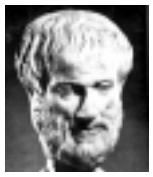

Newsletter

for the History of Science in Southeastern Europe

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OUR NEWSLETTER

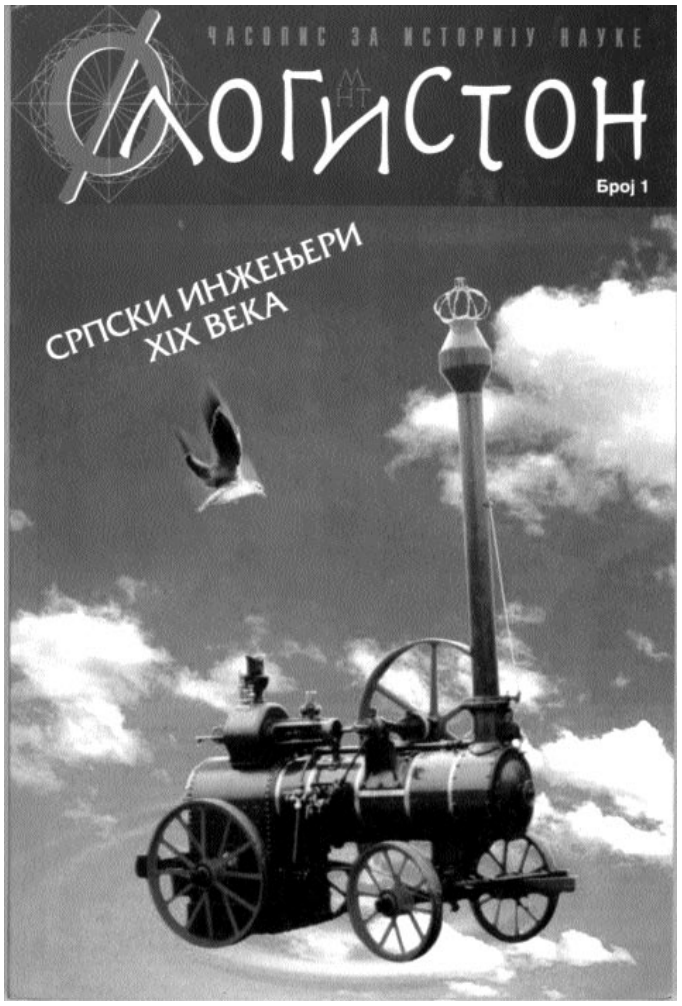
The publication of this newsletter is designed to meet an objective need: that of fostering closer contact among the history of science groups in the countries of south-eastern Europe. At the same time, it is hoped that the newsletter will also be a step forward in the promotion of what is a significant area of historical research.

In recent years, close collaboration has been established among the history of science groups in this part of the world. Professors Miladin Apostolov, Milko Borissov, Penka Ivanova, Gamka Kamisheva, Dinko Mintchev and Alexander Vavrek from Bulgaria, Radu Iftimovici, Sebastiana Grama, Edmond Nicolau and Horia Patapievici from Romania, and Ekmeleddin Ihsanoglu from Turkey and Miloje R. Saric, Aleksandar Nikolic and Aleksandar Petrovic from Yugoslavia, participated - with the presentation of papers - in the Conferences on the History of Science held in Athens in 1993, 1995 and 1997 (the *Proceedings* of these Conferences have already been published); 1999 will also see the two-volume work *History of Science. South-East Europe, Eighteenth and Nineteenth Centuries* on its way to the printers. The volumes contain contributions made by the history of science research groups in Bulgaria, Greece, Romania, Turkey and Yugoslavia to the study of scientific thought in their countries during the eighteenth and nineteenth centuries.

This collaboration has been fruitful so far and our ambition is that it should become even more effective in the future, stimulating an interest in studying the history of science among more and more researchers both in the countries listed above and in the other states of south-eastern Europe. It is in that direction, we believe, that our newsletter can make a significant contribution: by constantly strengthening the bonds of co-operation among the historians of science of our own geographical area, while at the same time fostering closer contact among history of science groups in south-eastern Europe and the corresponding history of science groups in the rest of Europe and more generally the international history of science community. The start has been made: now let us all look into what the next steps should be.

TECHNOLOGY OF THE FUTURE PAST

Among its activities dealing with research into the history of science, the Museum of Science and Technology in Belgrade has commenced a series of exhibitions which endeavour to reconstruct the spirit of the Neolithic period. The exhibitions are exploratory and experimental in nature and try to create a dialogue among experts from diverse specialised fields. The fundamental idea is that the Neolithic period was when all the major discoveries on which our modern era relies - fire, the wheel, the lever, agriculture, metallurgy - were made. What is even more important is that the Neolithic people managed to preserve almost complete ecological balance between Man and nature.



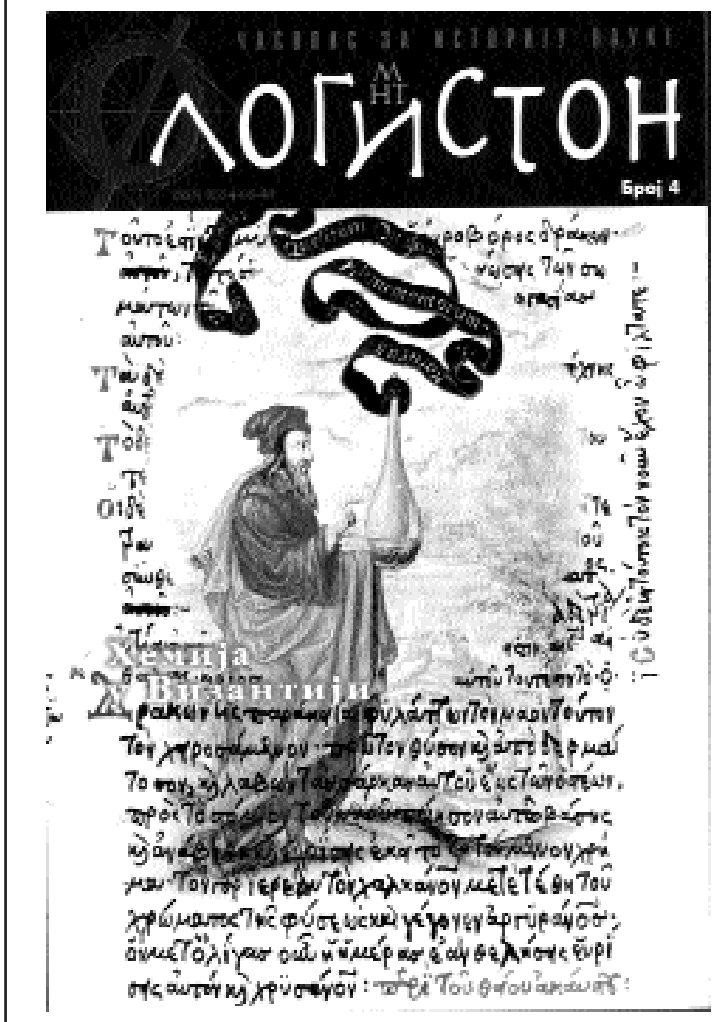
The first exhibition, which opened in spring 1997, was entitled Technography - Principles and Forms in Stone and Wood. The idea behind this unusual exhibition is a reflection on time and principles, on Man and his primeval relationship to the universe that surrounds him. It was prepared by biology professor and sculptor Kosta Bogdanovic and archaeologist Borislav Jovanovic. As a result, the exhibition is simultaneously technological, artistic and ecological; in essence, it belongs to the Earth, to that border area between science and art which curious and free-thinking minds have always explored.

The principles of the human attitude towards nature, which is the subject here, have been reflected throughout the ages - those we have forgotten as well as those we have not yet experienced - in materials of all kinds: in stone as well as wood. Although today history looks like an island in time, washed on all sides by the sea of prehistory, this is not an exhibition about the past. In objects which are several thousands old we can clearly discern contours and intimations of the ideas of the modern world. To survey the principles from such a vast distance means to comprehend them. The thought expressed by Beno Rothenberg, Director of the Institute for Archaeo-Metallurgy in London, that “essentially, we too are Neolithic people - slightly more advanced - but not much”, leads us in this direction.

Our state of being ‘slightly more advanced’ on the island of history is reflected in the host of technologies with tasks that must be completed in ever-shorter periods of time: we already speak today about nano-seconds. In this scarcity of time, the principle of beauty - the principle which took the ancient technologists

millennia of development to achieve - has been eliminated. Efficiency has rid itself of beauty, which demands a different relationship towards time. For the ancient technologist, beauty was functional in itself, and this is the basic idea that lies in the very nature of almost every one of his tools. That is what the exhibition is designed to remind us. Such an attitude results in an overall relationship towards nature: original technology does not reduce nature to a means, but tries to discern a purpose in it.

The first technologists felt that tools without beauty of form were destructive, selfish, egocentric and lacking in an awareness that the whole was something more than just the sum of its parts. The purpose of such tools was to conquer and subjugate nature and people, not to achieve harmony with the world that surrounds us. When directed and reduced to a mere component, a tool performs its task in the technological sense, but loses the ground from beneath its feet. Democritus, looking into the past as much as into the future, summed it up in a single thought: “bad reasoning is your victory and your defeat”.



Man’s superfluity of words can often make him feel embarrassed when he reads the ancient thinkers - and the technological mind must have a similar feeling when surrounded by the infinite host of its products. At the close of the twentieth century, it is clear that there have never been so many time-saving tools and that man has never had less time. If these tools continue to proliferate and be perfected, man will find himself without any time at all. When confronted with his absence, he will have to return to a time far enough away to be able to realise what he has lost and to find what he forgot long ago: beauty, simplicity and the measure of procedures which he used to shape nature in the quest for harmony with himself. Perhaps some of that lies hidden in this exhibition, too.

The second exhibition in the series is now in preparation. Its title is The Two Vincas, and it is an attempt to interweave the technology of the fifth millennium BC at the prehistoric site of Vinca, 14 km. east of Belgrade, with the technology of the atomic institute located on the same site today. Although apparently separately by a vast gulf in time, both the ancient technologist and his modern counterpart are heirs to the same principle.

Aleksandar Petrovic
Museum of Science and Technology
Belgrade

NEWS FROM THE HISTORY OF SCIENCE IN TURKEY

The Turkish Society for the History of Science organised an international symposium on The Introduction of Modern Science and Technology to Turkey and Japan, held in Istanbul on 7-11 October 1996.

The symposium reached one first conclusion: that the paradigms offered for the study of the transfer process outside Europe were not applicable either to Turkey or to Japan. The papers presented by Japanese and Turkish scholars dealt in detail with the 'introduction' into their respective countries of industrial shipbuilding, transport and communication techniques, scientific literature, scientific educational institutions and the metric system, paving the way for comparative studies. Discussion showed that further investigation will be needed in order to shed light on the 'establishment' and 'impact' of modern science and technologies in the two countries, helping specialists to gain a thorough understanding of this complex and multinational phenomenon.

The XII Symposium of the Comitι International d'Etudes Pre-Ottomanes et Ottomanes was held in Prague on 9-13 September 1996. The symposium was of particular significance for the history of Ottoman science, because for the first time a session on the history of science, technology and education was included in the Intellectual and Cultural History section.

The XX International Congress on the History of Science was held in Liηge, Belgium, on 20-26 July 1997. During the Congress, elections were held to the board of management of IUHPS/DHS and for presidents and secretariats of the commissions for the next four years. Ekmelledin Ihsanoglou was unanimously elected president of the Commission on Islamic Science and Technology.

Supported by Belgium, Italy and France, Prof. Ihsanoglou was also elected Vice-President of the IUHPS.

International Congress on Science and Education in the Ottoman World, Istanbul, 12-15 April 1999

The Research Centre for Islamic History, Art and Culture (IRCICA), the Turkish Historical Society (TTK) and the Turkish Society for the History of Science (TBTK) are jointly organising an international congress within the framework of the events to mark the 700th anniversary of the founding of the Ottoman Empire. The congress will deal principally with the activities and traditions of the Ottoman scientific and intellectual institutions, with the Ilmiye teskilati, with scientific and intellectual life and with related topics. The congress is expected to foster new contributions to Ottoman history by providing an opportunity for researchers to communicate their recent findings and exchange ideas.

Scholars and researchers interested in the congress are invited to contact the Congress Secretariat at the address given below. Congress application forms and further information will be sent on request.

Congress Secretariat Ottoman 700
IRCICA, Yildiz Sarayi, Barbaros Bulvari, 80690 Besiktas, Istanbul, Turkey
tel. no. (90) 0212-259 17 42, fax (90) 0212-258 43 65
e-mail: ircica@superonline.com

THE ACTIVITIES OF THE ROMANIAN TEAM

The Romanian history of science team which intended to investigate the questions associated with the penetration of Western science into the various provinces of which modern-day Romania consists was formed in 1996. However, the death in 1997 of its co-ordinator, engineering professor Dr Edmond Nicolau, prevented the team from continuing its activities at the level required by the Centre for Modern Hellenic Studies in Athens (Prof. Karas).

A second team was thus formed in February 1997, consisting of Prof. Radu Iftimovici MD, specialised in the history of biology and medicine, as co-ordinator, Prof. Dr. Dragomirescu of the Romanian Academy (geography and geology), and Prof. Dr. Florin Badea of the Technical University and engineer Sebastiana Grama (Spiru Haret University) for the technical sciences, including physics and chemistry.

The secretary to the team is Dan Falcan, historian and museographer at the Museum of the City of Bucharest.

The first objective of the team was to take part in the Congress on the history of science (Athens, 18-19 June 1997). Two papers were presented: Sebastiana Grama and Radu Iftimovici, 'Echoes of the concepts of J.B. van Helmont concerning alkalies in the works of the Romanian prince Dimitrie Cantemir (1673-1723)', and R. Iftimovici and Sebastiana Grama, 'The penetration of Pasteurian ideas into Romanian medicin (1880-1890)'.

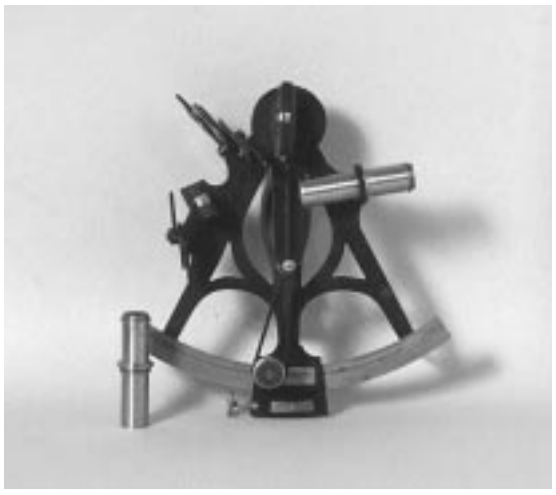
During the period from May to December 1998, the members of the group held three working meetings, establishing the following priorities:

1. Studies of the bibliographic documentation in the great libraries of Romania (the Library of the Romanian Academy, the Central University Library, the National Library, the Bayhareum - Alba Julia, and the libraries of the Universities of Cluj, Iassy, Craivo, Timisoara, etc.) necessary for the preparation of synthesis studies on the post-Renaissance and Enlightenment periods in Romania.

2. The establishment of contacts with a view to the inclusion in the Romanian team of one or two specialists from the Republic of Moldavia, given that in the seventeenth century and from 1918 to 1945 Bessarabia was a province of Romanian Moldavia and hence of Romania, with which it shares a common language and cultural traditions.

3. The preparation and submission, before 10 February 1999, of two papers: the first, on the penetration into the Romanian principalities of achievements in chemistry, biology and Western medicine (seventeenth, eighteenth and first half of the nineteenth centuries), and the second on the relations between Romanian scientists and their colleagues in the West in the field of geography.

Prof. Radu Iftimovici MD
Programme Co-ordinator



THE HELLENIC ARCHIVES OF SCIENTIFIC INSTRUMENTS

In the part of the European periphery consisting of the post-Byzantine Greek world, the history of modern scientific instruments begins in the late eighteenth century. Until that time, Greek scholars had almost no contact with experimentation and observation. The only known scientific instruments of the post-Byzantine era were occasional astrolabes such as those constructed by Chrysanthos Notaras in the late seventeenth century, using a technology almost unchanged since the thirteenth century.

By the end of the eighteenth century, scientific instruments had come to be considered as a vehicle for the new experimental philosophy which was now being taught widely in the Greek colleges of the Ottoman Empire and throughout the Greek Diaspora. At that time, thanks to the generosity of benefactors (usually Greek merchants), these colleges began to be equipped with instruments for the teaching of experimental physics and of chemistry. Early in the nineteenth century, the Greek colleges of Ioannina, Bucharest, Jassy, Smyrna, Chios, Milies, Kydonies, Constantinople and Odessa all had properly-organised laboratories in which experimental physics was taught. A few of these early scientific instruments have survived down to the present day, serving as evidence of a true cultural revolution.

The foundation of the modern Greek state was followed by the establishment of educational institutions in the image of those of Western Europe: primary and secondary schools, a military academy and a technical school. Later, an observatory was founded. Education and science thus became an affair of the State, as did the acquisition of scientific instruments.

In the mid-nineteenth century, the process of setting up experimental physics and chemistry laboratories in the University of Athens began. The period also saw the introduction of an experimental physics course in secondary education, and instruments were ordered from abroad to be sent to the secondary schools. Some of these have survived, in the country's first secondary schools: those of Nafplio, Syros and the Plaka district of Athens.

Thanks to the generosity of benefactors and to the state, by the late nineteenth century Greece had imported a large number of scientific instruments. The Athens Observatory, founded and equipped by Baron Sinas, possessed quite an impressive array of scientific apparatus, most of which has survived. The departments of physics and chemistry at Athens University had properly-organised laboratories, and here, too, most of the instruments have survived. By the early twentieth century, most secondary schools were well-equipped to teach experimental physics; only a few of the instruments of this period have been preserved, but we know that on the nationwide level there were a significant number of them.

Scientific instruments entered Greece for a number of other purposes in the late nineteenth and early twentieth centuries: for instance, the reorganisation of the 'Craft School' (laterPolytechnical University) on the lines of the German-style technical university created fresh needs for instruments, and the

emergence of national manufacturing and mining instruments led to the establishment of new laboratories.

The origin of the instruments varied. At the period in question, very few instruments were manufactured in Greece; down to the late nineteenth century, most instruments were imported from France, with Germany and Switzerland being the principal sources later.

Until recently, only instruments dating from before the War of Independence were considered by the State to be part of the national heritage and thus carefully preserved and displayed in museums such as that of Milies. Gradually, interest has expanded to include the first instruments acquired by the Observatory and by Athens University, but the main corpus of nineteenth and twentieth-century instruments is still neglected. The fact that some instruments have survived is purely a matter of private initiative.

It was in order to contribute to the preservation and utilisation of the scientific instruments located in Greece that the National Hellenic Research Foundation set up the Hellenic Archives of Scientific Instruments. The Archives cover the scientific instruments in Greek collections which date from the post-Byzantine period down to the Second World War.

For each instrument, we are in the process of preparing a card with the following information:

1. A picture (or pictures) of the instrument, showing it in full.
2. A description of the instrument.
3. A text (eventually to be accompanied by image and sound) explaining how it functions.
4. A text (eventually to be accompanied by image) on its history, origine, construction and use.
5. An indication of the instrument's current location.

We will also be trying to prepare cards for instruments which have not survived but about which we have some information, and in some cases pictures.

The Archives constitute a virtual museum functioning on net. For that reason, the virtual museum is set up in English, although a French version will also be forthcoming in view of the support the project has received from the 'Archives de la Création' programme run by the Centre National de la Recherche Scientifique (CNRS).

The project has already organised an exhibition of nineteenth-century scientific instruments in Greek collections. Held at the Hellenic National Research Foundation headquarters in June 1997, the exhibition presented 150 instruments from various collections, was accompanied by an illustrated catalogue, and was the first of its kind ever to be held in Greece.

The Web site of the ptoject was inaugurated January 22, 1999 and it is beeing enriched with new data.

The Web site of the Hellenic Archives of Scientific Instruments is at:

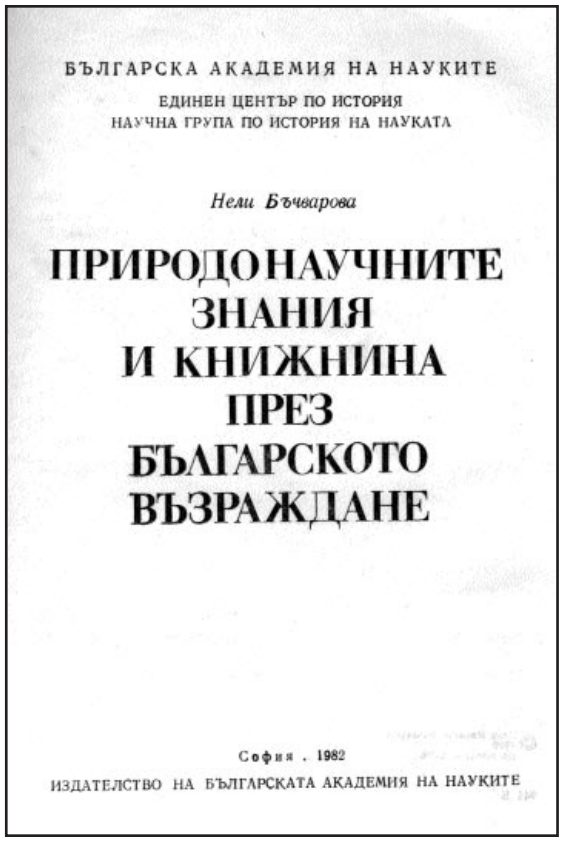
hht:/www.eie.gr/hasi.

THE RESEARCH GROUP IN SOFIA: GOOD PUBLIC AND SCIENTIFIC RECOGNITION

The fact that the interdisciplinary research group on the history of science was set up in April 1993 and has been working successfully since that time does not mean that before 1993 no sophisticated historical and research studies were carried out. Of course, since 1993 everything has been addressed more concretely and organised more efficiently.

The reason for setting up a research team of historians of general science and specialists in the history of the various sciences was to study the influence of Western European scientific thought on the science of the Balkans during the eighteenth and nineteenth centuries.

The visit by Prof. Yannis Karas to the Centre of Balkan Studies (CIBAL) in Sofia in spring 1993 marked the start of the effort to set up a research team elaborating a single Balkan programme. Two letters dating from that time testify to the positive role played by Prof. Karas in the formation of the team. In a letter to Sergei Roussev, Director of the CIBAL Secretariat, he expressed the willingness of the Greek interdisciplinary group to promote co-operation with Bulgarian scientists, and in another (dated 15 April 1993) he shared the experience of the Greek interdisciplinary team, which had already started work on a study of the influence of European scientific thought on the Balkans in the eighteenth and nineteenth centuries. The letter indicated in more concrete terms what considerations would have to be dealt with if we wished research teams from all the Balkan countries to become involved in a single significant and comparative research project. It also drew our attention to the paths along which the ideas of Western European scientists and schools of science about the natural sciences penetrated the scientific thinking of the Balkans, and to the way in which these ideas were received by the peoples of the Balkans. The importance was underlined of presenting and assessing the data with precision, of the scientific and historical aspects of the project,


БЪЛГАРСКА АКАДЕМИЯ НА НАУКИТЕ

ЕДИНЕН ЦЕНТЪР ПО ИСТОРИЯ
НАУЧНА ГРУПА ПО ИСТОРИЯ НА НАУКАТА

Нели Бъчварова

ПРИРОДОНАУЧНИТЕ ЗНАНИЯ И КНИЖНИНА ПРЕЗ БЪЛГАРСКОТО ВЪЗРАЖДАНЕ

София . 1982

ИЗДАТЕЛСТВО НА БЪЛГАРСКАТА АКАДЕМИЯ НА НАУКИТЕ

and of the context of the consolidation of national self-awareness.

We next faced the task of working out our programme and choosing our national co-ordinator, which we did on 24 March 1994. The Bulgarian scientists undertook this task with enthusiasm, holding a meeting attended, inter alios, by Mladen Nonev, Nikolina Sretenova, Grozyo Stanilov, Ivan Gantchev, Julia Ninova, Penka Ivanovna, Alexander Vavrek, Michail Buchvarov, Neli Buchvarova and Ival Ialov, representing the Bulgarian Academy of Sciences, the Sofia University of Medicine, the St Climent Ohridski University in Sofia, the Centre for Balkan Studies, and other agencies. The undersigned was chosen as national co-ordinator, with Penka Ivanova, Chief Assistant in the History of Medicine Department of the University of Medicine, and Dinko Mintchev, researcher in the Bulgarian Academy of Sciences, as secretaries.

The information about the formation of the interdisciplinary group was also communicated to Mikele Dzenoveze of the Commission of the European Communities. Recognising the leading role played by Prof. Yannis Karas of the Centre for Modern

Hellenic Research in Athens, we began to work seriously on the development of our first topics. Regular correspondence with Prof. Karas has helped to harmonise our scientific methods and methodology. The well-known Bulgarian scientists Neli and Michail Buchvarov undertook to study the influence of Europe on the scientific work of Dr Petar Beron, the most prominent Bulgarian encyclopedist and representative of the Enlightenment, also looking into some aspects of this influence in the sphere of the natural sciences. (However, the death of Michail Buchvarov has prevented the authors from finalising their study.) Another team, Miladin Apostolov and Penka Ivanova, undertook an examination of the beneficial effect of Western European science in the spheres of human and veterinary medicine, pharmacology and stomatology. Mladen Tsoneve, head of the History of Science Section in the Centre for Scientific Studies of the BASc, studied the comparable effects in the technical and technological sciences, later turning his attention to mathematics. Dinko Mintchev took part in individual and team studies of the history of biology, chemistry and the natural sciences, while Alexander Vavrek worked on the effects in the field of physics. The possibility was discussed of initiating studies of methodology, archives and the agricultural sciences at a later stage.

The vast theme of the effects of European science on the scientific thought of the Balkans in the eighteenth and nineteenth centuries has been approached with responsibility and objectivity. We have focused on the two ways in which scientific ideas penetrated the Balkans during the two centuries in question: that is, directly (by means of the training of students and specialists in the West) and indirectly (principally through Greece, but also through the Ottoman Empire and Russia).

Thanks to the efficient organisation of the project, the deadlines were observed, and the studies were translated into English and sent to Athens for publication. The only delay on the Bulgarian side was in the sphere of mathematics, where a new author had to be found.

The Second Congress on the History of Science organised by the Centre for Modern Hellenic Studies in Athens in June 1997 provided a good opportunity to analyse what had already been done, to summarise developments and to promote co-operation among the Balkan scientific groups. D. Mintchev and P. Ivanova presented a paper on 'The influence of European scientific thought on natural science and medicine in Bulgaria in the eighteenth and nineteenth centuries', in which they covered much of the work done in recent years.

We greatly appreciated the organisation of the congress and the opportunity to make contacts with historians of science from Turkey, Romania and Serbia.

The Bulgarian interdisciplinary scientific group, studying not only the influence of Westen European science but also intra-Balkan influences and co-operation over the centuries, has achieved public recognition in Bulgaria - a country which, together with the other Balkan states, is striving towards European integration and co-operation.

Prof. Dr. Miladin Apostolov
Co-ordinator of the Bulgarian
Interdisciplinary Scientific Group
on the History of Science

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Tel. no.: 00359 2 434 4260/532
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A PIONEERING RESEARCH PROJECT

A research project which might be described as a pioneering undertaking began within the Institute for Neohellenic Research of the National Hellenic Research Foundation (INR/NHRF) during the Eighties, and in recent years it has been expanding continuously. The project studies the history of science in Greece and takes the history of modern Greek scientific thought to be one of the components of modern Greek history. Entitled 'The History and Philosophy of the Physical and Natural Sciences, Fifteenth to Twentieth Centuries (the Modern Greek Nation, the Ottoman Empire, the Modern Greek State)", the project is open to all directions in which fruitful co-operation seems possible.

In its present form, our project covers the period down to the establishment of Athens University in 1837. Its first phase, during which the beginnings of modern Greek scientific thought can be identified, occupies the period to 1821.

Our project has been staffed with scientific experts from right across the spectrum of the natural sciences - physicists, chemists, mathematicians, etc. - working in various university centres throughout Greece. Before engaging themselves with the history of science and, more generally, of ideas in the Greek intellectual space,[1] these experts investigated the history of the space per se, studying learning there and, more generally, all the intellectual currents of the time in the texts, manuscripts and printed matter of the period. In other words, they studied the period in each of its many aspects.

We also have excellent and lasting co-operation with researchers, university teachers and others in almost all the Balkan countries.

The central objective of the project is to study the evolutionary progress of (modern) Greek thought over time, from the rudimentary and empirical knowledge of the first years of Ottoman rule to the scientific knowledge and scientific thinking of the final decades before the War of Independence. Precisely as a result of the unusual historical and political conditions in which the Greek nation lived during the 400 and more years of Ottoman domination, that progress was never linear and it was often subject to hazards and impediments.[2] The project also monitors or identifies influences, and more particularly the channels via which modern European scientific thought - the thought of the natural sciences - entered Greek (Balkan) thinking and learning in the general sense; it studies the radius over which the new knowledge was disseminated and the degree to which it was assimilated; it traces out the new quality, new identity and fresh instances of intellectual synthesis brought about by contact with European scientific thought; above all, it examines the reception of new scientific thought by society in general within the general cognitive pattern of tradition versus renewal. Lastly, through evaluation and interpretation of the elements preserved in long or short-term historical memory, it seeks for the deeper links or cohesion among scientific knowledge, the inner consistency and functionality of that knowledge within the process of historical evolution. The construction, during the period in question, of a new scientific discourse is also among the topics examined by the project.

For exactly that reason, we do not confine ourselves to scrutinising or recording the presence, or the sequence, of events as they occurred in the limelight of history, and we do not limit ourselves to what might be called the summary condensation of individual cases. As historians of science, our purpose is to seek for the bonds and consistency among those individual events, not regarding them merely as incidents to be viewed externally, but searching for the thoughts concealed within them and expressed by them. We strive to understand the inner rhythm of events, the logical train of their succession, and their deeper structures and causes - though remaining always within a specific historical framework.

We seek for the logic in the evolution of scientific knowledge - not as a process of accretion, by which new data and theories expand the field of science in a cumulative manner, but as a search for continuity within discontinuity.

We try to gain a knowledge of the intellectual processes and considerations of the age, to see how the problems were stated

and how they were resolved, or which of them were resolved and what the solutions were. We try to understand situations, mentalities and mechanisms, not events whose interpretation is highly subjective in character.

We study the scientific knowledge of the period in question in the texts themselves, in the written word, which is the only authentic witness to the thinking of the period: we read the books, whether printed or manuscript, and in them we identify the ideas for which they are the vehicles, after which we endeavour to understand people whose mentalities and concepts (as the products of a given historical period, of given economic and political conditions) differ from our own. We study how the new ideas were expressed, what form they took, what refractions they were subjected to, what resistance they encountered, the extent to which the new knowledge shook traditional beliefs and attitudes; our concern is not only how this or that scholar embraced, adopted and - rightly or wrongly - interpreted the various new scientific concepts, but alsoand mainly the way in which those concepts became (if they became) the property of larger groups in society, the way in which they were incorporated into the evolutionary progress of Greek (scientific) thought, which is our prime object of study. In other words, we strive to see what the people of the Modern Greek Revival passed down to us, and also what we later generations have inherited from them.


ΟΔΟΣ ΜΑΘΗΜΑΤΙΚΗΣ

Η' Τ Ο Ι

ΤΟΥ Α'ΓΙΑΣΕΙΜΩΤΑ'ΤΟΥ ΚΑΙ ΕΠΙΣΤΗΜΟΝΙΚΩΤΑ'ΤΟΥ ΚΥΡΙΟΥ ΜΕΘΟΔΙΟΥ Α'ΝΘΡΑΚΙΤΟΥ ΕΞ ΙΩΑΝΝΙ'ΝΩΝ

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ΚΥΡΙΟΥ ΜΠΑΛΑ'ΝΟΥ ΒΑΣΙΛΟΠΟΥ'ΛΟΥ,

ΤΟΥΣ ΕΚΛΑΜΠΡΟΤΑ'ΤΟΙΣ ΚΑΙ ΕΥΓΕΝΕΣΤΑ'ΤΟΙΣ ΥΙΟΥΣ Ε ΚΑΡΑΓΙΩΑ'ΝΝΟΥ, ΚΑΙ ΜΑΡΟΥ'ΤΣΗ, ΕΥΠΑΤΡΙΔΑΣΙΣ ΙΩΑΝΝΙ'ΝΩΝ.

ΓΕΩΡΓΙΟΥ ΚΩΝΣΤΑΝΤΙ'ΝΟΥ ΣΑΘΡΙ'ΤΟΥ ΕΞ ΙΩΑΝΝΙ'ΝΩΝ

ΤΟ'ΜΟΣ ΠΡΩΤΟΣ.

ΕΝΕΤΙΗΣΙΝ ΕΤΕΙ ΤΩ ΣΩΤΗΡΙΩ, ΑΨΜΔ'.

Εν τῃ Τυπογραφίᾳ Α'γιαμίου τοῦ Βάρσλι.

CON LICENZA DE' SUPERIORI, E PRIVILEGIO.

We signify events, accentuating the meanings whose vehicles those ideas became; we study the cracks and fissures that appeared in concepts and mechanisms as they were damaged and ultimately eliminated under the cumulative pressure of new knowledge; we try to distinguish and identify the new and viable elements - not the various traditional concepts, not the continuities, but the discontinuities: even then, not every discontinuity, but those, in harmony with the spirit of the age - in this case with the new European spirit, with the spirit of contemporary scientific thinking, as an attitude which is always critical, as the activation of a (new) attitude - which create new continuities.

In the multifarious mosaic of historical events and facts, we also encounter - it would be unthinkable not to encounter - knowledge from earlier times, the remnants of the previous, Byzantine, period. We study that knowledge, too, not only to underscore the question of continuity but also so as to see how those ideas 'functioned' in new intellectual fields, in other periods, in different times. This is because our aim, the aim of any historian of science, is not just to record the facts, whatever they may be, but also to identify and highlight new elements - the elements which contain a new dynamic, which herald a new concept or, more generally, a new form of thought.

Through a study, in all cases, of the texts, we attempt to weigh the significance of, and the role played in shaping modern Greek scientific thought by, the various exogenous and endogenous factors, the traditional and the modernising elements; we attempt to provide a clear and scientifically documented answer to the problem of influence, whether vertical (from ancient Greece and Byzantium) or horizontal (from the Europe of the period). We monitor the changes in the field of mentality which occurred more rapidly in some areas, where the Greeks lived and which came into more direct and closer

contact with Western Europe, than in others, where superstition and prejudice, reinforced by the mentalities, institutions and forces of the past, did everything in their power to impede the wind of change blowing from Europe. We observe the ways in which new knowledge created new habits, in which - depending on the agency for the transfer of knowledge, and also on the specific area in which it occurred - the modern or traditional components of the new synthesis stand out more clearly.

We try to comprehend the existence of an atmosphere, the density of a movement - at a time at which concerted efforts were being made to Europeanise the Greek space, and Greek thought in particular.

We have also set up an extensive data base to which we are constantly adding - the project is still in progress - all the valuable pieces of information we extract from the texts we study (see relevant article). As physicists, chemists, mathematicians and more generally as historians of science, we are able, each in his or her own field, to pick out the elements which are of substantive importance for our research: we do not accumulate, we do not copy, and we do not simply transpose data. Then we are able to use those elements to demonstrate the evolution and dynamics of scientific ideas.

In the same spirit, we are compiling - using computers, as everywhere - an archive of the scientific instruments which first appeared in the Greek intellectual world in the late eighteenth century and even more so in the early nineteenth century, when we have the first rudimentary laboratories for teaching by means of experiments, or which are referred to in books on the natural sciences. We study these instruments as more living evidence of the scientific climate of the period, and more generally of the intellectual atmosphere. Experimental instruments, and experimentation itself as a cognitive process with various philosophical extrapolations, are for us a special field of research and study.

Our next step is to study the role which the Greek intellectual resources played in the Balkans as a whole, in the more general circulation of ideas throughout that area.

We do not study the Greek intellectual space only as a periphery of Europe. The European centres where scientific knowledge was produced are for us sources of knowledge, a space from which the intellectuals of the period could draw new scientific knowledge which was later transferred to the centre where it was processed - a new centre, one whose scale was of course smaller, but still a centre from which knowledge was diffused to other spaces.

In view of the above, we can say that the history of science in Greece today is now better endowed with data than at any other time. The interest in the subject displayed by academics from various disciplines, whether in the human sciences (history, literature) or in the natural sciences (mathematics, physics, chemistry, medicine, etc.) - who have expressed their desire to contribute to our project or are working in parallel, utilising data from our research - strengthens our conviction that this field of research will continue in the future to produce positive results.

The members of our team are :

Members of the INR: Yannis Karas, Efthymios Nicolaïdis, George Vlahakis.

Associate members of the INR: Dimitrios Karaberopoulos, Nikos Kastanis, Michalis Lamrou, Nikos Matsopoulos, Alekos Papadimitriou, Maria Terdimou, Christos Xenakis.

Notes

1. Greek intellectual space: the space in which the Greek population, although politically subjugated, played during the last centuries of Ottoman rule and down to the War of Independence of 1821 a primary and decisive role in the fields of learning and education in the general sense of the terms, acting across strictly national borders and within a geographical framework consisting of multi-ethnic entities.

2. Looking back over the entire period of Ottoman rule, it could be said that, throughout the period and in each separate century, the problems and intellectual inquiries of the Greeks had already been dealt with by Western European thinkers in previous centuries. For precisely that reason, the struggle in the Greek intellectual space between the various tendencies and concepts in the field of science and of thought more generally did not involve the sharp conflicts that took place elsewhere in Europe: the processes of checking, confirming and disproving the various scientific and philosophical hypotheses and theories had already been completed, the solutions had been identified, and only a distant echo of the battle reached Greece, lingering for as long as the forces of tradition were able to resist the dissemination of the new ideas.