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ANGOL NYELVŰ ÖSSZEFOGLALÓK

ENGLISH ABSTRACTS OF THE PAPERS

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SYMBOLS, ICONES, SCIENCE – THINKING IN ICONES

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Attached to the main topic of the conference the author deals with four problems in brief: 1. The science of symbols, 2. The language, 3. Thinking in icones, and 4. The role of science. His thoughts about the professional language and everyday language from the aspect of understanding science are very interesting, His suggestion that the professional Hungarian language ought to be tought not only at the Univerity of Medicine is worth being borne in mind.

WHAT WAS LEFT TO US FROM THE PERIODICAL „RETORTA SZIPORKA" (SPARKLES FROM THE RETORT)

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„Retorta Sziporka" was the humour magazine of the Technical University's Faculty of Chemistry. Its first issue appeared just 100 years ago, in 1913, and the last one in 1942. During the 29 years of its existence a total of 5 issues were published. Several communcations commemorated the magazine, among others, also on the columns of the Hungarian Chemists' Journal. Some of the authors disputed the existence of some of its issues. The author of the present paper found all the five issues in 3 of our biggest public libraries. The first two issues seem to be the work of amateurs, the later three prove, however, of real professional journalistic skill. The journal still provokes laughter parodizing the insufficient knowledge of the students sitting for exams. However, it does not spare the professors either: their blunders and humorous sayings are authentically conveyed to their audience that consisted not only of students. The author gives a compilation of all these, not hiding her aim to give the participants of the conference an agreeable and entertaining recreation, whereby she emphasizes the importance of the journal in history of science as well.

RELICS OF THE ONE-TIME ARC LAMPS OF BUDAPEST TECHNICAL UNIVERSITY

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The arc lamp was the first spectacular application of electricity soon after the discovery of galvanic electricity. The source of light was an arc discharge between two carbon rods.
Humphrey Davy demonstrated the electric light at the Royal Institution in 1812, it was a 3 inch-long arc discharge between two charcoal rods, but the rods burnt down and the primitive battery was exhausted in a few minutes. The practical application of the arc lamps began only in the 1840s, when the powerful batteries of Bunsen and Grove, and the solid gas-carbon rods made possible a 1- or 2-hour operation. In the beginnig arc lamps were hand controlled, they required permanent readjusting by an operator. The regular application of the arc lamp made possible a self-acting control of the rods. This was the first self-acting controller of the electrical engineering. One of the first arc lamps of Budapest Technical University was a series current controlled Siemens lamp, but it was used only for demonstrations. At the beginning of the 20st century the new building of

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the University had an electric lighting partly by arc-, and partly by incandescent lamps. Only few parts and photos survived the last hundred years. They were arc lamps by Bláthy, controlled by a Ferraris disc. Actually this disc was the common rotor of two induction motors, supplied by the current, or voltage of the arc. They drew the carbon rods together or back. At normal operation the moments were at equilibrium, they controlled a constant resistance of the arc.

UTILIZATION Of OUR TECHNICAL RELICS

Role of picture collections recording sights and inner contents in the progress of civilization and in forming attitudes

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Glancing over the scientific and technological achievements of Hungary, the author states that this small country has contributed so much to the world's scientific heritage, then he turns to the many tasks that ought to be complied with in order to save our unutilized assets and make better use of our opportunities. Finally, as an encouragement, he presents the brown boards showing the way to the industrial heritage in county Borsod-Abaúj-Zemplén, which were set up by the Society of which the author is president.

APPLYING WORKS OF LITERATURE AND ARTISTIC REPRESENTATIONS IN THE TRAINING OF TEACHERS OF TECHNOLOGY

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The technical knowledge of those that have finished their secondary schools (with an A level) show a decreasing tendency. This is, among others, to be attributed to the fact that at primary schools the number of lessons in sciences has been drastically reduced, and that of the lessons of technical character even more. Often the subject „technology" has become impossible owing to the reduction in the number of lessons. A similar trend may be observed at secondary schools, where there has not been a subject of technical character for a long time, although in the 1970s and 80s such a subject still was included in the curriculum. It is to this trend that the very low standard and deficient technical knowledge of the students entering university can be ascribed. Elementary technical and scientific principles have to be taught to them which were evident to every student leaving secondary school some decades ago. The methods of training that could be used without any problem some decades ago, cannot be efficiently applied today.
The question is whether it is necessary to teach technology and history of technology to university students studying other specialities than science, and what should be this teaching of technology or the method of teaching history of technology like (in the yes-case). How is it possible to build upon so-to-say zero knowledge in public training and made technical culture known, liked or acquired as knowledge. The study assumes to present such a possibility.

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SITUATION OF THE RESEARCH INTO THE HISTORY OF THE INSTITUTION AT THE BUDA CAMPUS OF BUDAPEST CORVINUS UNIVERSITY

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The timeliness of reviewing the situation of the research into the history of the institution indicated in the title is given by the fact that in the two years to come the Campus will see several anniversaries important from the aspect of the history of the institution.
In 2013 it will be 160 years that the first predecessor of the Campus – the Practical Institute for Training Market Gardeners – was brought into being by Ferenc Entz, and in the very same year we can celebrate the centenary of Professor Endre Probocskai's birth. He was one of the most important researcher personalities of the vocational and university education of horticulture in Hungary. The Archives of the Campus as archival unit of the Ferenc Entz Library and Archives will celebrate in the same year the 20th anniversary of its coming into being and its being declared professional archives.
In the year to follow we may commemorate the 75th anniversary of the coming into being of the first independent domestic institution of university education of horticulture, the Royal Hungarian Horticultural Academy.

THE HEIR TO THE THRONE'S TEXTBOOK OF GEOMETRY
Das Geometriebuch des Kronprinzen

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The textbook of geometry published in 17-c. Germany is a real rarity. The illustrations it contains – independently of the mathematical contents – represent fortresses and towns as well as genre paintings from Hungary following the liberation from Turkish rule. The book was very popular in its time, it has seen several editions. The prints were analyzed by historians of art. Its mathematical contents have – according to my knowledge – not been analyzed so far. However, according to my experience, the volume does not have any particular value of mathematics or mathematical training, new results cannot be detected in it. Why then, is it – in spite of this – worth while to deal with it? We may learn from it about the transitory state of geometry. It does no more reflect the pure construction of Greek geometry of the Antiquity, and - of course – it is far from the 20-century axiomatic treatment of the subject. Also the "tie-up" of sales raises many an interesting question. Why is it just a textbook of mathematics that has gained fame for its "vedutas"?

THE REMAINING BUILDINGS OF "ÓBUDA GAS WORKS"

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Upon the authorization of the municipal board the Council of the capital Budapest commissioned Albert Weiss to design the gas factory Óbuda. The commission not only contained the general layout but also the detailed (1:100) designs of all the buildings for the first cycle of a capacity of daily 250 000 m^3, the compilation of budgets and company conditions, calculations of profitability and detailed technical descriptions. Design work was carried out in Zurich-Schlieren, where Weiss

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established a special designing office for the purpose. From the huge documentation the great part of the designs survived but the descriptions were lost. However, Weiss's designs were put into practice with fundamental modifications only.
Gas production started in October 1913. At that time the gas factory was a decisive ensemble of the cityscape. At present some of the buildings surviving till today can be considered a memento.

IMAGE REPRESENTATION OF THE BADGES PRODUCED BY THE FIRST HUNGARIAN FIRE ENAMEL BADGE FACTORY

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The author presents the badges of Budapest schools produced by the factory in the title, on drawings, with some explanations.

THE SARAPIS TEMPLE (SARAPEION) OF ALEXANDRIA

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The beautiful building of the Sarapis temple was regarded upon with awe, in Hellenistic times, both by the Greek and the Egyptian population of Egypt. The Sarapis cult started (or developed from the cult of Osiris and Isis), when the country fell under the rule of the Ptolemys.
When Egypt was conquered by Rome, the cult of Sarapis and Isis spread all over the Mediterranean Basin. The cult lasted till the victory of Christianity; the demolition of the temple by Patriarch Theophylos (A. D. 392) was considered the elegy of Paganism. However, we must add that the fight against Christianity was still going on, so that – in 415 A. D. the Christian mob killed the female philosopher Hypathia upon the order of Patriarch Cyrillos, and the Mouseion of Alexandria, whose learned community defended the ancestors' cult as a half-clandestine society, survived even the Arab conquest.
The temple itself was considered a speciality, besides its beauty also a representant of scientific achievements. The present study summarizes what may be known of the Sarapis temple of Alexandria and the Sarapis cult interwoven with it.

"ALBUM COMIQUE DE PATHOLOGIE PITTORESQUE" – PATIENTS, DISEASES, AND WAYS OF CURING ON 19TH-CENTURY HUMOROUS FRENCH LITHOGRAPHIES

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Humour and laughing ease the problem-laden periods of mankind's life. Re-thinking the psychological background of this statement that sounds like a common-place, we may support its contents of reality by a number of personal experience and situations undergone. Among the everyday difficulties of life belong illnesses or pains of the body that can be endured with discipline or less patience, according to the basic nature of the person affected. However, it is sure that these

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things are thought of with anguish or fear. Also in such a state of mind humour or liberating laughter, or even a slight smile chasing worries might be of help. It cannot be pure chance that among the artistic representations (statues, drawings, and paintings) of various diseases or patients known from ancient times we can find grotesque representations and caricatures in such great proportions.

The material of medical caricatures made by English and French artists is very rich, pillorizing not only the patients behaving in strange ways but – with the vitriolic means of the satire – the physician himself. As a recurring topic we can meet cases to be recorded by spectacular pathologic states, diseases and elements based on farcical situations. That is why the representation of the awkward symptoms of toothache, colics, or a sore stomach, or even migraine that does not show any external symptoms but is nursed by many a "ceremony", or the presentation of the "malade imaginaire", are very frequent.

The increase in caricatures representing medical topics can be explained by more prosaic reasons as well. As it is, in the first decades of the 19th century, censorship was watching political caricatures with growing rigorosity, and finally the very rigorous French censorship regulations were brought into being as well. That why artists preferred the more harmless topics of everyday life. It shall be added that the drawings are not sources of ringing laughter. Some of them draw the attention to a blatant phsnomenon, others to a habit held wrong or harmful, and – of course – there are some that pallorize the average man's fallibility, provoking smiles on the audience's faces this way.

FUTURE OF THE PATENT SYSTEM

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Two years ago the main theme of the conference was the successful integration of the achievements of the domestic industrial revolution's flood of inventions into the processes of innovation in the late 19th and early 20th centuries. The topics chosen for last year and the present year are more and more linked to the results of our days. The more we we speak of the 21st latest achievements, the 21st century's science– as we could hear even today – the higher the relevance of the possibility of protecting our intellectual products. In the field of technology and science – among the forms of protection – patent protection is of the greatest importance. That is why I do not feel it unnecessary to devote now a little time to the future of the patent system.

NEW DATABASES ON THE INTERNET ON THE HISTORY OF MEDICINE AS COMPILED BY THE HUNGARIAN INSTITUTE OF THE HISTORY OF SCIENCE

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The Medical and Health Center of Debrecen University decided to bring into being a great database of medical history as background material for the subject „history of medicine". This subject was introduced at the university and lectured on, for years, by dr. Ápád Szállási. After dr. Szállási's death the lectures of the one-semester course were given every week by another lecturer. Preparing of the home studies was greatly promoted by the two great databases available on internet. The

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material of these was compiled by the experts of the Semmelweis Museum, Library and Archives of the History of Medicine as well as by the co-workers of the Hungarian Institute of the History of Science.

BORSOD 2050 – FORWARD, INDUSTRIAL LANDSCAPE!
Possibilities of industrial rehabilitation in North-Eastern Hungary

Gabriella ANTAL – Veronika BORZSÁK – Piroska VARGA
(Consultant: Béla VÁSÁROS, DLA)

The research work aimed at the complex and demonstrative rehabilitation of industrial buildings and the industrial landscape was dealing with one of the most backward regions of Hungary located at the Northern border of county Abaúj-Zemplén. The beauties and special potentialities of the area (industrial landscape, natural landscape, values of cultural history) are in blatant contrast with its situation experienced today. The landscape is interspersed by industrial buildings left behind and being in a state of decay, and industrial buildings waiting for rehabilitation. All these belong to the past of the area, and in many cases represent a considerable architectural value. Our aim is to awaken consciousness related to the assets of the area, to show up visions, and to inspire. Therefore we drew up a possible direction of development that does not wipe out the traditions of this industrial past. One can get acquainted with the area in the course of a regional journey, some elements of which were designed by us as example. The work that had lasted a year was presented in the frame of a series of exhibitions accompanied by programs making known the industrial heritage.

KÁROLY KŐSZEGHY-MÁRTONY, INVENTOR OF THE LIFE-SAVING RESPIRATORY APPARATUS WAS BORN 230 YEARS AGO

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With the spreading of explosion techniques their health-damaging effect became permanent. Ont of the methods of protection was the aeration of the explosion area. This was sometimes very time-consuming. After explosions some work (securing, doing away with the debris, etc.) had to be done very quickly. In order to comply with this requirement Márton Kőszeghy-Mártony invented a repiratory apparatus working with compressed air. The invention of the Austrian general of Hungarian origin made way to the development of respiratory devices. The inventor's scientific work in the field of soil mechanics was an outstanding achievement of its epoch.

REPRESENTATION OF WHEELS AND CARRIAGES/COACHES ON NON-PAPER OBJECTS

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Expressing himself and immortalize, for himself or other people, something nice and valuable

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belong to the most ancient activities of man. Maybe he had a special purpose with the painted and drawn pictures he made on the walls of the caves. Our most ancient image sources come from the prehistoric man, from such a remote past that interpreting them cannot be but mere speculation. The author extensively deals with primitive representations, their materials, then switches to image visualisations that are not so far from today's man, also with respect to time..

ABOUT CEMETERIES AS SPECIAL COLLECTIONS OF ART

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The author sees the functions of cemeteries in the following: a place of individual family reverence, a place of commemoration of a larger community, e. g. a village or even a nation, a place of piety, part of the nations's memory, and of history. Aoart from these it is an outstandingly important place of collecting fine arts and related monuments of architecture. Larger cemeteries can be considered museums – and they ought to be treated with adequate care.

PHOTOGRAPHS AND THE LIFE OF INSTRUMENTS AT THE PROFESSIONAL SECONDARY SCHOOL OF ELECTRIC ENGINEERING

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The author deals with the importance of contemporary photographs representing schools and their equipment, with emphasis on the rooms and equipment of the professional secondary school of electric engineering, legal predecessoe of today's Faculty of Electric Industry Kálmán Kandó of Óbuda University. By this, he introduces the following paper closely related to his.

THE ROLE OF OLD PHOTOGRAPHS AT THE PROFESSIONAL SECONDARY SCHOOL OF WATCHMAKERS, LATER OF ELECTRIC ENGINEERING

Enikő KRASZNAI-KOVÁSS

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IMAGE REPRESENTATION ON THE BADGES OF THE FIRST HUNGARIAN FIRE ENAMEL BADGE FACTORY

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The author presents drawings of the badges of Budapest schools manufactured by the factory in the title, adding some explanations to them.

COMPARATIVE INVESTIGATIONS OF VISUAL REPRESENTATIONS OF DENTAL INTERVENTIONS IN THE 18-19TH CENTURIES AND THE 20TH CENTURY

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Pictures are ancient communication media, and an important field of information transmittance. Visual signs are as important in communication as linguistic symbols. Visual communication may also be called visible communication, a means of intellectual communication, carrier of messages, a possible form of the interpretations of reality, or a means of cognition. 90 % of cognition is performed by the eye. Although all our senses participate in cognition in a cumulative way, nevertheless our eye is dominant, and this is utilized by visual information.

HISTORY OF TRAINING IN BIOMEDICAL ENGINEERING IN HUNGARY

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Biomedical engineering is an interdisciplinary or multiisciplinary field of science that basically relies on natural and engineering sciences but cannot do without the knowledge of basic medicine. That is why experts working or wishing to work in this field have to acquire special knowledge. The theoretical basis of this knowledge is jointly provided by the training in – as it is named today – health engineering at Budapest Technical and Economic University as well as Semmelweis University of Medicine, while its practical basis is provided by so-called clinical engineering.
Biomedical training has been performed, since 1992, at the Haynal Imre University of Health Science, later at the Faculty of Health Science of Semmelweis University. However, its antecedents can be traced back to the 1970s and are connected to the branch training at Kandó Kálmán College of Electrical Engineering.
The paper describes the short history of these training, mentioning some people playing an important part in their formation.

SOME ISSUES OF HISTORY OF TECHNOLOGY OF MEDIEVAL SALT MINING IN HUNGARY

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The study investigates the history of the Solivar (Slovakia) salt-works – at one time on the territory of the kingdom of Hungary – in the 13-14th centuries. In its analysis the author makes use of the

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achievements of Polish literature on mining. In the 13th century a large well-pit was established there, and the salt solution was forwarded to the salt boiling house by way of a pipe. At the end of the 13th century the village got into the hands of a landowner's family that made a nice profit of the small plant. After medieval beginnings, mining of rock-salt started int he second half of the 16th century.

VISUAL REPRESENTATIONS IN COLLECTIONS – WOOD WORKERS AND FORESTRY TRAINING

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After the names, in different languages, of the carpenter, the cabinet maker and the joiner, we may have a look at the pictures of the wood carver of Lenti, Saint Joseph of the Bible, the joiner's workshop by Millais John Everett as well as the picture of the joiner at the Parliament by Gyula Szász. The one-time palace of forestry training can be found in the painting „Selmecbánya by Tivadar Csontváry-Kosztka as well as on the memorial medal of Sopron University. The painting „Floor scrapers" by Gustave Caillebote visualise a one-time heavy work. – The history of the Hungarian coach is immortalized ont he series of stamps issued by the Hungarian Post. We may see a ine-time cooper's workshop, a poster of a barrel factory from Budapest-Kőbámya as well as an inlay portrait, and flowers carved of wood.