

Newsletter



for the History of Science in Southeastern Europe

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INTERNATIONAL CONFERENCE "HISTORY OF SCIENCE IN PRACTICE"

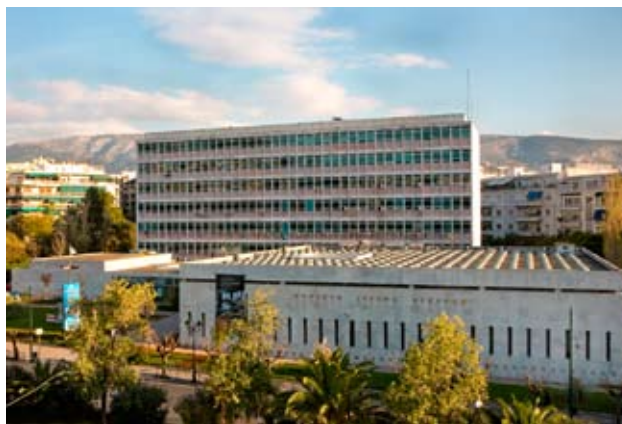
and

HELLENIC CONFERENCE "HISTORY, PHILOSOPHY AND DIDACTICS OF SCIENCE"

*National Hellenic Research Foundation,
Athens, 5-9 May 2010.*

The international conference *History of Science in Practice*, which was organized by the HPDST team and funded by the European Union's Seventh Framework Programme [FP7/2007-2013] under grant agreement n°229825, took place in Athens from Thursday, 6 May, through Saturday, 8 May 2010. Although the conference was scheduled to start in the afternoon of Wednesday, 5 May 2010, a general strike of the workers in the wider Hellenic public sector (including the air-traffic controllers) obliged the organizers to defer the opening of the conference by one day and to change the Conference program, as some of the speakers were forced to cancel their trip to Athens or opted out of it for reasons very well understood. And it was admittedly a success despite that initial glitch.

As its title suggests, the Conference explored the possibilities of putting history of science into practice, both in teaching and in communication with the public. It focused on the following themes:



*The National Hellenic Research Foundation,
venue of the Conference*

- Exploring the creation of a common European textbook of History of Science
- Using History of Science in formal and informal teaching of science
- Examining epistemological problems in the teaching of History of Science
- Appraising what a History of Science Museum can offer to the public
- Inquiring what to preserve and how from contemporary scientific heritage.

The participants at the conference included the following invited speakers: Christopher Cullen, Wilfrid Hodges, Peter Heering, Catherine Jami, Vladimir Jankovic, Vincent Jullien, Eberhard Knobloch, Helge Kragh, Michael R. Matthews, Alexandar Petrovich. Christopher Cullen, from Cambridge, and Catherine Jami, from Paris, delved into Chinese history and addressed the questions whether a subject like divination can legitimately claim a place in history of science, and whether we can create a non-Euprean textbook of history of science respectively. The talks of Wilfrid Hodges, from Britain, and Eberhard Knobloch, from Berlin, drew from the history of mathematics in the west. W. Hodges's talk revolved around the issue of involving the history in a mathematics module, whereas E. Knobloch used K. Schott's *Encyclopedia of All Mathematical Sciences* in order to develop a notion of mathematics based on it. Peter Heering, from Flensburg, presented a series of personal teaching experiences involving reconstructed historical instruments; experiences which aimed at teaching science in a novel way. Vincent Jullien, from Nantes, questioned whether a general history of science for a broad public is a reasonable purpose. Helge Kragh, from Aarhus, gave a historical overview of modern cosmology, and he subsequently proposed how it might be used in science teaching. Michael Matthews, from Sidney, painted a broad picture that brought together history of science, changes in the worldviews that are affected by scientific change, and science teaching. Last but not least, Vladimir Jankovic, from Manchester, and Alexandar Petrovich from Kragujevac, focused on the history of climate change, and they discussed, respectively, issues in teaching that are associated with this extremely important contemporary problem, and the possibility to involve history of science not only in informing but also in educating the present-day public.

Apart from the invited talks, a number of contributed papers were also presented at

the conference. The program committee had received around forty high-quality abstracts from scholars from Greece and the Balkans, but also from as far away as China, Canada, Iran, Mexico and the United States.

Thus, several papers explored the possibility or impossibility of the creation of a common European textbook of history of science. A number of contributions tackled the issue of the use of history of science in formal and informal teaching of science. A handful of presentations highlighted the relation and dynamics between history of science, museums and the public. And some talks associated the history of science with problems faced by contemporary society.

A book of proceedings will be published and selected papers will be included in the journal *Almagest*.

The National Hellenic Research Foundation offered a wonderful environment that not only facilitated the proceedings but also it inspired lively conversations and interaction among the various participants. All in all, the first of the two international conferences that HPDST is organizing in the frame of Hephaestus programme was a success which sets a high standard indeed and paves the way for an equally successful follow up.

In order to promote synergies between the Greek community of history, philosophy and didactics of science with the international community, the Hellenic Conference "History, Philosophy and Didactics of Science" was held in parallel with the international conference.

The Hellenic conference was organised by the Hellenic Society of History, Philosophy and Didactics of Science. About 50 papers were presented, reflecting the activities of the Greek community. The invited speakers were Aristides Baltas (National Technical University of Athens), Byron Kaldis (Hellenic Open University), Vasilis Kalfas (University of Thessaloniki), Petros Karyotoglu (Univ. of Western Macedonia), Nikos Trakas (National Technical University of Athens) and Dimitris Psillos (National Technical University of Athens). A Round Table Discussion on "Revolutions in Mathematics" was organised by Evgenia Koleza, Dinitris Chassapis and Kostas Nikolantonakis.

The proceedings of the Conference will be published. The programme can be found on the website of HPDST, www.hpdst.gr

THE HEPHAESTUS PROJECT

*Work progress and achievements
(April 2009 to July 2010)*



Exchanges of scholars and Research networks

HPDST has hosted for medium term research and collaboration visits scholars from six European sister institutions: Département de Philosophie, Université de Nantes; Centre d'Archives, Philosophie et Édition des Sciences (CNRS-ENS); Centre d'Histoire des Sciences et des Techniques (Université de Liège), Conservatoire National des Arts et Métiers (Paris), Laboratoire Territoires, Techniques et Sociétés (CNRS-ENPC) and Needham Research Institute (Cambridge). Four HPDST researchers have paid medium and long term research visits in European centres.

Seven international collaborative projects have been initiated from these visits:

- A European textbook on history of science.
- A European network "Europe and science, a mutual engenderment".
- A research project on Byzantine Alchemy.
- A research project on the modernization of the Southeastern European countries.
- The expanding of the exhibition "The Antikythera Mechanism".
- A project on the preservation of contemporary scientific heritage.
- A research project on the history of informatics

Recruitment

Two senior researchers with international experience have been recruited for a 28 months period. They have international experience from USA and Europe.

Conferences, Workshops, Seminars

HPDST has organized the international conference "History of Science in Practice". It inaugurated the first of a series of conferences with that theme, organized by a network constituted during the 1st conference.

Two summer research seminars have been organized. The first was about two of the axis that HPDST planned to develop (medieval studies and scientific and technological modernization of Southeastern Europe) and the second lead to the creation of a network on the history and didactics of environmental sciences.

A workshop on the "The Anikythera

Mechanism" has been organized. It achieved the expansion of the research team to specialists of Ancient Greek metallurgy and to comparative studies of the Mechanism to analogous technologies of other civilizations.

Portal, exhibitions, publications

HPDST web portal serving both the team members and the wider scientific community has been constructed.

An exhibition on the Antikythera Mechanism has been presented in Athens, with large impact on the media. Local authorities have financed the venue in Crete and Kythera and its venue to Spain, France, Belgium, UK and China is being organised.

The new international journal *Almagest* has been launched (1st issue, May 2009). It attracted the interest of the international editor Brepols, who has accepted to edit it.

Three issues of the *Newsletter for the history of science in Southeastern Europe* have been published by the relevant network.

Two issues of the Greek journal *Kritiki* have been published, self-financed.

Equipment upgrade

New equipment, for exhibition and research purposes has been acquired.

Promotion of the team

Members of HPDST have participated to international workshops and conferences, presenting their research and promoting HPDST activities.



From the Hephæstus exhibition on the Antikythera Mechanism

ELATI 2010 WORKSHOP AND RESEARCH SEMINAR

*7th Workshop on Critical Approaches to Science and Education and Hephaestus Research Seminar
Elati, 14-17 July, 2010*

From the 14th to the 17th of July, 2010 the 7th Workshop in Critical Approaches to Science and Education took place in the picturesque village of Elati, Thessaly. This year's Workshop was devoted to pedagogical, educational and historical issues of the environment and consisted of six different sessions. The organizing committee also dedicated it to the memory of Nikos Kaisaris, who had been one of the main organizers and representatives of the ecological movement in Greece. Many of the participants took the time to present his work and achievements, as well as discuss his legacy and ethos.



Once again, the Workshop was characterized not only by its interdisciplinary approach to the issues discussed but by the active and formative role of the audience. Scholars from different institutional and academic backgrounds came together with students and members of the public to discuss different aspects of the environmental crisis, as well as more general issues of education, science, history and philosophy. The Workshop started with the welcoming speech of Prof. Constantine Skordoulis, one of the co-organizers, who presented the Workshop's past and present orientation, giving special emphasis on the need to tackle environmental issues from many different perspectives and disciplines. During the course of the next three days, his proposal came to life as philosophers, political scientists, historians and educators presented ways to talk about the environment that spanned the space between the classroom, the historical archive and the research laboratory. Debate had always been the hallmark of the Workshops and this year was no exception, with the various attendees engaging in vigorous and heated

discussions, encouraged but firmly regulated by the attentive Chairs of the sessions. As a result, many were the times that participants continued to engage each other in conversation deep into the night, in the various tavernas and coffee shops of Elati.

The key lecture in the 2010 Workshop was given by Prof. Aristides Baltas, a notable philosopher of science currently in the Metsoveion Polytechnic School of Athens. His lecture was titled 'The lives of animals' and was a fascinating and thought provoking discussion of a way to reestablish a kind of Natural History which would harness the philosophical discourse of bioethics to examine the relation between man, civilization and the environment. Lasting one hour and given in a relaxed but compact and specific style, Prof. Baltas' talk was considered the high point of an already excellent Workshop.

In conjunction with the Workshop, the 2nd Hephaestus Research Seminar also took place in Elati. The two meetings were scheduled together and had a common theme, in order to maximize the synergy between the students attending the workshop and the participants to the seminar. This indeed proved a successful approach, since graduate and pre-graduate attendees had the opportunity to discuss not only with the guests of the seminar, but with other notable scholars pursuing research in environmental issues. The invited foreign researchers of the 2nd Research Seminar were Prof. Vladimir Jankovic of Manchester University and Prof. Dave Hill of Middlesex and Limerick Universities. The Research Seminar was deemed a great success, due to the many interactions between its participants and also due to the fact that it led to the creation of a research network for the history and didactics of environmental sciences. Finally, decision was taken for a joint conference in Critical Education comprising environmental issues, to be held next year.

THE FORMATION OF ISTANBUL UNIVERSITY

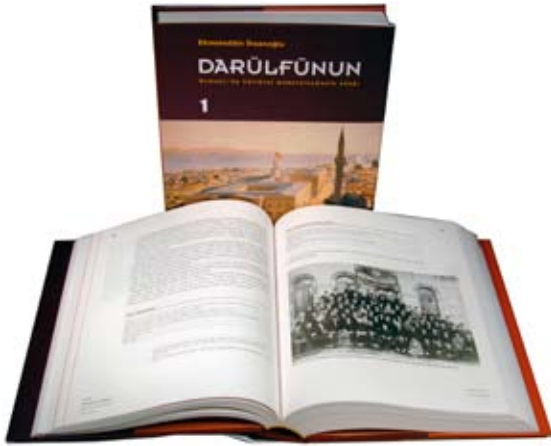
Ekmeleddin İhsanoğlu, Darülfünun. Osmanlı'da Kültürel Modernleşmenin Odağı (Darülfünun: The focus of Ottoman cultural modernization) Istanbul: Research Centre for Islamic History, Art and Culture, 2010, 2 v., 1126 pp., ill.

A comprehensive research and reference work on the history of the modern university which emerged as part of the cultural modernization



process that followed the *Tanzimat*.

The formation of a European-type university represented a transformation in Ottoman cultural and educational life. In addition to the preparation of the university's legal, administrative and financial structures, it necessitated policy decisions on such subjects as the university model to be followed, the curricula and the faculty.



This book resulting from many years of research by Prof. Ekmeleddin İhsanoğlu, a leading figure of the history of science, education and culture, records in detail and on basis of first-hand sources the stages of formation of the university from realisation of its concept until its institution as the University of Istanbul.

A NEW DEPARTMENT OF HISTORY OF SCIENCE

Istanbul University

The Department of the History of Science (est. 1984) which has been merged into the Department of Philosophy at the Istanbul University in 2000 was recently given autonomy. Thus the Department of the HS will have its own autonomous graduate program in HS from the academic year 2010-2011 on and the four-year



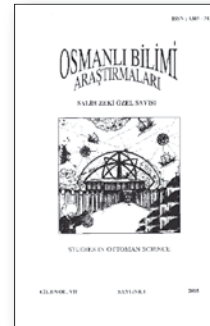
undergraduate program is planned for 2011. The faculty team is composed of Feza Günergun (Head), Mustafa Kaçar, Sevtap Kadioğlu, Gaye Şahinbaş Erginöz, Meltem Akbaş and Kaan Ata. MA and PhD students that have started their HS thesis in the Philosophy Department have been officially moved to the Department of the History of Science. Their theses focus the history of physics, astronomy, geology, and iron-steel industry in Turkey. The research at the Department aims to examine the scholarly activities in the Ottoman Empire (14th-20th c.) and in the Republican Turkey (20th c.), their relationship with various scientific traditions and their impact on the society. The website of the department is <http://www.istanbul.edu.tr/edebiyat/bilimtarhi/>

STUDIES IN OTTOMAN SCIENCE

Vol. X, Nr.2, 2009

Istanbul University

The recent issue of the journal *Osmanlı Bilimi Araştırmaları (Studies in Ottoman Science)* published by the Department of History of Science, Istanbul University contains the following articles: A portable sundial designed by Ahmed Muhtar Pasha and his treatise accounting for its usage (*Atilla Bir, Feza Günergun*); Paul-Louis Simond and the inauguration of the Ottoman Institute of Bacteriology in Çemberlitaş, Istanbul (1911) (*Şeref Etker*); Ottoman army troops and the health services at the Galicia front (1916-1917) (*Oya Dağlar Macar*);



Journals published by architects and engineers in Istanbul in the aftermath of the Young Turk Revolution (*Çetin Ünalın*); The Anatolian plant collection of Walter Siehe (1859-1928) (*Asuman Baytop*); The Anatolian botanical expeditions of Joseph Bornmüller (1862-1948) (*Asuman Baytop*); Taqi al-din's Observatory at Péra (J.H. Mordtmann (transl. *Cem Pulathaneli*); Taqi al-din's biography from Nevizade Atai's *Hadaikü'l-hakaik* (transl. *Cahid Şenel*); Dr.Zigardelakizade Salih Nabi (1886-1914):Psychiatry and Music (compl. and transl. *Şeref Etker*); The Ottoman Society for Engineers and Architects – General Statute of 1908 (transl. *Şeref Etker*).

A GUIDE: CONSTRUCTING SUNDIALS

Ahmet Ziya Akbulut, *Güneş Saatleri Yapım Kılavuzu (A Guide for the Construction of Sundials)*, eds. Atilla Bir, M.Kaçar, Ş.Acar, Published by Biryıl Kültür Ltd., Istanbul, 2010, 188 pp.
ISBN 978-605-61242-1-1

A polymath, Ahmet Ziya Akbulut (1869–1938) was among the last scholars trained in the Ottoman science tradition. He was a mathematician, astronomer, timekeeper, museologist, cartographer, painter, calligrapher and scientific instruments maker. Like many of the scholars of the time, he was trained in the military school. He taught mathematics, astronomy and perspective in both the military and the civilian schools as well as in the School of Fine Arts in Istanbul. He produced many books among them the *Güneş Saatleri (Sundials, 1929)* which unfortunately not published during his lifetime. In this book he accounts for the mean solar time newly adopted by the Ottomans.



The publishers added to the book another work of him which deals with the *vertical sundials*. This is a text which was written as an addendum on a book on the construction of the quadrants in 1921. This 2010 edition is a combined version of the two manuscripts. The editors examine

Akbulut's works on the sundials and comment on them. These texts of Ahmet Ziya Akbulut is important since it displays the problems encountered during the changeover in Turkey from the local apparent time to the mean solar time. It also helps us to know the late Islamic gnomonic, to understand the design and the working of the sundials which still exist on the walls of the mosques in Istanbul.

A MANUAL: USING THE QUADRANT

Ahmed Ziya bin Rıza, *Rubu Tahtası Kullanım Kılavuzu (A manual for the use of the quadrant)*, eds. M.Şinasi Acar, Atilla Bir, Mustafa Kaçar, Published by Biryıl Kültür Ltd., Istanbul, 2010, 180 pp. ISBN 976-605-61242-2-8



The quadrant (*rubu tahtası*) was developed in the 13th century, when the traditional astrolabe with stereometric projection of the Classical Antiquity was folded in four, in order to obtain a more compact and practical instrument. Thus, new elements were added to the structure, functioning and use of the astrolabe. In the course of time quadrants were successfully used by the Ottomans to find the time and to determine the direction. Gradually, this instrument became very popular among the Ottomans and many works were written on its manufacture and use. The book titled *Rubu Dâirenin Sûret-i İsti'mâli (The use of the quadrant)* was written in 1921 by the last Ottoman chief astronomer and timekeeper Ali Rıza Bey (1869-1938). It introduces many examples how this sophisticated instrument can be used for astronomical measurements and mathematical calculations. In accordance with Ali Rıza's intention of describing the use of the quadrant in details, the editors (M.Ş.Acar, A.Bir, M.Kaçar) commented the original text and enriched it by adding numerous explanatory drawings.

A DISTANT ACCORD: THE RUSSIAN-SERBIAN SCIENCE LINKS

Émigré Scholars and History of National Sciences

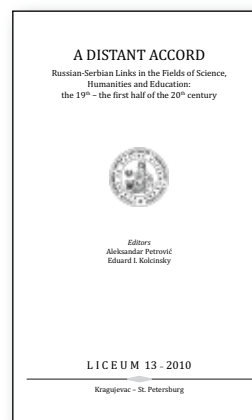
Aleksandar Petrovic, Eduard I. Kolchinsky (eds.) A Distant Accord - Russian-Serbian Links in the Fields of Science, Humanities and Education: the 19th – the first half of the 20th century, Research Center of the Serbian Academy of Science and Arts, and St. Petersburg branch of the Institute for the History of Science and Tecnology, Russian Academy of Sciences, Kragujevac – St. Petersburg 2010.

The present English edition, entitled *A Distant Accord*, which comes after the Russian edition which was published in 2009, contains the papers delivered at the International Conference 'Russian-Serbian Links in the Fields of Science, Humanities and Education: the 19th – the first half of the 20th century', which took place on October 20, 2008 in St. Petersburg. The conference was organized by the St. Petersburg Branch of the Institute for the History of Science and Technology, the Russian Academy of Sciences, and the Center for Scientific Research of the Serbian Academy of Sciences and Arts and the University of Kragujevac. Among the Russian participants were the members of the Institute for the History of Science and Technology (Moscow), its St. Petersburg branch, the faculty of St. Petersburg State University, the staff of the Library of the Russian Academy of Sciences, the Peter the Great Museum of Anthropology and Ethnography (Kunstammer) of the Russian Academy of Sciences. The Serbian side was represented by professors and faculty members of the University of Kragujevac, the University of Novi Sad, and the members of the Serbian Academy of Sciences and Arts. English edition is slightly extended but basically quite similar to the Russian one. It is addressed to the English speaking readers in order to display some specific problems which are not very well known to them.

The history of Russian-Serbian history of science links provides an opportunity to examine specific phenomenon of transfer of scientific knowledge. During October Revolution and immediately after that, Russia and her scholars acted as 'donors' of scientific knowledge by an active impact on the system of scientific knowledge, the language of scholarship and academic community of another country. A unique experience of the accelerated development

of Serbian science under the impact of influential representatives of Russian academic community, complex and multidimensional processes of the establishment and development of contacts and cooperation between Russia / the Soviet Union and Serbia / Yugoslavia were analyzed.

This volume considers various aspects of interrelations between Russian and Serbian scholars, and explores the history of Russian academic émigré community in the Kingdom of Serbs, Croats and Slovenes (the Kingdom of Yugoslavia since 1929). The papers focus on the role of Russian science, humanities and literature, Russian scholars and writers in the making and development of certain fields of knowledge in the Serbia in the 18th-20th centuries. They also overview the contribution made by immigrants from Serbia, Montenegro and Dalmatia to the development of Russian culture. The readers could find out materials related to the education of some members of Serbian and Montenegro royal and aristocratic dynasties in various schools in St. Petersburg, as well as on the origins of Montenegro collection in the Peter the Great Museum of Anthropology and Ethnography.



The problems which have been discussed are connected to the general understanding of the ways and mechanisms of maintaining and developing national science in the times of political crises. Both Russia and Serbia happened to be in the very epicenter of global social and political dislocations that ultimately led to the collapse of the Soviet Union and Yugoslavia. These problems have been previously discussed mainly by political scientists, sociologists and political philosophers. Here they have been discussed in various aspects of contradictory and sometimes multidirectional processes related to the making and maintenance of national science and scholarship in the periods of profound social

and political transformations and crises, including revolutions, World and civil wars. The study of these issues can provide a better understanding of the role played by contacts between individual scholars, academic communities and institutions in maintaining national science. No less interesting is the question about the mechanisms that facilitate integration of émigré scholars into an academic community of a different nation, and about the problems faced by immigrants, regardless of many similarities in their linguistic, confessional and cultural background. In a word, the study of Russian-Serbian cooperation in the fields of science and humanities contributes to a better understanding of the interaction between national cultures in scientific, historical and geopolitical context.

Djordje Djuric
University of Novi Sad

NEWS FROM CROATIA

Almagest
Vol. 1, 1 (2010), May 2010, Brepols, Belgium

The Croatian National Television Network (HRT Zagreb, the 1st program) has broadcasted on July 7, 2010, a short multi-media contribution on the occasion of the 1st volume of *Almagest* (*Int. J. for the History of Scientific Ideas*, Vol. 1, 1 (2010), May 2010, Brepols, Belgium), as one of the important events at the international scale interesting to the Croatian public. A television contribution (duration of 1 minute and 20 seconds) was a part of the “Scientific News”, an emission published once a week in Croatia for the public understanding of science and technology. *Almagest* was shown in a very nice way, as the new journal promoting history of science not merely to be a spare history of ideas, but aiming to develop the new broad contacts (collaborations) between historians and scientists of the South-eastern Europe and Eastern Mediterranean countries, by including also a social-cultural and institutional context through a local network of them. By answering to a science journalist (Nikolina Dragosevic, who has created a contribution on *Almagest* for the *Science-Education Program of the HRT*), Tomislav Petkovic as the Croatian member of the Editorial Board of the *Almagest* has explained various ideas contained in the Ed. Statement, promising that also Croatian authors - historians and scientists - may occasionally publish their valuable papers in *Almagest* on English or French, by following the scope of the journal and by passing peer-reviewing. By running

and imaging by the camera through the articles of the volume, the facts on page 2 and 3 were emphasized, especially that 20 members of the Editorial Board from 15 countries of the World (2 editors are from Greece) are responsible for the future scientific and historian life of the journal. A DVD copy of the inserts of *Almagest* (Copyrights of the HRT Zagreb, *Division of the Science-Education Program*) - upon available and signature by the HRT Zagreb - will be sent immediately to the editors in Athens.

Synthesis Philosophica
Vol. 25 fasc.1, October 2010,
Croatian Philosophical Society, Zagreb



The 1st issue of the volume 2010 of the internationally known journal *Synthesis Philosophica* will appear in Croatia by the beginning of October 2010. A full reference is: *SYNTHESIS PHILOSOPHICA* 49, vol. 25 fasc. 1 pp. 1-196, *Croatian Philosophical Society, Zagreb*, 2010, available on-line at the HrcakPortal of scientific journals of Croatia (<http://hrcak.srce.hr/synthesis-philosophica>). An actual issue brings 10 original papers by the authors from various countries, collected together within the thematic unit: Democracy and Political Education. *On the Occasion of the 150th Anniversary of John Dewey's Birth (1859-1952)*. The theme section of the journal was prepared and organized by the *Foreword and Introduction* of P. Barisic, Croatia. A journal *Synthesis Philosophica* (Editor-in-Chief Ante Covic, professor of ethics and bioethics at the University of Zagreb) publishes articles from

all standard philosophical and to philosophy closely related disciplines which belong to both areas of Humanities and Philosophy, by taking into account also a modern development of science and technology. A journal which deals with a remarkable history of 25 years of continuous regular publishing (the first issue was at 1986), appears twice yearly with articles in English, German and French, bringing regular units (studies, book reviews etc.) beyond the framework of planned thematic units announced before. As the strong rule, every article has to pass peer-reviewing procedure, with two anonymous reviewers, who do not know the author of the text given to them for reviewing. A journal is characterized by international Editorial Board of 15 members, then international Junior Managing Editor of 16 members of young philosophers and scientist as the unique feature of the journal, and a respectable international Advisory Board of 26 members from European as well as non-European countries. Articles appearing in *Synthesis Philosophica* are indexed in the Current Contents/Arts & Humanities, Arts & Humanities Citation Index (Web of Science), The Philosopher's Index, Répertoire Bibliographique de la Philosophie, Sociological Abstracts, Social Services Abstracts and Linguistic & Language Behaviour Abstracts.

Synthesis Philosophica recently introduced, according to its fundamental programmatic policy, a groundbreaking orientation for integrative thought. This means that it holds pluralism of philosophical positions by requiring a philosophical sphere open to other spiritual and scientific approaches, and that it aims to establish a network between the various theoretical perspectives within the paradigm of creating orientate ideas and concepts of knowledge.

CELEBRATING BOSCOVICH'S BIRTH

*Celebrating the 300th Anniversary of
Boscovich's Birth
Zagreb, 2011*

The great project keep going for whole Croatia is dedicated to Ruđer Josip Bošković, under the working title: *Celebration the 300th Anniversary of His Birth (1711 - 2011)*, to be held in Croatia 2011. Ruđer Josip Bošković (18 May 1711, Dubrovnik 13 February 1787, Milano) was a great universal thinker of the 18th century: physicist, philosopher, theologian, astronomer, mathematician, diplomat, poet, Jesuit. More than 20 Croatian subjects such as academies, universities, institutes and

faculties, societies, museums, and historical cities were submitted an interesting projects (with no overlap) to celebrate the 3rd centenary of the Boscovich's birth. It includes symposia, memorial lectures, book publishing, and cultural events. The most responsible institution engaged to organize and coordinate all various events is the *Croatian Academy of Engineering (HATZ, Zagreb)*. *The Boscovich's year of 2011 in Croatia* will be sponsored by the Croatian Ministry of Science, Education and Sports, under the very high auspices of the Croatian Parliament, President of Croatia and Croatian Government. The national ceremony as the central event in the Boscovich's year 2011 will be held on the Boscovich's birthday at May 18, 2011, in the *Vatroslav Lisinski* Concert Hall in Zagreb. Under such circumstances, there may be possible to invite a few outstanding people of the DHST (Liu Dun, Ronald Numbers, Efthymios Nicolaidis) to visit Zagreb to participate in the central event. In order to get a little insight into the contemporary *Boscoviciana project* going on in Croatia, I am giving preliminary formulation for the events to be held in Croatia through the next year 2011. It may be summarized by the title (slightly extended) as follows:

*Historical and contemporary views on
Boscovich's philosophy of nature,
particle physics and astronomy,
mathematics and theology,
geodesy and modern technique,
poetry and diplomacy,
ethics reflections
with the responsibility for the homeland and
native town Dubrovnik*

Zagreb, October 10, 2010

Prof. dr. sc. Tomislav Petković
Department of Applied Physics
Faculty of Electrical Engineering and Computing
University of Zagreb, Croatia
&
Member of the Editorial Board of *Almagest*

HOMMAGE A GERARD SIMON (1931-2009)



Gérard Simon, philosophe et historien des sciences français, membre de l'Académie internationale d'histoire des sciences, nous a quitté en 2009. Ses premières études, il les a consacrées à Descartes et surtout à Kepler ; sa

thèse donnera lieu à l'excellent ouvrage *Kepler astronome, astrologue* (Paris, Gallimard, 1979 ; 2e éd., 1992). Dès ces premières années, Gérard Simon s'est intéressé à l'optique et aux théories de la vision chez ces deux auteurs, voyant dans la découverte en 1604 par Kepler de la formation d'une image réelle sur la rétine, due à la convergence du cristallin conçu comme une lentille, le début d'une science physique de la lumière. Afin de mesurer la rupture que constituent les travaux de Kepler et de ses successeurs, il fut conduit à l'étude de l'optique d'al-Haytham mais aussi des théories de l'Antiquité grecque, auxquelles il a consacré tout un ouvrage: *Le regard, l'être et l'apparence dans l'optique de l'Antiquité* (Paris, Le Seuil, 1988), et la première partie de *l'Archéologie de la vision* (Paris, Le Seuil, 2003). Il a porté une attention particulière aux traités d'Euclide et de Ptolémée, dans lesquels la mathématisation de la théorie de la vision repose sur le présupposé de l'émission d'un cône visuel à partir de l'œil. Il a insisté sur la fonction sensorielle du rayon visuel qui vient toucher les objets, fonction bien mise en évidence par Ptolémée. Il a montré comment le rayon visuel ainsi conçu permet à l'œil d'appréhender les distances auxquelles se trouvent les objets, mais aussi leurs couleurs et leurs mouvements. Tout autre est la théorie d'al-Haytham, dans laquelle le rayon lumineux va de l'objet vers l'œil. Gérard Simon a montré que ce changement de direction du rayon, même s'il est sans conséquence sur les modélisations mathématiques, entraîne des rapports différents de l'homme au monde et à soi. Il a ainsi soutenu que les différentes théories de la vision ont des conséquences sur l'art pictural : selon lui, seule une théorie du rayon visuel venant vers l'œil permet le développement de la perspective à la Renaissance.

Dans tous ses travaux, qu'ils portent sur l'Antiquité, le Moyen âge ou l'Âge classique, Gérard Simon a toujours refusé une conception rétrospective de l'histoire, demandant que chaque théorie soit étudiée en prenant en compte le contexte culturel et historique dans lequel elle naît. Il l'a particulièrement bien montré dans son étude sur Kepler mais aussi dans ses travaux d'optique et des théories de la vision de l'Antiquité. Il insiste en particulier sur le fait que les objets et les méthodes de l'optique moderne ne sont pas transposables tels quels dans les théories anciennes et qu'il est nécessaire de comprendre les interrogations que se posaient les auteurs que l'on étudie, de même que le cadre théorique de ces interrogations. Cette

approche l'a conduit à étudier avec rigueur les textes, remettant en cause certaines traductions qu'il jugeait anachroniques (notamment de l'optique d'Euclide) ou certaines interprétations (par exemple de deux passages de Vitruve sur la théorie des miroirs).

Sabine Rommevaux

A DARK ECHO

The Biological Conference (4-8 April 1949, Sofia): a dark echo of the August Session (1948) of the Agricultural Academy of USSR



The presidium of the Biological Conference (4-8 April 1949, Sofia) . Prof. Ch. Daskaloff delivering the basic report. Sitting (from left to right): T. Chernokolev, T. Pavlov. The others – not identified.

The so-called Biological conference (Sofia, 1949) was a gloomy event, announcing the victory of Lyssenkoism in Bulgaria over the “reactionary” classical genetics, while triggering the routing of the biological science and education for a long period of time. It was a dark echo of the famous “historical” Session of the Agricultural Academy of USSR (31 July - 7 August, 1948) that heralded the triumph of Lyssenkoism and marked the full crushing of the biological sciences in USSR, delaying irreversibly the development of the agriculture in the enormous country.



Trofim Denisovitch Lyssenko (1898-1976)

Lyssenkoism arose in USSR still in the early thirties as a teaching named after the agronomist Trofim Denisovich Lyssenko (1898-1976) who developed it as a complex of theoretical postulates and practical approaches, largely applied in agriculture. This concept rejected the classical chromosomal theory of heredity (Weismann, Mendel, Morgan) and imposed the view that the whole organism, not the genes, is a carrier of heredity, and that the organisms can easily be transformed by “education”. Genetics was denied and proclaimed as a “reactionary” science. Completely erroneous views and recommendations for the agricultural practice flowed from these ideas, having heavy negative economic impact. Lyssenkoism concept proclaiming “the revolutionary changes of organism”, neglecting heredity and affirming as an absolute the transformation of the organisms by the environmental conditions, was fully compatible with communist ideology, and had a strong political support by the Communist Party. People arising against the absurdity of Lyssenkoism with scientific arguments were treated as “enemies of the people” and subjected to heavy political persecutions. N. I. Vavilov, one of the most outstanding Soviet biologists, was arrested in 1940 and died in prison in 1943; the famous Institute of Plant Growing created by him was destroyed.



After the World War II the Lyssenkoism wave rose up again being supported by Stalin, and culminated in the August Session of the Agricultural Academy of USSR, 1948.

The August Session was held in the USSR Ministry of Agriculture with the principal address by Lyssenko “On the situation in biological sciences” (approved personally by Stalin). The kernel of Lyssenko,s address was the absurd thesis that two diametrically opposed biologies exist: the materialistic Soviet biology, and the reactionary, idealistic, Weismannist - Mendelist - Morganist, bourgeois biology, based on chromosomal theory of heredity. Scientists supporting it were qualified as reactionaries, carriers of bourgeois influence in Soviet science. Thus, the August Session was not a free meeting of scientists, while resembling a Middle-Ages trial. Five years before the greatest discovery

of biology - the double helicoidal structure of DNA, in USSR the genes were denied, genetics - condemned, and geneticists - abused like criminals.

Immediately after the August Session a number of laboratories pronounced as hotbeds of reactionary Morganism were abolished; research in animal husbandry and plant genetics were forbidden; teaching courses relevant to genetics were banned, genetic textbooks in the libraries were destroyed, and leading university professors of genetics were dismissed or arrested. Genetics became a state menace.

In subsequent years the absurd thesis of the existence of two biologies spread into other branches of science: medicine, physics, chemistry. Medical investigations of hereditary diseases were put beyond the law. Cybernetics was declared reactionary, and remained underground until 1955. Einstein’s theory of relativity, Bohr’s complementary principle, Pauling’s theory of resonance were denied and qualified as reactionary.

The August Session of the Academy of Agricultural Sciences, like an avalanche, triggered similar awful events in the communist countries, with the slogan “two biologies – two ideologies” expressing the call for reconsidering the scientific view of biologists in accordance

with Lyssenko,s concepts, and for fighting against the reactionary Weismannism - Mendelism - Morganism.

Bulgaria was the first among the communist countries to start this fight. A conference “The situation of the biological sciences in the light of Michurin’s teaching” was organized by the Bulgarian Academy of Sciences (4-8 April 1949) under the auspices of its President, Acad. Todor Pavlov. The Conference was preceded by the publication of a series of papers in the Communist Party newspaper “Rabotnichesko delo”. Prof. Ignat Emanuilov in three consecutive articles in November 1948 (№№ 276, 277, 278) qualified the Weismannist - Mendelist - Morganist concept as “wrong”, “reactionary”, “sterile”, etc., criticizing the Bulgarian biologists for their reactionary views. Eminent scientists such as Acad. Dontcho Kostoff and Acad. Methodi Popoff were the main targets of this

attack.

One month later, in December 1948, at the Fifth Congress of the Bulgarian Communist party, Vulko Chervenkov, Minister of Culture, Science and Art, and Titko Chernokolev, Vice-Minister of Agriculture, addressed accusations and threats against the adherents of the “reactionary” biology in the Bulgarian scientific institutes and universities, pointing to the only alternative - the progressive Michurin - Lyssenko teaching. Over 500 scientists of different branches were forced to attend the Conference which resembled a trial where the prosecutors were Acad. T. Pavlov who opened the Conference, and Vice-Minister T. Chernokolev, main representative of the Communist Party. In their speeches they qualified theoretical research in the universities as “sterile” being based on the “reactionary” classical genetics, labelled as a “pseudoscience”, far from the real problems of agrarian practice. They called biologists to break off with it and to address the practical problems of cooperative farms by applying the new socialist Michurin – Lyssenko approaches. Prof. Ch. Daskalov presented the basic report generalizing the critics against “reactionary” genetics and outlining the new “revolutionary” tasks. Criticizing Acad. D. Kostoff he expressed the disappointment that D. Kostoff has worked long (1932-1939) in the Soviet Union, without adopting Lyssenko,s ideas while persisting to build his research on the chromosomal theory. Critics against D. Kostoff marked also the statements of other speakers.

Some of the participants in the Conference actively rushed to confess the mistakes in their previous work, and to declare their full reorientation towards the new socialist credo; other tried to defend their former achievements and positions, while promising a progressive reorientation. In these declarations genes were defined as “only auxiliary notions”.

An address by the main attendant D. Kostoff, deadly ill and not present at the Conference, was announced. It was a strongly falsified copy of the actual address signed by the world-wide geneticist, who died soon after the Conference.

The Biological Conference was the last act of the scenario organized by the Communist Party, disclosing the routing of the biological sciences in Bulgaria. The consequences are lasting until nowadays.

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THE ROOTS OF PHYSICS

*International Symposium on the History of
Physics
Poellau, Austria, May 28-29, 2010*

The Victor Francis Hess Society and the European Physical Society/History of Physics Group (EPS/HOP) organized a very interesting symposium on the History of Physics which hold at Poellau, Austria from May 28-29, 2010. During the Symposium took place the Grand Opening of the very well organized exhibition “Radiation and Mankind”, which included among others many scientific instruments and

other material related to the history of physics.

The Symposium was a real success thanks to the efforts of Dr. Peter Maria Schuster. The Proceedings of the Symposium are going to be published soon by Living Edition.



Krehl, Peter (Ernst Mach Institute of the Fraunhofer Society; Freiburg, Germany) *Shock Wave and Detonation Physics: a Stimulus for the Evolution of Numerous New Branches in Science and Technology*; Salcher, Günther (Karl Franzens University of Graz; Austria) *Peter Salcher—His Life and Works*; Davis, Edward Arthur (University of Cambridge; UK) *Lord Rayleigh—His Works and Laboratories*; Šebesta, Juraj (Comenius University of Bratislava, Slovakia) *History of Physics in Slovakia (1990–2010)*; Peruzzi, Giulio (University of Padua, Italy) *Notes on Italian Physics between the Two World Wars*; Faustmann, Cornelia (University of Vienna; Austria) *The Roots of Modern Physics Teaching at the University of Graz—the Merits of Leopold Gottlieb Biwald*; Ford, Peter (University of Bath and IOP/History Group; UK) *History of the Liquefaction of Gases*; Kluza, Maciej (Jagiellonian University Museum; Cracow, Poland); *Liquefaction of Air—a Success with Controversy*; Granitzer, Petra (Karl Franzens University of Graz; Austria) *A Bloom of the Graz Institute of Physics during the Second Half of the 19th Century*; Pichler, Franz Rupert (Johannes Kepler University of Linz, Austria) *The Contribution by Robert von Lieben to the Development of Electronic Amplification*; Weaire, Denis (Trinity College Dublin, Ireland) *Philomorphic Pursuits in Science, Art, Architecture, History*; Draxler, Sonja (Karl Franzens University of Graz; Austria) *The Reckoning of Time—Calendars Across the Centuries*; Blondel, Christine (CRHST/Centre Alexandre-Koyré; Paris, France) *The Replication of Historical*

Experiments and the Ampère Website; Jurdana-Šepić, Rajka (University of Rijeka; Croatia) *Educational Aspects of the History of Physics in Classroom and Environment*; Krenn, Heinz (Karl Franzens University of Graz; Austria) *Boltzmann’s Bicycle—a Mechanical Analogue of Coupled Electric Circuits*; Kutschera, Walter (University of Vienna, Austria) *Ludwig Boltzmann’s Encounter with America in 1905*; Lippitsch, Max E. (Karl Franzens University of Graz; Austria) *Digging the Roots—Ancient History Behind Modern Concepts*; Kivilšienė, Rasa (University of Vilnius; Lithuania) *Physics in Lithuania from the 16th to the 21st Century—a Short Review*; Hohenester, Adi (Karl Franzens University of Graz; Austria) *August Musger, Inventor of a Time-Machine*; Rumpf, Klemens (Karl Franzens University of Graz; Austria) *Development and Highlights of Physics at the University of Graz during the Last 425 Years*; Soukup, Rudolf Werner (Vienna University of Technology, Austria) *Some New Insights into the Scientific Network of Robert W. Bunsen*; Thim, Hartwig (Johannes Kepler University of Linz, Austria) *The U2 Anisotropy Experiment of Smoot Had Confirmed an Aether Drift*; Kragh, Helge (University of Århus; Denmark) *Heavenly Radiation: Research on the aurora borealis in the Early 20th Century*; Talas, Sofia (University of Padua, Italy) *Cosmic-Ray Physics in Italy from the End of World War II to the G-Stack: the Rebirth of Italian Physics*; Besser, Bruno P. (Space Research Institute of the Austrian Academy of Sciences; Graz, Austria) *History of the Spectroscopy of Planetary Atmospheres*; Strohmaier, Brigitte (University of Vienna, Austria) *The Vienna Radium Institute and Its Collection of Historical Instruments*; Grandin, Karl (Royal Swedish Academy of Sciences; Stockholm, Sweden) *The Nobel Prize to Victor Franz Hess in 1936: a Look into the Nobel Archives*; Holmberg, Peter (University of Helsinki; Finland) *Early*



Radioactivity and Nuclear Physics in Finland; Rossel, Christophe (Swiss Physical Society, IBM Research GmbH Zuerich, Switzerland) *One Hundred Years of Swiss Physical Society—the Link Between Tradition and Innovation*; Kamisheva, Ganka (Institute of Solid State Physics—BAS; Sofia, Bulgaria) *The Roots of Theoretical Physics in Bulgaria*; Jäger, Helmut (Graz University of Technology; Austria) *The First Wireless Transmission of Music*; Denoth, Armin (University of Innsbruck; Austria) *The Innsbruck Physikalische Institut, 1906–1926: the Period of ‘Atmospheric Electricity’*; H. Mache, F.v. Lerch and E.v. Schweidler; Vlahakis, George N. (National Hellenic Research Foundation and Open University, Greece) *Tracing the Future into the Past—the Significance of History of Physics for Physics Development*; Breisky, Bill (Grandson of Victor Francis Hess; MA, USA) *A Cosmic Connection: a Grandson’s Perspective on Victor Hess—how he lived in America, and how he influenced my life* 13:00:

- Echo Physics Grand Opening Programme
At the occasion of the Grand Opening Ceremonies to jointly inaugurate
- the first European Centre for the History of Physics: echophysics.
 - its 2010 exhibition on the European History of Physics: Radiation and Mankind.
 - the Victor F. Hess Centre of Research and Commemoration at Schloss Pöllau.

BIBLIOGRAPHY ON THE HISTORY OF MEDICINE

Demetrios Karaberopoulos, Hellenic Bibliography on the History of Medicine (1750-2000). A summary description [in Greek], *Library of History of Medicine, No 3*, Athens: Ath. Stamoulis, 2009, 815 pages



The lack of a Hellenic Bibliography on the History of Medicine was always a barrier to the enrichment of students and writers background on this field. The publication of the Hellenic Bibliography on the History of Medicine constitutes the first attempt to satisfy this need.

The volume of 815 pages covers the period from 1750 to 2000. The readers can find out materials related to 7156 titles. The Bibliography provides the opportunity to examine the phenomenon of transfer of scientific knowledge from Europe to the Greek world and

the profiles of the contemporary doctors.

The titles are indexed in an alphabetical order according the writers’ name. Articles published in others languages by Greek writers are also included. The volume comprises also more than three hundred titles of journal articles as well as of Proceeding volumes largely unknown. A diagram is prefacing the volume presenting the progressive increase of written articles by decade while the detailed index of main names and relative subjects helps to explore the history of Medicine .

The author, the pediatrician Demetrios Karaberopoulos, is Doctor of History of Medicine of Athens University and the writer of many articles on the ancient physicians, Hippocrates and Galen. His research focuses on the history of medicine of post-Byzantine and the Greek Enlightenment period.

THE SPACE OF THE SCIENTIFIC LABORATORY

Maria Rentetzi (ed.), The space of the scientific laboratory, 16th-20th centuries. Architectural and social dimensions, *Heraklion: Crete University Press, 2010.*

This collection of essays edited by Maria Rentetzi, an STS scholar, focuses on the scientific laboratory as the fundamental space for knowledge production in the natural and life sciences. Historically there is no single definition of the laboratory. From a secret and enclosed area in the 16th century it moved to the gentleman’s quarters in the early modern period and to the craft dominated workshop of the early 19th century. In the early 20th century laboratories such as that of Curie’s Institute in Paris reflected the interdisciplinarity of modern science. In the 1930s the emergence of big science can be traced to laboratories such as the Lawrence Berkley Laboratory in California. It was after the World



War II that the laboratory was transformed to a large-scale factory transforming also the politics of collaboration in the practice of science. To trace those shifts in the definition of the laboratory the book looks at its urban setting and the architecture of its buildings through a collection of well received articles written by scholars such as Paula Findlen, Steven Shapin, Owen Hannaway, Londa Schiebinger, Sophie Forgan, Peter Galison, Sharon Traweek and others. It is through the spatial culture of the laboratory that the book traces the shifts in assumptions about who has the right to participate in science and for whom the laboratory doors have been open. By studying the blueprints of the laboratory several essays question the multiple gender assumptions reflected in spatial arrangements, in inclusions or exclusions of places to socialize, in separate sanitary installations, and in the accessibility of the most valuable technologies and instruments that the laboratory hosts. After all, this book tackles the role the architecture of the laboratory has played in the construction of scientific knowledge.

ALMAGEST, JOURNAL FOR THE HISTORY OF SCIENTIFIC IDEAS



EDITORIAL STATEMENT

The journal *Almagest* views the history of science both as a history of ideas and as an activity that has taken place in institutional and social contexts. In its pages, the journal aims to address the philosophical assumptions underpinning the scientific ideas and scientific developments, but also, whenever applicable or possible, the influence of the historical context on such ideas and developments and *vice versa*.

Several historians of science believe nowadays that a proper understanding of scientific accomplishments requires a deep appreciation of their situation in time and place. As a result,

historians of science have increasingly shifted the emphasis from universal validity to the local particularity of such accomplishments. And yet, despite some pioneering efforts from the 1930s through the 1950s, as well as important developments in historiography of science since then, a genuinely interdisciplinary, comparative perspective is still in its infancy. Acknowledging this lacuna, and recognizing the potential applications of such an approach, *Almagest* aspires to publish essays on the history of science that take advantage of such a perspective, and contribute, potentially, to a better understanding of some major issues of the present day and age, for example, issues concerning cultural conflicts, multiculturalism and cultural fusions, globalization etc.

Given the defining features of *Almagest's* approach to history of science, the history of scientific ideas, of research priorities and agendas, and of conceptualizations of nature is perceived as being related in reciprocal ways not only to History, broadly construed, but also to various cultural factors, including geo-political, social, economic, religious, and technological. Thus, the journal invites papers that examine and analyze the relations between scientific achievements, on the one hand, and, on the other hand, the specific geographic features, political status quo, social conditions, religious undercurrents and the technology of a given era; relations that have arguably either fostered or prohibited the said achievements.

Another aim of *Almagest* is to promote the teaching of history of science, by advocating its utilization in science courses at all levels and forms of education (from elementary school, to university, to public education). Emphasis is given to the use of history of science in programs dedicated to the preparation of future science teachers. It is a firm belief of our editorial board that historians of science can contribute substantially to the scientific education of both students and the general public, especially at a time when the answers to the question “What counts as science?” have major implications on several decisions the contemporary society has to make: from what ought to be available to students in their school curricula to the course of action required for the preservation of our environment. The journal, therefore, invites papers on the utilization of history of science in science education.

Last but not least, *Almagest* aims to constitute a forum for historians of science from South-eastern Europe and the Eastern Mediterranean,

which will promote their research and make it known to the international community of historians of science.

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The new journal 'Almagest' considers the history of science both as a history of ideas and as an activity that takes place in institutional and socio-cultural context. It aims to address the philosophical assumptions underpinning scientific developments and ideas, as well as contribute to a better understanding of some of the major issues concerning the relation of science with contemporary cultural conflicts, multiculturalism and globalisation. Almagest especially welcomes papers • on the history of scientific ideas in specific regions or related to a specific cultural context • on the relations of scientific ideas to the material civilization, in particular to scientific instruments • on the utilization of history of science in science courses of all levels and in programmes for the preparation of science teachers • from the historians of science in Southeastern Europe and the Eastern Mediterranean, for whom it aims to constitute a forum

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