LIFE OF SCIENCE

A MONTHLY DEVOTED TO THE SCIENCE OF SCIENCE

Editor: BOGUSŁAW LEŚNODORSKI

VOL. 5 MARCH — APRIL NO. 27 – 28

LIFE OF SCIENCE is the organ of the CIRCLE FOR THE SCIENCE OF SCIENCE (Konwersatorium Naukoznawcze) in Kraków, Poland. The Circle was founded in 1945. Its purpose is to carry on the scientific research work in all branches of the science of science, i. e.: theory, methodology, history, sociology, psychology, and organization of science together with education, as well as publishing and organizational activities. The Circle for the Science of Science facilitates the exchange of information and the collaboration of the representatives of all scientific lines interested in the science of science and unification of knowledge.

The Chairman of the Circle is Mieczysław Choynowski, Vice-Chairman: Bogusław Leśnodorski, Secretary: Tomasz Komornicki. Adress: Kraków, Słowackiego 66, Poland.

THE SCIENTISTS AND THE TRADE ORGANIZATION

by ZENON KLEMENSIEWICZ

IN DECEMBER 1947 the problem of the trade organization of the Polish scientific workers was finally settled.

The Trade Union of Polish teachers existing since a long time and consisting of all workers in the primary and secondary schools gave the model how to set up the organization and to dispose of the administrative service.

All scientific, administrative and technical workers in the higher schools and the scientific institutions became the members of this Association, forming within it an autonomous section (both from the legal and the organizational point of view).

This incorporation of the scientific workers into the Trade Union of Polish teachers should be welcomed. The harmonious collaboration of the educa-

tional and scientific workers at all stages from to the teachers in the lowest schools to the professors in the university, determines both the development of the national education and the progress of science. This collaboration can be carried through if there is the best mutual understanding and all their activities in the sphere of teaching corresponding to each other are systematically planned. The easiest and quickest way to realise this point appears to be the common work in one wide trade organization. In spite of the fears of some scientists who believe that this common membership in a single body will make the social position of the scientist worse than ever, the author holds quite a contrary opinion. He thinks that by means of this body each scientist, if only willing to, shall be able to work in a generous and honest way, influencing this sphere of social life which he will enter.

The special tasks and aims of this independent body in the organization of the Polish teachers gathering all scientific workers are as follows:

The scientists usually confined to the limits of a given speciality should inform each other about their researches and the present state of a given science.

The scientists who as a rule fulfil in Poland also the duties of the teachers should be acquainted with pedagogics and didactics. It happens very often that good scientists are not good teachers.

The teachers at the lower stages should be educated by the scientists specializing in a given sphere of science to understand their latest achievements.

The staff for the popularization of science in such cultural institutions as the workers' universities, the high schools for the peasants or the factory readingrooms should be trained accordingly.

The social function of science and of the scientists should be explained to the masses to make them appreciate the worth and meaning of man's strive towards the truth.

JAGELLONIAN UNIVERSITY, KRAKÓW

THE KAROL-UNIVERSITY IN PRAGUE CELEBRATES ITS 600th ANNIVERSARY

by HENRYK BARYCZ

ON 7th APRIL of the present year comes the celebration of the 600 years long existence of the University founded in Prague by the Czech king, Karol. The University soon became not only the centre of knowledge and scientific researches but — according to the opinion of one of the Czech scientists — „the shelter of the old Czech tradition, the place sanctified by the great historical events, the guarantee of work undertaken for the nation's good and development" as well. It is worth mentioning that the Karol-University

in Prague is the oldest Slavonic University and was the first higher school in Middle Europe.

Being the international centre of higher learning in the Middle Ages, Prague became the focus of philosophical and theological activities. Numerous students not only from the Middle Europe but also from the West European countries stayed there as Prague was the propagator of university thoughts in the cultural life of those times. From the University in Prague came the new professors to the then established new universities in Vienna, Heidelberg, Leipzig, and Kraków. Soon, however, under the influence of strong individualities like Jan Hus the University in Prague turned to be the centre of social and national ideas.

Since 1526 the history of this University is a continous struggle with German influences and attacks. Only in 1848 was the Czech language given the same rights as the German. The second world war brought new and great persecutions.

The scientific bonds between the University in Prague and the Polish universities have been and still are very strong. Thus upon the day of its 600th anniversary all Polish universities and all Polish scientists express their heartfelt congratulations and wish the University of Prague to take the most fruitful line in future.

JAGELLONIAN UNIVERSITY, KRAKÓW

THOUGHTS ON THE HIGHER TECHNICAL SCHOOLS

by HENRYK GOLAŃSKI

THE PROBLEM of educating a large staff of qualified experts becomes the most important out of all considering how to make the methods of work used in the industry mostly efficient and perfect. Of course, the quality of the industrial goods depends on the specialists well fitted for this job as well.

In Poland we are at present lacking this staff and are afraid that the lack of it should grow more painful because of the natural decrease of the few specialists and the still increasing extension of the industry. The engineers whom we need at the present while and expect to come in the course of the next years should no tall be trained academically. This academic training is necessary for those who are going to work as the independent constructors, the members of the scientific Institutes of Industry, or the managers at the higher stage of the organization. All other engineers (practitioners) should be educated in the technical higher schools. The knowledge gained there should be quite sufficient to make them able to take up their profession. The most appropriate and practical ratio between the number of the academically trained engineers and the the number of the engineers-practitioners should be 1:4. According to the official needs stated

by the Ministry of Trade and Industry we lack sharp 1500 engineers with the academic training and 4000 engineers-practitioners. The required annual increase in each of the above mentioned categories amounts to 400 and 1500 engineers accordingly.

Can the present organization of the higher technical schools cover the existing needs? The author points to the evident disproportion between the actual needs and the work of the organization hinted at above. As the things stand now we can expect that the engineers with the academic training will increase in number over the demand for them while the engineers-practitioners will decrease far below our request.

What should be done in order to change this undesired state of things is:

1) to shorten the course of studies in the higher technical schools to 3 years.

2) to extend the number of these schools from 3 to at least 10.

3) basing on the existing staff and equipment of our 6 polytechnic schools to start gradually classes for the non-academic students.

4) in admitting students to the higher technical schools to make the pupils from the technical secondary schools prior to any others.

5) to extend the polytechnic studies from 4 to 5 years.

6) to select the candidates for the polytechnic studies by means of a severe examination.

7) to base the whole action on the real collaboration of the educational, social and scientific bodies.

The propaganda should be used to push the thing in earnest.

The programmes of the technical schools should make it a rule to require from the student only as much as he needs know. The student should be specialized in rather narrow limits and told to know a reasonable quantum, while the students of the polytechnic schools must follow a thorough theoretical study. In the place of the engineer with his encyclopaedic education should stand the engineer-practitioner with his narrow but well-mastered speciality. We also expect him to be more adjusted socially and ideologically to the new economic structure of the present Poland.

MINISTRY OF TRADE AND INDUSTRY, WARSZAWA

THE ORGANIZATION OF SCIENTIFIC LIBRARIES

by TADEUSZ JACZEWSKI

THE PRESENT state of libraries in Poland as well as in numerous other countries is chaotic because of the old traditions making the stumbling block on the way towards planned economy. The drawbacks of the state of libraries so far are evident enough. There is a too poor equipment (very often there is none) in the field of finances. The personnel (by that is meant: the qualified workers) is insufficient, the organization -- not adequate for the scien-

tific librarianship — is defective. Some libraries have to render service to an excessive number of readers while the others are not exploited at all. In all countries damaged during the last war and the occupation there is a fatal lack of coordination in restoring libraries because no planned action of purchasing new books has been settled so far.

Undertaking the reform we must hold it as the premise that the present extension of the scientific publications makes impossible the work by occasional means. If the library is to answer its postulates it should have a special personnel, an appropriate budget and a clear set about plan.

Three main types of libraries should be established: 1) Small libraries without any need for a special personnel (academic school departments and industial laboratories), 2) special libraries with the personnel ruled by a clear idea what their tasks are, 3) great scientific general libraries prepared for the ever-increasing extension of their stocks.

The reorganization or the creation of the secondtype-libraries are especially important. They should provide books for the Academic Institutes (joining several chairs) or for the whole faculties (e.g. the faculties of agriculture, pharmaceutics, veterinary, law, may be medicine). To their range of activity should belong also some special faculties and all extramural research institutes as well as all special scientific societies.

If we established these types of organization we could make the next step towards the conception of how to dislocate the scientific libriaries in our country.

UNIVERSITY OF WARSAW

THE ROLE AND MEANING OF SPECIAL LIBRARIES

by HELENA WALTEROWA

THE ACTUAL development of science towards the ever greater specialization makes urgent the organization of special scientific libraries collecting the whole literature of one only sphere of science and in this way affording a proper place of studies for the specialists. The existing universal libraries confronted with the enormous scientific production of the present to day cannot fulfil their tasks.

The statistic data prove that the creation of scientific libraries is being implied by the development of life itself.

The systematic activity should be started with taking care of the already existing special scientific libraries belonging to the scientific institutions. Other scientific societies should be also fostered while the policy of including some special collections into the universal libraries should be cancelled.

The tasks of these special libraries can be presented, as follows: a) collecting and completing the scientific literature of a given sphere. The inter-

national exchange of publications would be the best vehicle to achieve this aim.

b) The catalogues ought to be arranged at least on a national scale. By doing so we could registrate all works in a given sphere of science and know which are obtainable in our country. Certainly, it would bring much help to the scientists engaged in their researches and make the special libraries a centre of the researches for bibliographic work as well.

c) These special libraries should become also the centres of bibliography— and information — service in a given sphere of science. Their task would be to answer the national as well as the international needs.

d) The special libraries ought to be the centres of the documentation and the documentation-service as well.

UNIVERSITY LIBRARY, TORUŃ

SCIENCE AND ACADEMIC EDUCATION IN SWEDEN

by STEFAN LEWICKI

PROFESSOR Stefan Lewicki visited Sweden twice during the last two years. On ground of his observations while in that country he formed an opinion that the great development in the field of pure and applied science, now going on in Sweden is due not merely to the favourable circumstances, such as the fact that the country was not involved in the II World War, that it created a very high standard of living, that its economic development has been successful and that its research stations are provided with excellent equipment. For the successful development of the Swedish Higher Schools, credit must also be given to the general atmosphere reigning in that country, which encourages the scientific development and stimulates the creative work at the Universities and in the numerous research institutes.

Another cause of the Swedish success is the efficient organization which forms an excellent basis for the development of science. Further, Prof. Lewicki gives an account of personnel structure at the Universities, calling particular attention to the great number of young doctors-lecturers.

He also discusses the powers and competences of the authorities, and the direction of studies and specialization, and he explains how some university departments, carrying on various specializing studies are connected with respective ministries, e. g. Ministry of Agriculture, Board of Trade and Industry, etc.

Other problems discussed in detail are as follows; number of the university students, qualifications required from those applying to be admitted, programme and organization of studies and of other activities and the conditions in which average men and women live and learn.

A feature very characteristic of the Swedish Higher Schools is the comparatively small number of students. It is caused by the great amount of active work required, e. g. compulsory attendance at the lectures, numerous classes and seminaries, taking sometimes the whole day etc. Hence the limited number of students. Those who apply to be admitted are strictly selected. There is, however, another cause of the small number of students, namely the considerable costs of subsistence and the fact that the majority of the young people are used to a high standard of living.

The government and various bodies and organizations are, indeed, providing facilities for poor students but a far reaching democrating scheme for the Higher Schools is now being worked out. The scheme has no political aspect its aim is simply to provide facilities for university studies for an as large as possible number of students.

MARIE CURIE-SKŁODOWSKA UNIVERSITY, LUBLIN

FACTS AND OPINIONS

COOPERATION OF SOCIAL AGENCIES WITH HIGHER SCHOOLS, *by Kazimierz Majewski.* The general needs of Science and Education and of social development make it imperative to provide facilities for closer cooperation between the social agencies and the scientific world. For this purpose Societies of Friends of the Higher Schools should be established. Besides the philantropic activities of the traditional type, duty should be placed on these societies to cooperate closely with respective High Schools in the fields of strictly defined research or enquiry. (Financial support, scholarships, supply of technical equipment, assistance in the tasks of popularization of results etc.). The societies should also consult with the Higher Schools in planning the future development of research and enquiry.

The Societies of Friends of Higher Schools should be formed by every existing Academic School. Their aim would be to promote cooperation between the Higher Schools and the people and better understanding of all the problems involved. For this purpose they should organise conferences, lectures and other forms of exchange of information, together with other scientific centres, such as the Circle for the Science of Science in Cracow.

The Societies of the Friends of Higher Schools should submit their postulates concerning the scientific development and organization of Higher Schools to the Academic Scientific Council and to other University authorities. (Academic Scientific Council will be formed according to the recently passed Higher Schools Organization Act).

In due course the conceptions presented by the Societies will be considered on a broader, national plan by the Chief Board of Science and Higher Education, now the highest authority in the Higher Schools

autonomy. A consultative body of the Societies of Friends of Higher Schools should be set up to form a mediating link between the Chief Board and the Societies from all over the country.

The author points out that his scheme, briefly outlined above, is not conceived merely as a way of providing Higher Schools with financial support. Its chief aim is to bring the men of science into the possibly closest contact with the people and to produce an expansion of research and cultural acitivities throughout the country.

UNIVERSITY OF WROCŁAW

THE SOCIAL ENGINEERING BY MEANS OF JURISPRUDENCE *by M. Borucka.* The authoress discusses the article which appeared under this title in the American magazine NEW YORK UNIVERSITY LAW QUARTERLY (XXII, 1947, nr 2). The authors, S. Post and R. Field point to the necessity for creating a school of so-called by them „applied jurisprudence". They believe that the essential changes in the methods of investigation and in the traditional dealing with this subject should be: a) the integration of sciences, b) the basic investigations into the sphere of psychology and sociology closely connected with the development of law, c) some special investigations into the so-called „applied jurisprudence", d) the practical application of the scientific results, as the aim of each applied science is acting.

We are glad to stress that the postulate of planning in the sphere of law as well as the programme of the scientific policy of law and of its psycho-sociological extension had been stated a few decades ago by the outstanding Polish theorist prof. Leon Petrażycki.

SCIENCE AND LETTERS IN POLAND

THE POLISH SCIENCE AND THE RESTORATION OF OUR COUNTRY. On 22nd January was held the inaugural session of the chief Board of Science and Higher Education which (as we informed in LIFE OF SCIENCE nr 23/24) now stands for the central organ of the self-government of science and the higher schools in Poland. This body collaborates with the Ministry of Education, the Minister of which becomes automatically the chairman of the chief Board. The agenda contained among other items a lecture of the viceminister Eugenia Krassowska whose remarks on the relation between the Board of Education and the higher schools we published dately.

The Minister of Education, dr. Stanisław Skrzeszewski opened the meeting welcoming all members of the Board and all guests among which was the President of the Polish Republic, Bolesław Bierut. Quite a number, especially the representatives of the economic branches, took part in the discussion. All that they said proves that they understand the role of science in the new organization of life in all its spheres. All of them chiefly

pointed to the importance of science for the economic restoration of Poland after the enormous damages caused by the hitlerist occupation. Poland will not be satisfied with the restoration only; it drives to the modernization of the industrial and agricultural production, the perfection of methods used in each work, education of new and numerous specialists, on the whole its tendency is to progress. All speakers emphasized that the realization of the above mentioned aims can be achieved only with the corresponding development of science, this is to say with a still increasing equipment of all laboratiores and educating a large staff of the young scientific workers.

The Minister of Restoration, professor Kaczorowski presented the postulates of his Ministry addressing first of all the delegates of the technical science. The president of the Central Office of Planning, Bobrowski, discussed the role of science in the next three-years-plan as well as in the further planning of the economic development of our country. „The more evident and conscious becomes (said the minister) our decision to choose a definite line of progress, the more we require from science. The society needs its genuine participation in creating the new conceptions of our plan and realizing them as easy as possible." The Vice-minister of Industry and Trade (member of the Chief Board as well) Golański discussed the postulates of his Ministry. His troughts on the problem of educating a new staff of experts are published separately in the present issue of LIFE OF SCIENCE. Mr. Golański also dealt with the problem of increasing the number of the scientific institutes in the sphere of industry.

The further items were stated by the rector of the Main School of Farming Górski, and the rector of the Mining Academy, Goetel, who stressed as much as their predecessors the necessity of educating a new staff of experts. They demanded also a modernization of the academic programmes. The rector of the University and Polytechnic school in Wrocław (the Regained Territories) Kulczyński maintained that „we have to finish with the isolation of the scientific worker". The scientist should stand face to face with the needs of life and cooperate with other specialists and other scientific institutions. The institutes in which the professors work together with other scientific workers should be established according to the models existing in the west-European countries. Both the vice-minister Golański and the rector Goetel pointed to the usefulness of the near and many-sided relations between science and industry. This collaboration on the technical basis takes already place in the institutes of industry researches.

The vice-minister of Justice Chajn discussed the problem of educating a new staff of lawyers. The education should make each student acquainted with such disciplines as: Sociology, history of social doctrines, psychology and logic.

The secretary of the Central Commission of Trade Unions Sokorski coped with the leading problem of the present moment, namely: how to train the youth in the scientific thinking and by doing so how to breed a new-modelled man.

The President of the Polish Republic, Bierut, was the last speaker. His speech on the role of science in the social and national revival of Poland, was published in our latest issue (LIFE OF SCIENCE, 25—26).

ALL POLISH SCIENTISTS IN THE TRADE UNION OF POLISH TEACHERS On 31-st January of the present year the first general meeting of the delegates of higher School Sections and of Scientific Institutions (run by the Trade Union of Polish Teachers) was held in Warsaw. This meeting proved that all Polish scientific workers were willing to join in one great organization. All of them understand what is the role of the Trade Union of Polish Teachers in extending education and science in our country. No one doubts of the ideological unity of all Polish Teathers and scientists. At the meeting were present the delegates of all centres. After the report of the retiring Board of Section drawn up by professor Manteuffel and the paper of professor Chałasiński on the latest decree about the organization of science (see LIFE OF SCIENCE, No. 23—24 and 25—26) a long discussion went on. The participants dealt with the reform of higher education in Poland, and the social role of science in the modern world; they also touched on their trade matters i.e. the financial position of the scientific and administrative workers in Higher Schools.

A series of resolutions has been passed of which the most important are:

a) stating that the development of Polish science and education on the Regained Territories is going well on.

b) initiating the conception of advisory Scientific Committee at the Central Commission of Trade Unions.

c) coming into a close contact with the World Federation of Scietific Workers with the aim of connecting with this organization.

d) giving support to the magazine „Life of Science" which expresses the opinion of all Polish scientists.

The head of the newly elected Board is professor T. Manteuffel (Warsaw University), the vice-chairman is professor St. Mazur (Łódź University) and H. Wroński, M.A. (Curie Skłodowska University at Lublin), is its chief secretary. The Address of the Board of Section: Warsaw, Smulikowskiego 1.

THE MEETING OF THE POLISH LINGUISTIC SOCIETY. *By Stanisław Urbańczyk.* The linguistics makes one of the sciences in which Poland represents a high level. All European and Overseas linguists know the names of the deceased Baudouin de Courtenay and Rozwadowski and of the living Nitsch, Lehr-Spławiński and Kuryłowicz. There are some fields of this science in which the Polish scientists have achieved very much: the science of accent, the Slavonic dialectology, the investigations into the West-Slavonic languages and the Slavonic onomastics. Since 1925 a separate orga-

nization exists for the sake of bringing together all our scientific workers in this sphere. It is called the Polish Linguistic Society. On 20th and 21st December 1947 the first meeting of the society after the war was held in Kraków. 34 members took part in it. A series of papers on the essential linguistic problems were presented in the first day of the meeting. On the occasion of this meeting new authorities were chosen by vote. Most members of the society specialize in Slavonic and general Indo-European linguistics. There are, however, but few who begin work in the neophilology.

SCIENCE ABROAD

THE WORLD FEDERATION OF SCIENTIFIC WORKERS. *By J. G. Crowther.* The author is the Secretary of the Federation, and writes about the constitution and the of the Federation.

A booklet under the same title, issued in London also provides information about the scientific organizations in various countries which already joined the Federation.

Polish scientific workers, recently associated with the Trade Union of Polish Teachers (the only professional organization of this type now existing in this country), and formed a separate autonomic section for Higher Schools and Research Institutes. The first congress of the Section was held in January 1948 in Warsaw and in the course of the debates a resolution was issued stating that the section should establish close and many-sided contacts with the members of the Federation. (see p. 271).

Address of the Chief Council of the Trade-Union of Polish Teachers: Warsaw, 1, Smulikowski St.

LIFE OF SCIENCE is going to pay special attention to the development of the Federation.

The annual foreign subscription rate is 5.00 Dollars. Subscriptions and all other communications should be addressed to
THE EDITOR, „ŻYCIE NAUKI", KRAKÓW, SŁOWACKIEGO 66, POLAND.