

Miklós RÉTHELYI

OPENING OF THE 28TH CONFERENCE ON THE HISTORY OF SCIENCES,
TECHNOLOGY AND MEDICINE

The Minister of Human Resources addresses the audience of the 28th Conference on the history of sciences, technology and medicine. He stresses the necessity of commemorating the great Hungarian scientists and inventors of the past, and mentions the names of some outstanding personages among them. At the end of his address he wishes the participants a fruitful meeting and expresses his opinion, according to which the series of these conferences should be continued.

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THE PRESIDENT'S ADDRESS

The author addresses the Conference and gives a brief survey on the progress of the history of science and technology from the Reform Period to our days. At the end he outlines what has to be done.

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THE HOST'S OPENING ADDRESS

The author compliments, also on behalf of the President of the Hungarian Patent Office, the 28th Conference on Science, Technology and Medicine. At the same time she gives an overview on the situation of the submission of patents in Hungary as compared to the European standard. She outlines the short-time and medium-time plans of the Office.

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HISTORIOGRAPHY AND HISTORY OF TECHNOLOGY

In the research of Hungarian history of technology the 1960s played an important part. At that time the trade had some internationally well-known personalities, and the periodical „Történettudományi Szemle” (Review of the History of Technology) was started in 1963. Re-building of Europe after WW II and, undoubtedly, also the strong development of technology played a role in this development.. Collecting, one of the bases of research, was started as well. Some excellent monographies were written on history of industry, however, in general, they remained manuscripts. Development stopped short. The world of historians was too far away from that of engineers. The development of the historiography of technology requires that historians adopt an up-to-date way of viewing technology, and historians of technology a modern attitude towards society.

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COMPLIMENTS BY THE PULSZKY SOCIETY – HUNGARIAN ASSOCIATION OF MUSEUMS

The author compliments the nearly 30-year-old Conference of the Federation of Technical and Scientific Societies (FTSS) on behalf of the 20-year-old Pulszky Society, and delineates the tasks museums and curators will have to comply with in the near future.

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INDUSTRY OF MECHANICAL TOYS IN THE FORMER SOCIALIST COUNTRIES, 1945-1989

After elucidating the notion of mechanical toys the author gives a detailed review, amply supported by professional literature, on the industry of mechanical toys in Hungary and the rest of the former „Socialist Camp” as well as in China, stressing the differences in development of the individual countries in this respect. He describes the changes that occurred in the conditions and structure of this industry in the course of political changes.

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COMPLIMENTING ADDRESS BY THE HUNGARIAN SOCIETY OF GEOLOGY ON THE OCCASION OF THE 28th CONFERENCE ON THE HISTORY OF SCIENCE, TECHNOLOGY AND MEDICINE OF THE FEDERATION OF TECHNICAL AND SCIENTIFIC SOCIETIES (FTSS)

The author compliments the Conference on the History of Science and Technology on the occasion of the 30-year anniversary of the related Committee of FTSS. He mentions that the Hungarian Society of Geology was the first Hungarian scientific society established and that this first society brought into being the societies separated from it and working in related fields. He commemorates the renowned presidents of the Society and mentions that at the conferences of the Committee of History of Technology and Science of FTSS the Society's members were always present as audience, and many times as presenters of papers.

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AUTONOMY IN UNIVERSITY AND COLLEGE EDUCATION

The author deals with a topical theme: he tells his personal opinion as related to the new law draft of university education. After historical examples he considers, in turn, the individual aspects of autonomy. The first aspect is operating the institution. This is the right and duty of the maintainer. Autonomy of research should be very extensive. The freedom of the intellect must not be restricted or no maximum of achievement might be expected from everybody. The autonomy of teaching should be extensive but not without limits. The expectations towards the teachers have to be determined by the maintainer. As to the organizational and operational autonomy, in the author's opinion the right of deciding on the support by the state should be primarily in the hands of the maintainer. As to income from other sources, the author would grant more liberty to universities. Maintaining a high level is the most important in education. The maintainer should control the number of students admitted to the individual professions knowing about, and depending on the situation of the labour market. Scientific achievements should meet international expectations as well. Organizational autonomy must be restricted as to how many persons should be required as minimum to form a faculty. Autonomy should be equally restricted in appointing university professors, i. e. the recommending rector has to take into account the minister's opinion. The financial management must be restricted and made comprehensible. The maintainer should have the right to check the utilization of state sources. However, excessive administrative loads should be diminished. Even the free utilization of income from non-budget sources has to be checked. Students' autonomy is a delicate topic, the adequate middle course should be found. College autonomy, however, should be fully maintained according to the author's opinion..

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SOCIAL LIFE OF THE [HUNGARIAN] MEDICAL SOCIETY IN THE 1950s

The activity of the Hungarian Librdary of Medicine, which started its work on May 1, 1951, represents a special chapter in the social life of the Hungarian history of medicine. The coming into being of the Library symbolized the revival of a scientific field.as stopping of the university training in medical history (1947) and, shortly afterwards, the liquidation of the Royal Budapest Medical Society (1948) meant the abolition of the ancient forms of training and social life of medical history. Laying the foundations of the new forms of activity in medical history took place in an altered political atmosphere, and thus was not devoid of the characteristics of the period. The author gives a detailed account on how the society of medical historians grew out of the lectures organized by the Library, he speaks about the political debates, and about the coming into being of the Library's publication. Finally, he touches on the subject of the foundation of the special group of medical history, which came into being under the aegis of the pertinent Trade Union, and on the foundation of the Society of Medical History that stepped into the place of the former.

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JÁNOS BOLYAI, THE ENGINEER

Today it is commonly known that János Bolyai, the greatest Hungarian mathematician, has been an epoch-making personality of the world of science. In spite of numerous sources, however, it is lesser known that he had never forgotten the 15 years of his military service, from the time of his studies at the Vienna Academy of Military Engineering to the years of his service as military engineer in Temesvár, Arad, Lemberg and Olmütz. The years of his service in the army from the age of 16 to 31 took an indelible effect upon his personality and

scientific career. The fact that as an active and later retired military engineer he always used his qualifications and rank in all his letters, manuscripts, as well as on the title-page of his only publication *The Absolute True Science of Space*, may afford enough evidence.

Bolyai was interested in the engineering career very much and though as an architect his star didn't rise to the highest, in any case he belongs to best Hungarian engineers. His scientific oeuvre gathered honour not only for the engineer corps of the Imperial-Royal Army but for the engineering sciences as well. It cannot be denied that in mathematics and geometry, the base of all technical sciences, he was indisputably a genius of his age.

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THE „TECHNIKATÖRTÉNETI SZEMLE” (REVIEW OF THE HISTORY OF TECHNOLOGY) IS NEARLY 50 YEARS OLD

During the nearly 50 years of its publication the Review of the History of Technology was the only forum of Hungarian technical museology and research into history of science and technology that appeared and was renewed permanently. The author writes – with the heartache of parting – about the editors, the editorial board of varying members, the columns (chapters), and the papers published, as categorized according to the branches of the field. The latter shows the multifariousness of the Review that may be of interest to scientists of many branches of the trade. You should not want to read about an outlook, about perspectives as it seems that this journal, which eases the work of even today's researchers, will not appear any more. These lines may be regarded as an obituary.

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HISTORY OF THE 29-YEAR-OLD SZEKSZÁRD GARAY/NEUMANN COMPETITION IN INFORMATICS, SEARCHING AND CARING FOR TALENTS

The author describes, in brief but very vividly, the history of the competition first organized by the Garay grammar school in Szekszárd. The competition has changed later, and took on the name of John von Neumann. The competitors could compete in different categories, the number of which increased with the years. The students had to defend their work submitted not only against the jury but also against their competing fellow students. Thus their diction was improved, too. Under the influence of the competition many of the competitors chose informatics as their profession, and they became outstanding experts.

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PROFESSOR DR. BÉLA CZÉRE, FOR 12 YEARS DIRECTOR GENERAL OF THE TRANSPORT MUSEUM, GREAT PERSONALITY OF TRANSPORT POLICY AND MUSEUM DEVELOPMENT

The author pays tribute to the memory of professor dr. Béla Czére, director of the Transport Museum for 12 years, outstanding museum leader and organizer of exhibitions, publicist and author of trade books as well as politician of transport. The excellent scientist and expert was well known also outside the borders of Hungary.

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THE SOPRON MUSEUM AND THE SCIENTIST ENDRE CSATKAI

The historian of art, linguist and journalist born in Burgenland (Austria) and working there in his youth, later became director of the Sopron Museum. Under his directorship 81 temporary exhibitions were organized at the Museum. His work written with a co-author on the art monuments of Sopron and environments was awarded the Kossuth prize. After his financial situation had improved, he supported young historians of art and curators.

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INSTITUTIONS. OUTSTANDING PERSONALITIES, AND SOURCES OF THE SCIENCE OF TRANSPORT

The author, who has dealt for decades with the history of transport, reflects on the notion of the history of transport that has not been unambiguously defined till today. It has not been cleared so far if the museology of transport is an independent discipline or only a branch of museology. She herself considers transport science as part of the science of history. She mentions a number of publications that have appeared in the field and deplors the cessation of some that have appeared in series. She misses the publication of a comprehensive monography. She stresses the importance of the works of the non-specialists that deal with the science of transport or some branches of it, and know their field thoroughly. Finally, she mentions some outstanding personalities of the history of transport or of the Museum of Transport.

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JENŐ EGERVÁRY (1891-1958), ESTABLISHER OF THE „HUNGARIAN METHOD”

Jenő Egerváry was an outstanding Hungarian mathematician. He was born in Debrecen, and attended the famous Fazekas secondary school of the town. Later he became professor at the Technical University of Budapest. He was member of the Hungarian Academy of Sciences.

His most important mathematical results belong to the Matrix Theory. He dealt with combinatorial properties of matrices in his famous article “Matrixok kombinatorikus tulajdonságairól” (1931). He proved a theorem of D. König of the Graph Theory. In 1955 W. Kuhn (U.S.A) recognized a possible application of Egerváry’s theorems for the assignment problem, and this method was named by him *Hungarian method for the assignment problem*. D. König and J. Egerváry contributed to the birth of a new topic of mathematics, to the birth of linear programming and combinatorial optimization.

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THE COUNTS ANDRÁSSY DE KRASZNAHORKA AND CSÍKSZENTMIHÁLY, AND IRON METALLURGY

For centuries, the members of the Andrassy family gained distinction by their bravery. They were raised to the rank of nobility in 1569. In 1580 they obtained the rank of baron from emperor Rudolph. Maria Theresa bestowed the rank of count on general Károly Andrassy in 1779. In 1669 Miklós Andrassy obtained a license for searching for precious metal ores and coal in the district of Krasznahorka (upper Hungary, today Slovakia). Lipót Andrassy was appointed, in 1797, counsellor of the Selmec Office of Count of the Mines. In the 19th century Károly Andrassy, György Andrassy and Emanuel Andrassy achieved important results in developing the iron industry. In 1843 Károly Andrassy had the Károly blast furnace built which is today considered an industrial monument. In 1900 the iron factories were purchased by the Rimamurány-Salgótarjn Iron- and Steelworks Share Company.

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LOOKING FOR OPPORTUNITIES OF PROTECTING AND UTILIZING THE HERITAGE OF HISTORY OF SCIENCES AND TECHNOLOGY

The author describes the present situation of the heritage of history of sciences and technology in Hungary. He writes about the factors improving or hampering the situation. Finally he puts forward a number of proposals for considerably improving the situation.

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RESEARCH OF INDUSTRIAL HISTORY IN WOODWORKING

After briefly speaking of the industry, in general, and its changes, the author summarizes the fields of the woodworking industry as presented earlier as well as of the main characteristics of its development. We get an overview of the most important publications dealing with the history of the woodworking industry in the second half of the 20th century. The institutionalized site of research is the Scientific Society of the Wood Industry, while the most important exhibition site is the specialized Sopron Collection of Forestry, Woodworking Industry and Geodesy. Memorial booklets are published on the great personages of the wood industry. An important opportunity of publishing the results of historical research are the annually organized Conferences on the History of Science, Technology and Medicine of the Federation of Technical and Scientific Societies MTESZ, and the homepage of the Federation. From the Millenary on a great number of historical papers have been presented at the conferences by four expert lecturers about various wood products and their history such as doors and windows, carpented and bent-wood furniture, sawmills, matches, barrels, and coaches. Outstanding personages of the trade of the 18th and 19th centuries as well as the early 20th century were dealt with such as the coach manufacturers Kölber, the furniture manufacturers Lingel, the Thonets that manufactured bent-wood furniture as well as the professional teacher Károly Gaul and the manufacturer of furniture and pianos Endre Thék.

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ON THE IDEA OF THE SUSTAINABLE DEVELOPMENT –
 SUSTAINABLE DEVELOPMENT: WISH-DREAM OR MAINSTREAM?

Relying on international agreements, foreign books on the topic, and the latest information in the electronic press, the author depicts a gloomy picture on the Earth's future, if carbon dioxide emission that goes hand in hand with technical progress, and the global heating up as its consequence will not be taken seriously by the states. In this respect he estimates the Kyoto agreement as particularly important. As a solution he mentions – for the time being as a feasible solution only – the spreading of the so-called passive houses. These are, however, quite expensive, and are being built at present as one-family houses only. It is a good thing that in Hungary there are some people that can, and do, afford this.

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LUTHERAN GRAMMAR SCHOOLS IN BUDAPEST

The author gives an account on the history of the two Lutheran secondary schools (grammar schools) in Budapest. The first school was built in Deák square, the second one in the so-called "Fasor" (Avenue). Both ranged among the very best secondary schools of the capital, moreover of the whole country. Among its teachers there were many famous people, and the students gave many scientists of great fame, among them later Nobel-prize laureates, and a considerable number of great artists to the country, and to the world.

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FIFTY-FIVE YEARS AT THE SERVICE OF A FIELD OF SCIENCE:
 THE JOURNAL „COMMUNICATIONS OF MEDICAL HISTORY”

The author describes the circumstances of the coming into being of the scientific journal „Communications of Medical History” founded and edited by the National Library of Medical History. She also deals with the conflicts that accompanied the appearance of the first issue in 1955. One of the greatest merits of the journal is to essentially contribute to enlarge the Library's stock by exchange. The paper deals in detail with the contents of the Journal that are very interesting and embrace a large field. Apart from original publications it contains translations of Greek or Latin texts of authors of the Antiquity or early modern times, accounts on conferences, etc. The Supplements started in 1962 publish works of book-size. Finally, the author speaks about the present situation, and the future prospects of the Journal.

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THE COMING INTO BEING AND THE DEVELOPMENT OF UNIVERSITY ARCHIVES TILL TODAY

The author reviews the formation and development of university archives in Hungary. The first university that had independent archives was the University of Sciences ELTE in Budapest. Unfortunately the greater part of its material was destroyed in 1956 (by Soviet attacks during the Revolution). The author speaks about the fact that not every university or college has archives with an independent budget. Several archives work within the frame of the university library. The archives are not well supplied with staff, in several places part-time or retired people act as archivists. Between 2002 and 2010 the staff supply of the university archives with independent budgets increased considerably. This can be attributed mainly to the archives established. In 1993 the first Association of Archives came into being, and spread over the whole country in three years. In 2001 the Association of Hungarian University and College Archives was officially registered as a society. Storage provision is getting better as well. The institutions newly established have storage rooms built for the purpose with up-to-date equipment.

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Sexual Education, Sexual Pedagogy

Sexual education is an organic part of everyday life as passing on experience is important for the descendants. The paper begins with a concise summary of social pedagogy till our days. How, and in how many ways it was tried to teach the always recurring generations according to the aspects of the given age. The first period of nationalization of education goes back to the 1800s. The present paper deals with the history of a very interesting infectious disease of human history, i. e. syphilis. The author describes today's conception, fields, goals and methods of sexual pedagogy.

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INTERDISCIPLINARY PUZZLE – OR THE INTERDISCIPLINARY DISCIPLINE OF SURGICAL INSTRUMENTS IN ANCIENT ROME

The author gives a detailed description of the surgical instruments in use in ancient Rome. He does not only present different kinds of instruments but gives an overview based on history of science, demonstrating the necessity of an interdisciplinary approach in dealing with the topic.

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SOME THOUGHTS ABOUT THE PAST DECADES OF CLASSICAL STUDIES

The author supports, by well documented examples that – after encyclopaedic collecting of material in the 19th century– with the advent of the 20th century trends in classical studies have striven after synthesizing facts. The

classical philologists of the second half of the 20th century strive to look behind the texts, and get to the whole reality hidden in them and in the historical relics.

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THE INFANTRY ARMOUR INVENTED BY ROYAL HUNGARIAN CHIEF PHYSICIAN JÁNOS INOVAY

The events of WW 1 are gradually moving away, the tellers of the stories have left us. In the group photographs or documents only the name of the one person appears to whose family the picture has been sent. Well-documented recollections are rare. Often even the descendants of the participants have not retained the memories. Special literature on the superhuman health work performed in the Great War is poor. Physicians, medical orderlies, nurses and other members of medical troops were working around the clock. Determining the number of the medical staff was obviously erroneous, perhaps that is the reason, why this has not been elaborated after the war either. The truth could have come to light. However, it was brushed off by war propaganda. After the war the country had other things to worry about as it was then that the real troubles came. In the Inovay family father and son (the former being a physician) preserved the memories, which is rare, indeed. Thus could we look back upon a man-saving deed.

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2011 IS THE YEAR OF THE 125TH ANNIVERSARY OF FERENC PÁVAI VAJNA, THE „FATHER OF HOT SPRINGS”

The Hungarian world of scientists celebrated the 125th anniversary of Ferenc Pávai Vajna's birth in 2011. It is to the geologist known under the name of „father of hot springs” that we owe the nearly 20 hot springs that have founded the medical tourism of entire settlements. The abundant thermal water of the wells disclosed are utilized by some of the settlements as alternative energy, like in Iceland. By partially drawing off the heat from the wells disclosed or denoted by Pávai, geothermal energy might serve different objectives. His name is preserved by spas like Szeged, Hajdúszoboszló, Karcag, Berekfürdő, Debrecen, Szolnok, the Rudas bath and Marguerite Island in Budapest and spas in the Capital's City Park as well as in Cserkeszölös.

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ROLE OF HUNGARIANS IN ESTABLISHING CARDIAC SURGERY

The author briefly surveys the history of cardiac surgery in the United States and in Europe, and speaks of the not unimportant part Hungarians played in it. The first cardiac operation was performed by Dr. Árpád Eisert at the county town Nyiregyháza: it was an elimination of the pericardium due to a heart. Later he undertook other cardiac operations as well, partly in co-operation with the well-known Hungarian surgeon of cardiac problems József Kudász. The extracorporeal perfusion indispensable for the operations can be secured by a so-called roller pump, the basic idea of which can be linked to the name of the famous Hungarian pharmacologist professor Béla Issekutz, even if these pumps are known by the world under a different name. Today so-called cardiopulmonary apparatuses equipped with an oxygenator are being produced in Cleveland under the trade name PEMCO. The owner of the factory, Béla Köteles was born in America as the child of poor Hungarian immigrants. He is, however, very strongly linked to the old country. Until now he has already bestowed 8 PEMCO apparatuses on various Hungarian hospitals, among others, one on Transylvania. Hungarian cardiac surgery may be much indebted to this generous Hungarian-hearted bestower.

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The events of WW 1 are gradually moving away, the tellers of the stories have left us. In the group photographs or documents only the name of the one person appears to whose family the picture has been sent. Well-documented recollections are rare. Often even the descendants of the participants have not retained the memories. Special literature on the superhuman health work performed in the Great War is poor. Physicians, medical orderlies, nurses and other members of medical troops were working around the clock. Determining the number of the medical staff was obviously erroneous, perhaps that is the reason, why this has not been elaborated after the war either. The truth could have come to light. However, it was brushed off by war propaganda. After the war the country had other things to worry about as it was then that the real troubles came. In the Inovay family father and son (the former being a physician) preserved the memories, which is rare, indeed. Thus could we look back upon a man-saving deed.

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BRIEF HISTORY OF THE HOSPITALS SZENT ISTVÁN AND SZENT LÁSZLÓ

The objective of the paper is to briefly introduce the most important milestones of the foundation and operation of these two hospitals all the way up to their unification.

The public health and administration situation in Budapest demanded the establishment of new municipal hospitals due to the dynamically growing number of residents and the increased spread of infectious diseases. These two hospitals with different profiles were freshly constructed on the basis of designs in accordance with the most modern architectural and professional considerations, and on areas larger than had been customary up to that point. In August 1885 the New Hospital in Üllői street opened its door and later, in 1894 took on the name of Saint István. The 8 departments operating at the institute were located in 8 separate pavilions where 656 patients could be cared for. This system of pavilions was created to prevent the spread of the epoch's epidemic diseases through the most modern institutional public health structure. The departments included 3 for internal medicine, 2 surgical departments, one for skin and venereal diseases, one for neurology and one for cancer.

The Saint László Hospital admitted its first patients suffering from acute infectious diseases in November 1894. The majority of the patients had whooping cough, diphtheria, scarlet fever or typhus. The building had large spaces and natural ventilation, which were considered luxury conditions in the 19th century.

More than 100 years later, on 30 June 2007, the Metropolitan Government United SaintIstván and Saint László Hospital and a clinic (ESZSZK) was established, which also includes the Merényi Gusztáv Hospital and the Jahn Ferenc Rehabilitation Centre. One of Budapest's most multifaceted mega-hospitals was created through this unification. The names of the two hospitals were retained following unification but the Saint László Hospital is now being operated as an adjunct site of the Saint István Hospital.

The institution cares for more than 140.000 patients annually, with a wide range of medical specialists, and opportunities for consultation due to the consolidation.