

E-MŰVÁLMOS

Study Hours of the Hungarian Museum for Science, Technology and Transport

1017 Budapest, Kárpád uca 13-15.

www.emvmuseum.hu

THE 25 YEARS OF THE „NOVEMBER CONFERENCE“

On the occasion of the 25-year-anniversary of the conference series „Results from the field of the history of science, technology and medicine“ the authors present a survey – with the help of statistical tables – on the participants participating in the organization of the individual conferences as well as on the papers presented. The authors also present photographs taken at past conferences.

Angol nyelvű összefoglalók

English summaries of the papers

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JÓZSEF GALAMB, DESIGNER OF THE 100-YEAR-OLD FORD T MODEL, THE CAR OF THE 20TH CENTURY

One hundred years ago, in October 1908 the Ford T-Model designed by József Galamb and his colleagues rolled off from the assembly belt achieving world-wide success lasting up to the present times. The car won the customers' highest approval by its simple, manageable and reliable construction, furthermore by its affordable price, so that it was manufactured until 1927. During the nearly 20-year period over 15 million „Tin-Lizzy“ were produced. Assembly using the conveyor belt system made mass production possible. Durable structure and reliability were a requirement at that time.

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JÓZSEF GALAMB'S HERITAGE

The paper tries to illustrate the ways József Galamb, the student of outstanding skills, the excellent engineer and distinguished person, still has an effect – after more than a century – on professors and students, and the work of his former school. The legal successor Budapest Tech considers it important to ensure that the young generation of engineers get to know József Galamb's name and oeuvre, and feels it its duty to perform research into his work and cherish his memory. The paper also illustrates what teachers and students have been doing to achieve this goal.

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THE 25 YEARS OF THE „NOVEMBER CONFERENCES”

On the occasion of the 25-year-anniversary of the conference series „Recent results from the field of the history of science, technology and medicine” the author gives an overview – with the help of statistical tables – on the institutions participating in the organization of the individual conferences as well as on their main topics. Further, by showing some of the preserved photographs taken at past conferences, she recalls important moments of the earlier meetings.

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HISTORY OF THE 100 YEARS OF HUNGARIAN CAR MANUFACTURE ON DVD-ROM

The multimedia publication „100 years of Hungarian car manufacture” presents the history of vehicle manufacture and its main stages, the constructors that have worked in Hungary and abroad as well as the protagonists of the branch in the 20th century from the one-person workshops to the factory giants. It describes further the manufacture of cars and lorries, of the worldwide known Ikarus buses, and the forming of the vehicle park of bus transportation, postal services, taxi services, the fire brigade service, the ambulance service and the Hungarian army. It deals with the institutions that had a leading part in the development of automobilism, enumerates the object relics of posterity's commemorations, presents the museums' selected materials and the events of the 100-year anniversary of Hungarian car manufacture in 2005 as well as the contemporary achievements of the car industry.

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DEVELOPMENT OF TRANSPORT VEHICLES AND OF TRAVELLING SPEED FROM THE MIDDLE AGES TO THE EARLY 20th CENTURY

The author points at the fact that the development of transport vehicles aimed, in the first place, at increasing speed but the demand on comfort and security also played a part in it. A factor acting against the increase in speed was, in the Middle Ages, the bad state of repair of the roads. The coach invented at the Hungarian community Kocs became widespread in the 15th century. It was this appliance that started the development of horse-driven vehicles which lent themselves specifically for the transport of passengers. An advantage of the coach was that it allowed travelling by day and night, thus making journeys shorter. At the end of the 18th century there existed several competing organizations brought into being for travelling by coach. Among them were the mail-coaches that made the simultaneous transport of several persons possible. The radical increase of velocity was brought about by the appearance of trains: by the end of the 19th century the velocity of 100 km/h was no more a rarity.

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FOURTY YEARS OF THE HUNGARIAN MUSEUM FOR THE PETROLEUM INDUSTRY

The Hungarian Museum of the Petroleum Industry celebrated the anniversary of its 40-year existence in September 2009. On this occasion the director of the institution gave a review, in his paper, on the history of the Museum and its activities from the foundation till today.

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CHANGES AND NEW POSSIBILITIES FOR PROTECTING, UTILISING AND PUBLISHING THE RELICS OF NATURAL SCIENCES AND THE INDUSTRIAL HERITAGE

During the 25 years that elapsed since its coming into being, important changes occurred in the traditional "Autumn Conference", owing to international progress and fundamental modifications in Hungary's social and political arrangements. The fields affected by the changes are as follows:

- the earlier opinion on the notion, the protection and utilisation of industrial monuments;
- the earlier practice of publishing the events of technical sciences and history of technology;
- the institutional establishment of the conference's topics and the contents and methods of its activity;
- the public opinion and the decision-makers' judgement related to natural sciences and technology, the professions based on them and their heritage have changed – in the eyes of many people – to their disadvantage.

The paper is dealing with one of the changes, namely the movement of Cultural Routes initiated by the European Council and the possibilities offered by the program Central European Trail of Industrial Heritage brought into being within its frame as well as the Society brought into being upon a Hungarian initiative for the purpose.

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"LET'S ESTABLISH A MUSEUM OF ELECTRICITY!" HISTORY OF THE HUNGARIAN MUSEUM OF ELECTROTECHNICS

The author gives a survey of the events and conditions preceding the foundation of the Hungarian Museum of Electrotechnics from its establishment in 1970, then its opening in 1974 till today. The institution brought into being as a collection obtained the rank of museum in 1981, and in 1987 the building housing the collections was declared an art monument. Later maintaining the museum became more difficult, in 2006 the Museum was affiliated to the Hungarian Museum for Science and Technology. Today it works as an affiliation of the Hungarian Museum for Science, Technology and Transport. Its relations to its ancient industrial and social supporters have remained undisturbed.

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HISTORY OF COMPUTER SCIENCE FROM A CONSTRUCTIVIST ASPECT

A new school appeared in the early 80s with the aim of applying the new ideas developed in science sociology to works of history of science and technology. The school became known under the name of "constructivism". One of its branches is SCOT (Social Construction of Technology). According to the underlying idea of the school science and technology are the result of "social construction". The author applied the SCOT model to investigating the development of computers. According to her findings the SCOT model furnishes an explanation to the reasons of the computer development characteristic of the individual periods. However, it needs further analysis to establish whether it can be used to describe the transition between the individual types.

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MATERIAL SCIENCE AND MATERIAL TESTING AS TOOL AND DRIVING FORCE OF THE INDUSTRIAL REVOLUTION

Knowledge of mankind related to the motive forces and laws of the surrounding world's functioning and development went continuously increasing. There always were, still are, and will be in the future, too, discoveries that entirely reform the economy serving as condition of mankind's existence as well as the society expressing and controlling the relationship of people to each other. The effects of inventions have three periods: 1. The period of their appearance and introduction, 2. The period of boom, in which the impact of the invention leads to the transformation of economic and social conditions, and 3. The period of exhaustion, in which a new driving force appears and gradually takes over the role of the motive force. The author publishes, in a table, the most important events that promoted the progress of material testing, material science and technology from the late 15th century to our days.

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DEVELOPMENT AND APPLICATION OF THERMOGRAVIMETRIC METHODS AND INSTRUMENTS (DERIVATOGRAPHY): A SUCCESS STORY IN HUNGARY

At professor László Erdey's school of analytical chemistry at Budapest Technical University the professors Ferenc Paulik and Jenő Paulik carried out, in the 1950's, successful research of

thermal analysis in the field of developing up-to-date thermobalances. Developing an instrument for the derivation of the thermal curve made it possible, for the Hungarian Optical Works MOM, to manufacture an instrument of outstanding performance called Derivatograph from 1964 on. Between 1960 and 1990 the 4000 instruments produced covered the needs of the domestic market and exported the rest, in the value of 150 billion Ft, to 16 countries. Although the Derivatograph keeps being internationally recognised till today, its production has been stopped as in 1995 the producing factory MOM was declared unprofitable.

In the application of derivatography to the research of earth sciences, the chemist Mária Földvári-Vogl, later member of the Hungarian Academy of Sciences and the electric engineer Béla Kliburszky achieved excellent results at the Hungarian Geological Institute in the 1960s. These results had started and later the team work under the leadership of Mária Vogl-Földvári spread the wide-range application of the Derivatograph at the research institutes of geology and mineralogy-petrology as well as in the industry performing the most important domestic research of raw materials.

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DAVID WACHTEL AND HIS JOURNAL PUBLISHED IN SOPRON IN GERMAN (1850-1860)

David Wachtel's journal, the "Zeitschrift für Natur- und Heilkunde in Ungarn" appeared in Hungary for 10 years, at a time, when publishing activities were strictly controlled. The press act issued on March 27, 1852 regulated the mode and conditions of licences for publishing newspapers and journals.

David Wachtel does not belong to the renowned Hungarian physicians of the 19th century. In Balassa's and Semmelweis's epoch Lajos Grósz, Ferenc Bene, József Lenhossék, Ferenc Schwartzner or Tivadar Margó and Ignác Hirschler were much more important names, the bearers of which were outstanding personages of domestic history of medicine.

As professor of Budapest University Wachtel can be seen – in the company of the professors mentioned – in a lithography made by József Marastoni. His activity as university professor was not highly appreciated by the professional literature. We think, however, that his role in the history of Hungarian medicine is nevertheless important.

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THE LEGENDARY "SZÉKELY" ÁRON GÁBOR WAS BORN 195 YEARS AGO

On the occasion of his 195th anniversary the author reviews the path of life of the legendary gun founder and army organizer, who had been born in 1814 and died in action in a battle fought during Hungary's War of Independence in 1849. She presents the monuments erected in his honour and other relics commemorating his person in Hungary and in Transylvania.

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THE DECADES OF THE PORTABLE COMPUTER

The history of personal computers is one of the most important segments of the history of informatics. It is important as it deals with an invention of great impact on other processes of the history of technology and economy, and it is important as it is about an object shaping everyday way of living. The most important year of the history of personal computers was 1981. It was in this year that the trend of the development of the machines was split into two directions.

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THE FIRST COURSES OF COMPUTER SCIENCE, THE FIRST LECTURES ON COMPUTERS IN THE UNIVERSITY CURRICULUM, AND THE FIRST UNIVERSITY COMPUTER CENTRE AT THE UNIVERSITY OF ECONOMICS CHARLES MARX

The author gives a lively account on the heroic age of domestic computer science, on his personal experience related to the construction of the first computer, on the acceptance of teaching the subject at Hungarian universities as well as on the coming into being of the first computer centres in the capital and in the countryside.

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RECEPTION OF MAXWELL'S THEORY OF ELECTROMAGNETISM IN HUNGARY

A fundamental achievement of 19th-century physics is the bringing into being and acceptance of Maxwellian electrodynamics. Following its domestic reception is a good opportunity for surveying – through the investigation of the process of acceptance – the characteristics of science, technology and education, in our case the teaching of physics and of the electric industry.

The impact of Maxwell's theory on Hungarian science can be assessed by the activities of the respective university departments. Secondary school teachers formed a wider circle. However, their activities gained real opportunities but from 1893 on, when the Society for Mathematics and Physics was founded, and the journal of the Society started. The reflection of the acceptance in the secondary school textbooks of the epoch is informative as well. The ambiguity of science popularization is interesting too, when it tries to inform on a complicated theory. With the exception of the Bulletin of Sciences, the newspapers report but on the miracles of broadcasting.

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JÁNOS BOLYAI'S SET OF COMPASSES AT THE BOLYAI-MUSEUM
IN MAROSVÁSÁRHELY (TIRGU MUREŞ, RUMANIA) AND THE SYSTEM
OF FIGURES OF THE ABSOLUTE GEOMETRY „*TABULA APPENDICIS*”

At the General Assembly of UNESCO's „Memory of the World” held in Bridgetown, Barbados, on 29-31 July 2009, the International UNESCO Committee accepted the proposal initiated by The Pedagogical Foundation Bolyai: the working copy of János Bolyai's Appendix to be found in the manuscript archives of the Hungarian Academy of Sciences' Library. Its annexe is a “Table” containing the figures illustrating the theory of geometry described in the volume. These figures were drawn by János Bolyai by hand, with a compass and a ruler. This Table was multiplied by the printing house in Marosvásárhely under the name of “*Tabula Appendicis*”. János Bolyai's set of compasses can still be found today at the Bolyai Museum (Teleki Téka) in Marosvásárhely.

In all likelihood this set of compasses was used by János Bolyai as a student of military engineering, and later as artificer engineer for preparing the architectural designs of castles and fortresses. The set was the most important tool of Bolyai's professional activity and of his work as mathematician. It probably accompanied him at all the garrisons from Vienna through Temesvár (Timișoara), Arad, Nagyvárad (Oradea), Szeged, Marosvásárhely, Lemberg (Lvov), Olmütz (Olomuc) back to Vienna, then to Marosvásárhely, and finally to Domáld (Domald). This set still exist in Marosvásárhely today. The attentive visitor may observe the traces of ink or Indian ink on the finely worked copper compasses not in use since 1860, i. e. for 150 years, and considerably oxidized by today. This set has an imperishable importance in the fact that the “*Tabula Appendicis*” belonging to the *Appendix* could be completed, and represents Hungary today worldwide on UNESCO's List of the “Memory of the World”.

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POWER DISCOVERS MAPS

The author deals with a map of Transylvania dated 1699. In general, Morando Visconti is considered its drawer. It is, however, probable that his is the idea of the map only, and the “vedutas” of the castles represented in it; the map itself has been drawn, however, by a draughtsman called Stephanus Welzer. Further on the author – besides correcting some Latin mistakes – points at the fact that at the turn of the 17th and 18th centuries the role of maps changed. Monarchs found out that the maps used until then mainly as decorations only, had an importance in organizing economy and politics; on the other hand, map-makers regarded them as a tool of winning the monarchs' benevolence.

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AUER, THE CHEMIST

Baron Dr. Carl Auer von Welsbach (1858-1929) was the most successful Austrian chemist and inventor. His technical inventions in use till today are the luminophore mantles used in gas lighting, the incandescent lamps with osmium and tungsten filaments (OSRAM, TUNGSRAM) used in electric lighting, the fire-stone based on a cerium-iron alloy (Auer metal), the petrol lighter, and the electric lighting equipment for motor cars. Auer was, in the first place, a chemist. By Bunsen's method of spectral analysis he discovered four rare earth metals (^{60}Nd , ^{61}Pm , ^{70}Yb and ^{71}Lu). As chemist he developed fractional crystallisation, which lends itself for the separation of salts of similar solubility. This way he prepared high purity uranium salts for the physicists of his epoch (the 1910s). In the field of electrochemistry he applied industrial electrolysis of melts for preparing high purity cerium and platinum metals.

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THE HISTORY OF SCIENCE, TECHNOLOGY AND MEDICINE AND ITS CONNECTIONS WITH PEDAGOGY IN A SOCIAL CONTEXT

Development in science and technology can be appreciated from the aspect of its own history of development. In the field of medicine diagnosis is indispensable. The concept of education also means, besides its narrow domain, schooling, training, the ways of its use, their social role, and the effect of the latter on the progress of the related field of science. This requires independent scientific pedagogical research. In special training this attitude is being pushed – apart from some fortunate exceptions – more and more into the background. This phenomenon is triggered by the attitude to training but – besides wrong pedagogical ideas – reasons of world view and economic nature play a part as well. Successful scientific activities as well as secure technical progress require including the traditions of the history of science and technology in pedagogical activity at every level and in every field of the process of training.

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THE BENDING OF WOOD IN A HISTORICAL VIEW

The bending of wood by warming has been known for a long time. The majority of the kinds of wood become soft and flexible after being watered. The changes in bending methods reflect the changes in techniques during the history of wood bending. The first process applied was watering above fire. This process was widely used in manufacturing skis, ribs of lodge and barrels' staves throughout centuries. Bending was performed by hand for a long period of time.

The bending process was revolutionarized by the masters Thonet in the Austro-Hungarian Monarchy in the 19th century. Mass production was carried out using beech wood that had been used, in earlier times, as firewood only. The solution was the layered bending of wood, first applied in the 19th century. The real breakthrough was brought about by the Thonets: it was the bending of solid lath during the production of seat furniture. Layered bending returned in the 20th century using more modern technology: the high-frequency press. Cold bending of compressed wood became possible on an industrial scale in the 21th century.

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LIFE AND WORK CONDITIONS OF THE GAS FACTORIES' WORKERS AND EMPLOYEES IN THE CAPITAL

The author gives a review on the life and working conditions of the Budapest gas factories' workers and employees from the foundation (1855) to the 21th century. The history is subdivided into 7 parts: 1. Social measures taken at the 1st gasworks (mainly housing) until WW1. 2. Foundation of Óbuda Gasworks and its system of social institutions: housing districts, benefits in kind and free health care; 3. Cultural institutions for the workers and employees between the two world wars; 4. Organizational changes during WW2; 5. The Gasworks and planned economy: organizational changes, recognition of achievements, social provisions; 6. The epoch of natural gas: higher requirements as to the professional education of workers and employees; 7. Democratic transformation and privatization.

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THE TEXTILES CANVAS AND TARPAULIN, AND THEIR HISTORY

Canvas and tarpaulin are among the oldest and most versatile textiles used by mankind. The fields of their uses became wider with time, and – owing to technological innovation processes – more specialized. Today canvas might be described as an industrial textile, the most characteristic product of the flax and hemp processing industries. It can be produced of cotton, flax, hemp, and their mixtures. The Catalogue of Industrial Textiles as issued by the Szeged Hemp Spinning and Weaving Industrial Co. and published in 1967 enlists about 50 kinds of canvas products. According to the catalogue, canvas and tarpaulin have been, and still are, used nearly everywhere. From this broad repertoire the author wishes to present two fields in detail. Both are related to pastime and culture as well as technology. One of them shows us round in the world of entertainment and May picnics, and the inventions of early fun-fairs, the other one is closely related to the first one: it is the world of the circus and the theatre as well as of scenography.

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SOME LESSONS FROM THE HISTORY OF RISK MANAGEMENT OF TECHNOLOGICAL DEVELOPMENT

The paper deals with the following questions: what should be done, if there is evidence with regard to the harmful, (e.g. carcinogenic) effect of some technologies and substances but this effect has not been proven so far? Should we wait until this harmful effect has been scientifically proven, and may we endanger people's life and health by doing nothing? Or, following the precautionary principle, should we take costly precautionary measures and, by them, risk substantial expenditures? If the harmful effect does not exist, these expenditures have been unnecessary. In such cases we should decide in uncertainty, and the precautionary principle should be applied. The paper presents two cases – that of benzene and that of asbestos – to illustrate the issue.

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LIFE OF THE SOCIETY FOR THE HISTORY OF MEDICINE IN THE 1950s

After WW2 – owing to the fact that university training in the history of medicine and the Royal Society of Medicine in Budapest have been discontinued – the institutions serving the studies of the discipline had to be re-established. To these institutions belonged: the National Library of Medicine opened in 1951, later the journal “Communications of the National Library of Medicine” and, finally, the Hungarian Society for the History of Medicine (1965) that replaced the specialized group for the history of medicine. Establishing all these institutions was not an easy task in the given political conditions. The paper deals in detail with the related struggles.

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PAST AND RENAISSANCE OF THE BOX GIVING A CHANCE

The construction referred to in medical literature as turning/rotating box has been known for centuries as an appliance giving suckling babies – brought into the world as undesired newcomers – a chance of survival. The little boxes turning around their axis and mounted onto the entrance of monasteries originally served for collecting donations (mainly food). However, from the time on, when newborn infants intended to be entrusted to the care of the Church, were put in them under cover of the night, their task has changed. It was expressly with this aim that the turning boxes were mounted onto the entrance doors of the first orphanages founded by the Church. Later, also children's hospitals gave mothers an opportunity to get rid of their babies, guarding their anonymity. Historical literature provides ample material for processing the topic. The construction that has nearly fallen into oblivion, has – carried out in a somewhat modernized way – most deplorably its renaissance in the 21st century.

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SPLENDOUR AND FALL OF THE “IRON LUNG”

Polyomyelitis or infantile paralysis as caused by a virus and spreading as an epidemic had been known as soon as in antiquity. One of its gravest form is paralysis of the respiratory organs that can lead to death by suffocation. In order to make such patients breathe mechanically the “iron lung”, a life-saving invention was brought into being. After explaining the functioning of the device, the author describes the different stages of the struggle against infantile paralysis, until the appearance of the vaccines by Salk and Sabin practically eliminated the disease and made this struggle a success story. She commemorates the activities of the Hungarian physician dr. László Lukács for the orthopaedic after-treatment of patients permanently handicapped as a consequence of the illness. His work had started in 1955 and has been successfully improved ever since. WHO has been struggling since 1988 for the global eradication of the disease. Unfortunately, there are still regions where the importance of vaccination has not yet been fully understood. Egypt, Pakistan and India as well as Africa range among them.

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OPINIONS OF ANTIQUITY’S PHYSICIANS ON THE CHANCES OF NEWBORNS’ SURVIVAL

On the basis of a great number of sources of the antiquity, the author analyses – according to contemporary authors – infants’ chances of survival as a function of the pregnancy’s duration and the time of delivery. Her research shows that in the antiquity it was a steady belief that infants born in the 7th, 9th and 10th months of pregnancy were fit for life, whereas those born in the 8th month after conception were condemned to death. She comes to the conclusion that the observations of Greek medicine were correct, even if the underlying theories not always stand their ground.

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“WE’LL SEE WHAT WE SEE...”

Until the 19th century physicians examining patients had, in establishing a diagnosis, to rely exclusively on their organs of sense. As a result of the development of science and technology tools started to appear in early 19th century that helped doctors to establish adequate diagnoses. At the beginning examinations with specula and stethoscopy meant a considerable improvement, later – following the discovery of X-rays in 1895 – medicine achieved techniques of preparing even 3D-images. Enlisting the events that considerably influenced the development of diagnosis, the author gives us an insight into the hardly 100-year-old history of the development of diagnosing.

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NEW TOPIC IN THE HISTORY OF MEDICAL SCIENCE: THE HISTORY OF TRAVEL MEDICINE

The history of travel medicine is as old as traveling itself. In ancient times traveling meant the movement of armies and merchants. It was soon realized that traveling was a risky thing: in the footsteps of armies infectious diseases emerged, and the merchants' goods were the carrier of many unknown microbes and diseases. During the caravans' trips motion sickness and high-altitude illness were recorded. In the middle ages contagious diseases regularly caused pandemics. The curiosity for foreign countries arose in the late 19th century: the rapid development of railroads and ships made holidaymaking possible for the upper classes. This kind of traveler has already been equipped with some medical kits and tools, respectively. The real mass tourism began after WW1. After WW2 a „revolution of the travel industry” occurred: the commercial airlines and motoring make the distances shorter/make long distances short. The travel industry appeared and new forms of travel-related diseases were developed (such as jet-lag, venous thromboembolism, etc.) The history of travel and travel medicine is not a common topic for research in the traditional history of science; yet it is worth studying, because of its impact on our everyday life.

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A NEW SURGICAL METHOD DEVISED FOR TREATING HEAVY INJURIES OF THE FACIAL CRANIUM, AND ITS HISTORY

In his paper the author gives a detailed account on the development of the designs of, and the tools required, for a new surgical procedure for treating heavy injuries of the facial cranium. He writes about the method's appearance, its introduction, its international spreading, its domestic production and its implementation in everyday use in Hungary.

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SOCIAL PSYCHOLOGY IN THE SERVICE OF MEDICINE PEER HELPING AS AN EFFICIENT METHOD OF HEALTH DEVELOPMENT

Striving after health is as old as mankind itself. The prescriptions of healthy people's daily program and a harmonic life style were formulated as early as by the ancient Greeks.

Children and young people are more susceptible to external impacts, and their behaviour related to health changes quickly. The efficiency of health education can be considerably increased

by adequate guidance, using the method of peer helping. As every alternative method, this one also has advantages and drawbacks. On the whole it can be said, however, that it is of extraordinary importance for society, too, as it is the most simple way of prevention, and does not require significant expenditure. It may teach young people to pay attention to one another, to perceive each other's problems and to join forces if there are troubles. It offers alternative opportunities of entertainment so that they may pass their leisure time in a useful way.

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THEORY AND PRACTICE – CREATIVE DECADES OF MINERS' HEALTH CARE

The raw material supply of the economy and the realisation of underground building are based on the work of miners. The presence of mining throughout the decades – with varying importance, though, in the different epochs – can be traced until today. Health care of those carrying out miners' work is an important task in every epoch. The prosperous epoch of miners' health care started in Hungary – from 1945 on – in the state's organization. The activities carried out by different organizations in the field of miners' health care were co-ordinated by the "Interclass" Scientific Commission for miners' health care and ergonomics of the Hungarian Academy of Sciences" within the frames of the Academy. This commission carried out widespread professional scientific activities during the boom, and later the transformation of mining. The Commission was reorganized on 26 May 2000, in different conditions, but it has been carrying on its work with the same aims ever since.

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IT HAPPENED 100 YEARS AGO – OR THE SNAKE BITES ITS OWN TAIL

When studying the history of pharmacy, one easily comes to the conclusion that despite of regime changes, hardly anything has changed in the recent three centuries. The present lecture aims to point out the parallels between the Public Health Act of 1876 and the XCVIII. Act of 2006. The similarities between the situation in the 19th century and the issues of profession policy today are striking. One of these analogies are the conflicts of interest between the proprietors and the employees.

The conclusion of the author's investigations is that the struggles in party-policy and the attempts at a reform directed against the pharmacy proprietors and initiated by non-pharmacists' circles have always been of crucial importance. The intention to improve the public health situation generally represents external entrepreneurial interests and has always been an important instrument in political and judicial conflicts of parties.

Domonkos BÁN

Semmelweis Egyetem Közegészségtani Intézet, Budapest

NEW APPROACHES IN THE RELATIONSHIP BETWEEN MEDICINE AND MUSIC

The author describes three kinds of relationships between medicine and music: 1. the role of music in medical treatments; 2. the representation of healing in music, and 3. under the title of "systems helping to understand each other" he writes about the role of palindromes in the structure of DNA and observes that palindromes occur in music too. Finally, he reports in brief about persons that were dealing, in parallel, with music and with medicine, and writes about musicians that showed symptoms of typical diseases.

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THE DEVELOPMENT OF THE TOOLS OF COMMUNICATION IN HUNGARIAN OXYOLOGY. ITS PHYLOGENY OF THERAPEUTIC AND DIAGNOSTIC LOCATION

The author acquaints the reader with the phylogeny of therapeutic and diagnostic tools in the practice of oxyology, in medical science based on modern foundations, and in the 60-year-old practice of the National Ambulance and Emergency Service. He presents the different applications of the most important instruments and their efficiency as compared to different technical standards in various periods. Besides this, the author gives an overview on the development of radio-communication from the first radio apparatus to the modern appliances in use in Emergency nowadays as well.