy of Cronica latina by Johann Nauclerius of Cologne (1544), whom the Metropolitan Bishop Dosoftei (1624-1693), who was also a poet, offered with a dedication to Jacob Pylarino, in 1685. Likewise, our research indicates that Pylarino had a significant contribution to the establishment of the first hospital in Bucharest, Coltea,

inaugurated in 1704. This hospital, built at the expense of High Stewart Mihail Cantacuzino, who studied humanist disciplines in Padua, is a copy of the Venetian hospital of San Lazzaro e Mendicanti. This is confirmed in a document proving that the plans of the Venice hospital were designed by Jacob Pylarino, who in his youth had been a physician in this hospital, and brought by him to Bucharest. Pylarino was also the physician of another Romanian prince, Constantin Brancoveanu. Emmanuel Timoni, an Anglophone, son of an interpreter from the British Embassy in Constantinople, was the physician of the Ghika family, between 1680 and 1700. He disseminated the method of variolation in Great Britain, following the publication of an article in Philosophical Transactions (1717). Very little is known about his presence in Iasi but, given the importance of this doctor for the history of immunology, we will continue our research into the archives of the Ghika princely family.

Prof. Dr Radu Eftimovici
Academy of Medical Sciences

THE SCIENCES IN EUROPE

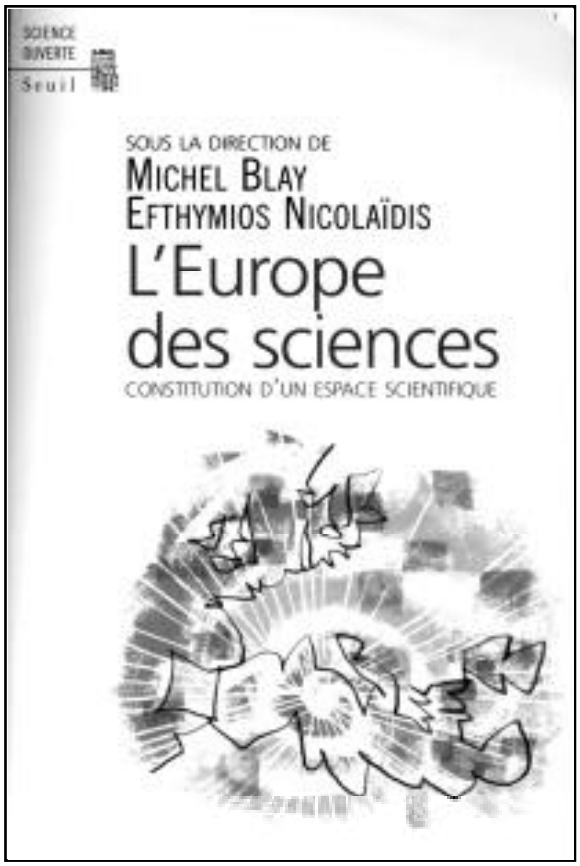
Michel Blay – Efthymios Nicolaïdis (éd.)
L'Europe des Sciences:
Constitution d'un espace scientifique
Editions du Seuil, Paris, 2001
440 p., 27 Euros, Isbn 2-02-032693-0

Globalisation is in vogue; it leads to an obliteration of thinking and cultures in their origins and to an obliteration of memory. Therefore, it is of consequence to reconstruct our history and to make it fertile. What is this science then, that brought us forth and that we call European science? It is a convenient denomination tailored to describe an aggregate of knowledge which origin and implementation are associated to a geographical space that, since Antiquity, spread according to times, from the Mediterranean to Northern Europe. This aggregate of knowledge constitutes the foundation of what we call in our society today "sciences."

The publishers of this volume sought to have a global grasp of the origin and the development of scientific knowledge in its original space, as well as of the influence this knowledge had on the homogenisation of the societies that occupy this space. Indeed, although the bibliography on the history of sciences is extremely rich concerning the development of European scientific knowledge, there is no general work up to now dealing with scientific Europe as an intellectual unit throughout the centuries. Thus, we sought to approach the development of scientific knowledge as such along with its relations with the space in which it developed, as well as with the dialogue or conflicts those relations aroused.

The setting of this broad historical perspective enables to better understand the specificity of this strictly European phenomenon (i.e., bound to a well delimited area of geographical Europe) consisting in the appearance of a new concept of knowledge, now called classical science, which, while breaking off its ancient sources, sprang from these in the second half of the 16th c. This constitutes the first part of the book

This new conception and organisation of knowledge that formed in some European



countries expanded from the last decade of the 17th c. and in the 19th c., reached the totality almost of geographical Europe. How this expansion materialised, what were the reasons behind it and what conflicts did it engender in countries that had a different scientific culture, coupled with different social relations with science. This constitutes the object of the second part of the book.

Before the end of the First World War, we see the emergence of new places of scientific production which, although located outside the geographic space of European science, belong nevertheless to its intellectual space.

Because this globalisation, however, the notion of European science is not that evident nowadays; at times, it is even considered as lacking any meaning at all. Yet, it seems undeniable to us that this notion both carries considerable historical value and constitutes a crucial cultural matter. This book was conceived and realised in order to remind everyone that European science, descending from a long tradition of thought, remains, because of its historicity, of a crucial importance for Europe and the world.

Apart from the editors, the contributors for this book are: Michael Assimacopoulos, Marco Beretta, Floris Cohen, Michèle Gally, Hélène Gispert, Giorgio Israel, Gabor Pallo, Yakov Rabkin, Sumitra Rajagopalan, Jean Seidengart Gérard Simon, Antonio Ten, Sven Widmalm and Yannis Bitsakis (maps).

The contents of the book:

Introduction - Michel Blay et Efthymios Nicolaïdis

Cartographie: L'espace géographique et temporel de la science européenne.

Les principaux centres du savoir scientifique de l'Antiquité grecque et romaine – Les principaux centres scientifiques du Moyen Age et de la Renaissance – Universités et Académies des sciences fondées durant les XVIe et XIIe siècles - Universités et Académies des sciences fondées durant le XVIIe siècle - Universités et Académies des sciences fondées durant le XIXe siècle

Première partie: La construction de la science européenne

I - Les origines

1. La science grecque - Gérard Simon

2. L'espace européen de la pensée médiévale - Michèle Gally et Michel Assimacopoulos

II - La transformation de la conception du savoir

3. Les raisons de la transformation et la spécificité européenne - Floris Cohen

4. La destruction du cosmos aristotélicien de Copernic à Newton - Jean Seidengart.

5. La mathématisation de la nature - Michel Blay

6. L'idéologie de la toute puissance de la science. La constitution des champs disciplinaires - Giorgio Israel.

III. L'organisation de la science européenne

7. Institutionalisation et professionalisation - Marco Beretta

8. Les journaux scientifiques en Europe - Hélène Gispert

Deuxième partie: L'extension de l'espace scientifique européen

9. Les sciences en Russie : entre ciel et terre - Yakov Rabkin

10. La péninsule Ibérique - Antonio Ten

11. L'espace scientifique scandinave - Sven Widmalm

12. Les Balkans - Efthymios Nicolaïdis

13. Diffusion des sciences en Europe Centrale : l'exemple de la Hongrie - Gabor Pallo

PANTELIS NICOLACOPOULOS

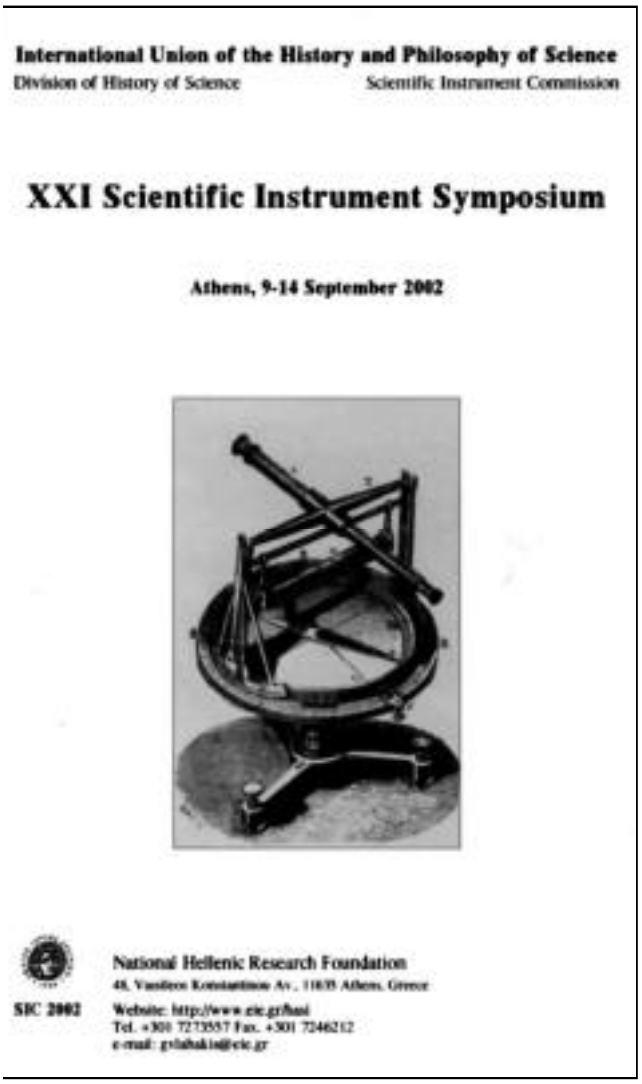
Our colleague and friend Pantelis Nicolacopoulos died October 10, 2001.

Born in Athens (1952), he obtained a BA from Wesleyan University (1974) and a MA (1977) and Ph.D. (1979) from Brandeis University. He was assistant professor of philosophy at the National Technical University of Athens and research associate at the Center for the Philosophy and History of Science at Boston University. He had also taught at Brandeis University and the American College of Athens. His primary interests were theory of knowledge, philosophy of science and the history of modern philosophy. He has edited Imre Lakatos and theories of scientific change (with K. Gavroglu and Y. Goudaroulis), Boston Studies in the Philosophy of Science, vol. 111, Kluwer Academic publ., 1989, and Greek studies in the philosophy and history of science, Boston Studies in the Philosophy of Science, vol. 121, Kluwer Academic publ., 1990. He was coeditor of the Greek review of philosophy Deucalion.

21st SCIENTIFIC INSTRUMENT SYMPOSIUM

Athens, Monday 9 – Saturday 14 September, 2002

The Scientific Instrument Symposium is organised each year under the patronage of the Scientific Instrument Commission of the International Union of the History and Philosophy of Science, Division of History of Science. The last two years, the Symposia have been organised in Oxford (2000) and in Stockholm (2001). The 21st Symposium in 2002 will be organised by the History of Science Programme of the National Hellenic Research Foundation.



Preliminary Programme:

Monday 9th, afternoon: Registration of the participants, Reception

Tuesday 10th, morning: Sessions.

afternoon: Sessions.

Visit to the big Newall refractor at the Observatory of Penteli (1h distance by coach).

Wednesday 11th, morning: Sessions.

afternoon: Visit to the Archaeological Museum (Antikythera Mechanism).

Thursday 12th, morning: Sessions.

afternoon: Visit to the National Observatory of Athens (19th c. Instruments).

Plenary Session of the SIC.

Closing Dinner.

Friday 13th, morning: Sessions.

Excursion to Syros island:

Friday 13th, afternoon: Departure from Piraeus to Syros island (2:30h by boat). Visit to the new Museum of Industry and Technology.

Saturday 14th, morning: free time at Syros.

afternoon: Departure for Piraeus.

Those who wish to participate can fill the on-line form at the following web site:

http://www.eie.gr/hasi

Additional information:

The Symposium will be held at the National Hellenic Research Foundation (NHRF), in the centre of Athens (address: 48, Vassileos Constantinou Avenue).

The Symposium hotels are situated at a 10 minutes walk from the Conference venue.

Coffee and tea will be served at the atrium of the NHRF.

Lunch will be held in restaurants 2 minutes walk from the NHRF (at a small square, outdoor or indoor, depending on the weather).

An exhibition of scientific instruments will be held in the main hall of the NHRF during the Symposium.

Registration fee (all participants): 76 Euros.

Conference Dinner: 25 Euros.

Excursion to Syros: 70 to 100 Euros, according to the Hotel category.

Details on the payment will be presented January 2002, at the above mentioned www site.