LIFE OF SCIENCE

A MONTHLY DEVOTED TO THE SCIENCE OF SCIENCE

Editor: MIECZYSŁAW CHOYNOWSKI

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„LIFE OF SCIENCE" ON TRIAL

by MIECZYSŁAW CHOYNOWSKI

FROM THE VERY beginning LIFE OF SCIENCE has been appreciated by many but at the same time it has met with many reproaches which are summarized at an imaginary trial by a Scientist, Politician, a Marxian, a Humanist, a Theologian, a Philosopher, an Artist, and a Man in the Street. The Editor of LIFE OF SCIENCE defends as sollicitor:

Our monthly is devoted to the science of science, and the knowledge of science as well as the understanding of its tasks and possibilities are regarded by us as a necessary condition of the social progress.

The organizational affairs of science grow more and more important and therefore a free discussion on the organization and on the social function of science seems desirable and valuable to us. Neither can the knowledge of the world nor its mastering be left to an accident, and therefore we think that the planning of science is necessary. Rational planning in the hands of scientists does not threaten the freedom of science but has to facilitate its development and to prevent any delaying chance.

We regard science as the best instrument of knowledge and of mastering the world. Science only is founded on criteria of social agreement and creates a picture of the world common to all people, in opposition to the politics, religion, and philosophy with their confusion of contrary programmes, doctrines, confessions, and systems. Although, it is true, many applications of science brought on mankind more damages than profits, yet this is the fault of man applying science to bad ends as well as of the incommensurability between its applications to technics, medicine, and agriculture, and on the other hand its applications in social life. The future of the civilization depends on the development of psychology and sociology; the social duty of scientists is to control applications of science and to foresee their undesired consequen-

ces. Perhaps it would be better for the world if every scientist instead of writing some of his works propagated the scientific culture among people who know neither the achievements in science nor its perspectives and values.

We realize that science does not exhaust the contents of life. Neither does it deny the existence of feelings and values in human life but takes them into account in its picture of the world. We consider that the task of science is the construction of the picture of reality; the task of art, on the contrary, is the enlargement and enrichment of the scale of human experience. The artist creates his personal vision of a world seen through the prism of his individuality formed by inheritance and environment. The scientist creates his picture of the world independently of his personality, sex, origin, age, confession, or opinions. Knowing what the world really is we can master it: on this depends the practical value of science. This cannot be given by art, and in this science differs from art but approaches it with its aesthetical and creative elements.

We realize well that science cannot utter anything as to the existence of God or soul, we stress, however, the groundlessness of the theological theses and the natural origin of religious beliefs. We are also of the opinion that the conflict between science and religion in all the matters scientifically decidable will be finished, sooner or later, with the victory of science.

Science, too, will win in the quarrel with philosophy. The questions which are beyond the reach of scientific methods do not exist for science ,and therefore the majority of traditional philosophical problems ought to be regarded as devoid of empirical meaning. Our dislike of philosophy concerns also the dialectic materialism which cannot free itself from the elements of Hegel's obsolete metaphysics.

We regard humanities as a science, yet we do not acknowledge „autonomy" of cultural phenomena and have no confidence in the epistemological value of many of these trends of the humanistic thinking which are more akin to letters or philosophy than science. Customs, beliefs, ideology, literary trends, or axiological norms are fit for research work the same as stars or amoebae. We are humanists, we look at science from the point of view of a humanist. Science is from our standpoint the historical product of culture and promotes, on the one hand, the fullest development of human individuality, and on the other hand, the best organization of the world.

With regard to politics LIFE OF SCIENCE represents the opinion that the scope of politics grows narrower in favour of science with the progress of knowledge. Thus the world to which we are going will not be governed by politicians but led by technicians and scientists by means of methods which permit to emancipate from personal passions or weaknesses and to realize so general and doubtlessly good aims, that all are going to accept them: i. e. social justice, economic productiveness, unlimited cultural development, freedom, and happiness of man. We think that with the aid of scientific methods not only technical and economical problems but also social, political, demo-

graphical, and other questions can be solved. Thus, instead of looking for the best solutions for some particular groups (as the politicians have done till now), one ought to look for the best solutions for all people with regard to their common needs. Therefore we dislike only those politicians who do not understand this line of development of our civilization and, by representing certain groups and defending obsolete doctrines or institutions, hinder the progress of the world.

CIRCLE FOR THE SCIENCE OF SCIENCE, CRACOW

SCIENCE AND POLITICAL POWER

by E. M. FRIEDWALD

(An authorized translation from the English monthly DISCOVERY, 1946, No. 10).

THE AUTHOR is the political and economical commentator of the newspaper LA FRANCE LIBRE. Considering in particular the index of the origin of the laureates of the Nobel prize in sciences the author comes to the following conclusion: the science has ceased to be the exclusive concern of a small group of scientists, and a few generous patrons, and has become an activity of vital national importance. The great scientific achievements have become less and less exploits of individuals, and more and more the result of planned and organized research, a triumph of scientific organization. The whole problem of scientific progress is how to combine the efficiency of organization with the creative power of intellectual freedom. The science can grow in all climates but it is slow to take root. Well cultivated it develops; neglected it dies.

PARIS

FROM THE HISTORY OF THE THEORY OF SCIENCE

by WŁADYSŁAW TATARKIEWICZ

AT THE END of the 19th and the beginning of the 20th century the French scientists developed the theory of science considerably. They understood it as the critique of epistemology. The result of their considerations was the conclusion that epistemology possesses neither necessity, nor objectiveness, nor certainty to such a degree as it is accepted. That was striking a blow against the dogma of positivism. This critique was the work of philosophers as well as scientific specialists, mathematicians and naturalists. In the course of the 19th century some thinkers already questioned this belief in the absoluteness of ideas and scientific theorems. The first among them was the great physicist Ampère who fought against the pretensions of scientists that

science is a creature more perfect than philosophy as it is free from any hypotheses. Ampère namely declared that science does not use such hypotheses as philosophy, yet it has its own hypotheses and cannot exist without them. In the 19th century the mathematician, economist and historian A. A. Cournot and the physiologist and physician Claude Bernard, who among other things fought against empiric theories of science, contineud this critical analysis. However the first who developed the critique of science was Emile Boutroux professor of history of philosophy at the Sorbonne. This critique became weightier when such an authority in scientific matters as Henri Poincaré devoted his time to it. The physicist Pierre Duhem was the man who worked out the critique of science to the fullest. Emile Meyerson promoted the same opinion on the nature of science. Bergson again was quite of a different opinion on this question. His critique of science is the only negative part of his extensive philosophy. The mathematician Edouard Le Roy was under the influence of all these scientists. He connected both trends giving the critique the most extreme form. The critical analysis of science underwent two phases. The first is called „contingentism". Its greatest representant was Boutroux. Its principal idea is the view that science does not discover any necessary connections. This results from want of uniform scientific laws, their not conforming with reality, their dependency not only on nature but also on the human mind. Moreover the scientific laws are changeable because of the changeability of things and the mind, the instrument of which is not only the intellect: the conceptions of a scientist are similar to those of an artist. Boutroux completed his negative conclusions by adding some positive viz. that with the lack of necessity in the world there is freedom, there is room for belief, there is room for religion beside science. Poincaré begins the second phase of the critique of science, the so-called „conventionalism", by definitively turning away from the conviction that the scientific laws are a copy of the reality. Laws but above all mathematical axioms are neither necessary nor objective nor true as they are only conventions. Therefore there may be many theories unlike each other as there are many kinds of geometry. Only their convenience and simplicity give them value. But Poincaré's followers Duhem and Le Roy went to the extreme in expressing this point of view. They were the first who applied the conventionality of axioms and of the most general theories in Poincaré's work to all scientific laws. They maintained the opinion that all laws contain conventional factors beside real ones, as well as subjective beside objective components. Moreover scientific facts are conventions because they are not observed directly. They already are based on the knowledge of laws. Besides, a fact is something definite and identical with other facts of the same kind, yet in nature there are no identical things. Therefore a fact does not belong to reality, it is but its symbol. Because of that the doctrine of these thinkers is also called „scientific symbolism". Yet those critics did not intend to condemn science. They regarded it as the most perfect creation of the mind.

The disharmony between reality and science being the result of the properties of the human mind was considered by them just as inevitable as the using of symbols and conventions in science.

PHILOSOPHICAL SEMINAR OF THE WARSAW UNIVERSITY

IRRATIONALISM AND SCIENCE

by WIESŁAW KOTAŃSKI

THIS IS a debating article initiated by M. Choynowski in the previous numbers of LIFE OF SCIENCE on the theme of the social role of science. The author refutes the reproaches and doubts expressed by J. Chmielewski in the article *Some commentaries upon Science and Society*. (No 7/8). The results of planning the economical life and the intended educational influence on society depend on the degree of recognizable adequacy of the given plan of programme. The plan contains also the question of the purpose of using technically the given product. Therefore the amoral use of technics is, according to the author's oppinion, only one of the forms of inconsequent appliance of the plan. Then, explaining that under the idea of mathematization of a certain sphere of knowlegde one must understand not so much the numeral *sensu stricto* as the axiomatic comprehension which permits to conclude formally from the supposed empirical bases. The author recommends more exact knowlegde of sociology and its possibility. Mathematical formulation of hypotheses and their statistic justification leads to that end about which W. Skrzywan wrote in LIFE OF SCIENCE No 7/8. This postulate is connected with the theses of contemporary methodology leading to the building of Unified Science as the logical empirics formulated it. The resulats of intuitive researches not being based on the uniform method of scientific researches have not the required epistemological value.

The social and physical technics seem to be similar spheres in the light of contemporary methodology. Besides axiomatization, the principle of empiric verification of axioms on the basis of the criterion of social agreement connects them. Limiting one's interests to one's own speciality does not give any successful results. One ought to know the whole scope of human knowlegde at least in general. Mathematicians ought to complete their studies in letters, the humanists ought to study natural science. We must regard the point of view of a pure scientist as fictitious as we can hardly find a scientific worker who avoids social questions. Yet it is necessary to widen the social interests by getting acquainted with the general needs, with the methods ruling in other spheres of research work. This will keep off all specialists from aimless efforts. What is the basis for the way in which the world has to proceed? We get the rational solution of social problems if,

by means of scientific methods, we draw the way on which the world can move. Productiveness is the real characteristic of true science. The negation of the possibility of rebuilding the world by science undermines its foundations.

WARSAW

THE PROBLEM OF PLANNING IN SCIENCE

by JAN RUTKOWSKI

IN CONNECTION with the political and economic changes of our times, we are faced to-day, when dealing with the organization of science and of the scientific policy, by the important problem of planning in science. We shall speak here about such a form of research organization, in which an individual or a group would create a plan, defining the problems first of all, while another group would realize that plan. As a rule we have to do here with team work. There are two types of team work: in the case of the one type the separate parts of the work in question are fixed within directions given by their respective authors, while in the case of the other type not only the whole but also every separate item of the problem in question is done by a greater number of individuals. The development of the bibliography of the different sciences shows an increase in planning and in team work. This is a result of the comprehension that some research problem surpass the possibilities of an individual. An improper use of planning may, on the other hand, prove very disastrous. Planning should not, above all, try to embrace the entire creative scientific work. We must bear in mind differences in mental dispositions of the various scientific workers. Not all of them can adjust themselves to team work, though they may be highly creative individuals. Some possibilities for research work must therefore be left beyond the pale of planning, the more so, if we keep in mind the immense role of subconsciousness in scientific creativeness.

The success of planning in science depends mainly upon the factors that will have to pass the final decisions in the planmaking. There exist two opposed points of view here — the one maintaining that the state should be excluded from influencing science, the other considering the state to be the leading factor in giving the initiative and in organizing science. It is rather difficult to accept decidelly the one or the other conception, both might prove very good under certain conditions. Some domains of science are of such a vital importance for the smooth functioning of the state apparatus that they cannot be left, not for any consideration whatsoever, to private initiative or to scientific societies only, but they form a minority in the vast complex of scientific research. The need of creating a higher institution that would control the entire scientific research work was often voiced, though some practical objections might be found here too.

The problem of planning has also to do with the question of a territorial distribution of research centres. Two postulates exist here: the one demands a concentration of all scientific activities into a few research centres only,

while the other would like to reserve this role exclusively to the research centre in the capital. This question presents some difficulties in Poland, in view of the fact that Warsaw is ruined, Kraków would therefore be more suitable. Finally, too little attention is paid to the state of scientific research in provincial towns, where there are no higher scientific institutes.

SEMINAR OF ECONOMIC HISTORY, POZNAŃ UNIVERSITY

ON THE REBUILDING OF THE BASIS OF MODERN POLISH HISTORIOGRAPHY

by HENRYK BARYCZ

INDEPENDENTLY from war losses the question of shortcomings in the Polish science has a more general aspect. It is connected with its underdevelopment in the last 150 years. The periodical national catastrophes are one of the more important causes of this state of affairs as they have undermined the organisational as well as the structural basis of the research work. These abnormal conditions are mostly felt in the modern historiography. The beginnings of the modern Polish historiography are conected with the name of A. Naruszewicz but the real promoters of this branch of science were J. Szujski, W. Zakrzewski, T. Korzon and other research workers who were well trained methodically and critically. M. Handelsmann, J. Kucharzewski and others built the foundations for the newest history. Yet all these efforts were delayed and partly annihilated by continuous war action. The last surpassed all previous in destroying different archives and cultural goods. The chief means of reconstructing the Polish historiography is to obtain some of the German and Austrian collections as retribution. In the first place there ought to be handed over all documents and things which are connected with our history. The second principal problem is to get access to the collections and archives which are on the territories recently incorporated to U.S.S.R. as there are many sources for the study of the Polish history. Many of these documents and memorials ought to return to Poland by cultural repatriation. An important position in planning this reconstruction is the matter of organizing a new network of archives and of giving access to the still existing collections as well as of taking care of the memorials which are in possession of private people. Further there is the question of getting into contact with historians abroad. The last question is the organization of a publiching action. The reconstruction of the Polish historiography is a problem of national importance and therefore it ought to interest the whole nation and even the whole world. Twenty five years ago the destroyed university library of Louvain was reconstructed with help of all the world. Among other countries helping there was also Poland, then very much ravaged.

JAGIELLONIAN UNIVERSITY, CRACOW

HISTORICAL MUSEUMS AS RESEARCH AND EDUCATIONAL CENTRES

by KAZIMIERZ MAJEWSKI

THE MUSEUMS existing in Poland in 1939, could be divided into 4 groups: 1) offering instruction, 2) offering aesthetic impressions, 3) sanctuaries of national relics, and 4) repositories of collections of different kinds. It was only just before the last World War that we began to pay attention to the didactic role of the museums. In order to be as efficient as possible in that role, all museums should be nationalized, and then re-grouped into larger units. Collections of the several cities ought to be re-organized, and museums of specific types should be formed out of them. Among the 4 basic types of museums (art museums, etnographical, archaeological and historical museums) the most important are the historical museums. They ought to be equipped with research laboratories, and should have their own publications, so as to be able to fulfil their politically educational, instructive and research role in the best way.

WROCŁAW UNIVERSITY

WHAT POLISH ANTHROPOLOGY ADDED TO THE WORLD SCIENCE

by JAN MYDLARSKI

THE FIRST chair of anthropology in Poland was founded in 1854. In the first period of its development the Polish anthropology did not show any special achievements although it was on the same level as this branch of science in Western Europe. The most known among the Polish anthropologists at that time were J. Majer and I. Kopernicki. After their death there were founded new centres of anthropology. Their activity grew so important that the scientific world literature speaks about „the Polish anthropological school". There are three trends in the Polish anthropology which bring new values into the world science: the first concerns the anthropomorphology of soft parts and is represented by the Warsaw school of Edward Loth. His book entitled *Anthropologie des patries molles* extended the horizon of anthropology considerably. The second sphere in which the Polish anthropology achieved important results refers to the connection between the environment and the structure of the body, chiefly its growth. As a result of this research work was the conclusion that growth depends, on one hand, on racial factors, and on the other hand, on economical conditions. (J. Czekanowski, J. Mydlarski). In connection with this the conditions of physical development of children and adults were examined in particular of the conscripted, as well as the influence of physical exercises on morphological changes. Great results were

attained in the researches on the general law of ancestral heredity. The most important achievements of the Polish anthropology concern the racial systematization and the structure of population. Much was done in the field of methodology. These research works gave a different face to the Polish anthropological school. The founder of this school was J. Czekanowski. The elaboration of an easy method which permits to define the race of individuals is the work of this school. The methods used by the Polish school enabled anthropology to connect its results with those of prehistory, ethnography, linguistics, and history. The possibility of racial defining of individuals permited anthropology to get into contact with physiological, pathological, psychological, and sociological phenomena. The first researches of this kind took place in Poland. They showed that there exist certain connections between psychological properties and race. At last, the serological researches of Ludwik Hirszfeld and their cartographical representation for the first time, drew the attention to the importance of serological groups for anthropology and introduced serology into this science.

DEPARTMENT OF ANTROPOLOGY, CURIE-SKŁODOWSKA UNIVERSITY OF LUBLIN

FACTS AND OPINIONS

SCIENCE, PROGRESS, PHILOSOPHY. Longer quotations illustrate here the scientific point of view of Julian Huxley, contrasting with his philosophical tenets, and presented in his series of essays, collected under the title: *On Living in a Revolution* (Chatto and Windus, 1944).

SCIENCE AND LIFE. The need of a greater participation of scientists in social and political life becomes more and more apparent abroad, though we also hear voices, expressing doubts as to the importance of science outside the laboratories. C. H. Waddington in his article *Science outside the laboratory* (POLEMIC, 1946, No 4), protests against such views, maintaining that the scientific language and the scientific way of thinking can and ought to find their way into all domains of communal and political life. They are sure to enhance the effects and results of all endeavours. All things point to the fact that, sooner or later, scientific methods are bound to enter all the domains of life, replacing „common sense", superstitions, or accident.

THE TENDENCY TO CREATE AN AUXILIARY WORLD LANGUAGE *by Wł. Antoniewicz*, who presented this problem on the basis of the pamphlet: *Commission for the Discussion of an Auxiliary World Language. Rapport de la Commission de la langue auxiliaire universelle*, issued for the Commission for the Discussion of an Auxiliary World Language by the United Nations Information Organization. The initiative for this Commission was given by G. Bolkenstein, the Secretary of Education, Arts and Science of the Dutch Emigration Government in 1942 in London. It has been decided to include the English and French languages as obligatory subjects into the programmes

of higher forms of the elementary and secondary schools of the United Nations. The English language was to enjoy special privileges in schools in view of its special importance in international relations after the war. It was agreed upon to use exclusively the English an the French language as the official languages at all congresses and meetings. The French language was to be introduced as an obligatory subject into elementary and secondary schools of all Anglo-Saxon countries.

LEGAL RESEARCH WORK AND ITS SCIENTIFIC VALUE *by Maria Borucka.* In No. 2 of the Italian periodical SCIENTIA there appeared Nicola Jaeger's article entitled *Les Recherches de Juristes et leur Valeur scientifique.* Jaeger defends the scientific importance of the methods and aims of the science of law, the scientific character of which has often been questioned. Some of his opinions must be accepted with reservations e g. when he does not pay any attention to the motivating and educational character of the law, showing an ignorance of Petrażycki's views. To-day we feel more and more strongly the need of a close connection between the law and sociology.

SCIENTIFIC INFORMATION FOR ALL. Nowadays more and more attention is paid to the ways of influencing masses by means of the press, the wireless and the films. They give the possibility of developing the social capabilities of man. The basis for these means of influencing masses must be honest and versatile information. With regard to this question we owe much to the British Assotiation for the Advancement of Science. Prof. J. D. Bernal propagated the problem of mass influencing by men of science. The above mentioned Association organized a special conference in March 1943, dedicated to the question of the social and international role of science. The organization of the Institute for Scientific Information was the theme of the second conference held by the British Association for the Advancement of Science together with the Royal Society on July, 8th, 1946. Ritchie Calder gave a short summary of all the preliminary discussions on this theme which had taken place in England; in DISCOVERY (No 12, 1946).

SCIENCE IN POLAND

A SUMMARY of the article on the conference of rectors and professors of academic schools will be found in the next issue of LIFE OF SCIENCE.

THE SCIENTIFIC COUNCIL FOR QUESTIONS OF THE REGAINED TERRITORIES *by Andrzej Rybicki.* The situation on the Regained Territories at once required a coordinated action as regards their incorporation, and rebuilding. At the same time it was understood that the Polish science has to do it. Thus there was called into being an Office for the Studies of Settlement and Replacement with the seat in Cracow. In the first place the task of this

Office is to work out projects as to the future policy and jurisdiction of settlement. These problems required a closer coordination with many scientists, in particular with specialists in economy, sociology, geography and statistics. In order to secure such a contact there was formed a Scientific Council for Questions of the Regained Territories. The scope of the interests of this Council is very wide. There are 97 members of this Council. Among them there are representatives of different ministries as well as experts specially called together. The Council is in contact with the Central Planning Office, too. The Council itself is an advising body for the Ministry of Regained Territories. Up till now 4 sessions took place (the first in July 1945, the last in December 1946) on which there were delivered many reports and taken up many important decisions. Until now the activity of the Council proved to be very successful.

IN MARCH 1946 the State Institute of Book knowledge was created with a temporary residence in Łódź. This Institute is a scientific and research institution, an all-Polish centre of research and documentation, of planning and advising in all matters, connected with books or having to do with the science of books. The detailed programme of the Institute foresees 4 departments of bibliological documentation. The forming of a central bibliological library and of a museum of books and libraries are among its most immediate projects. The Institute also intends to conduct research work, particularly in connection with the social role of books and the organization of the reading public, using the results of bibliological researches for practical purposes, such as advising, planning of libraries, professional training, etc. Bibliographic information will be given in all matters connected with the publishing of books. The management of the Institute is in the hands of Dr Adam Łysakowski.

CONGRESS OF THE STATE COUNCIL FOR THE PRESERVATION OF NATURE. In October 25—26, 1946, the XX Congress of the State Council for the Preservation of Nature took place in Kraków. The Congress was attended by its members, the representants of science, the administrative authorities and many social and economic organizations, the Teachers'Association and others. The Chairman of the Council, Czesław Wycech, Secretary for Education, stressed in his address the role of the preservation of the beauties f nature in Poland, in connection with the changes which are making Poland now an industrial country, instead of a purely agricultural one. Professor Szafer on the other hand stressed the educational role of the preservation of nature samong the youth. The project of creating a National Park in the Tatra Mountains and the promise of soon getting into touch with the International Bureau of the Preservation of Nature in Brussels were among the most important problems discussed there. A special department of Preservation of Nature was created, affiliated to the Natural History Museum of the Polish Academy of Sciences and Letters.

STATE HIGH SCHOOL FOR TEACHERS IN CRACOW *by Stefan Baścik*. The Pedagogical High Schools are a new type of schools on the level of a university but without its rights. Their aim is to give a professional education to the future teachers of elementary schools on a higher level. The studies last three years. The founding of such a school is due to the reorganization of the educational system which introduces obligatory school teaching for 8 years. Such an elementary school requires better instructed schoolmasters. The students at this School are divided into sections. Each section has to study special subjects. Besides these there are obligatory for all students some other subjects such as philosophy, pedagogical biology, sociology of education and economy. The programme enables the students to get acquainted with the methods of scientific work. Moreover they are introduced into independent scientific work. Stress is put on the educational element as well. The aesthetic feeling is also developed.

SOME of the more important items of the precedent number (9—10) of LIFE OF SCIENCE are summarized below:

THE ORGANIZATION OF POLISH SCIENCE AND POLISH ACADEMIC SCHOOLS OUTSIDE THE POLISH FRONTIERS. The data are based upon a booklet, published in London, Febr. 1945, entitled: *Informations of the Ministry of Religious Creeds and Education*. This booklet gives exhaustive information as to the organization of Polish science among the emigrants and possibilities for it, particularly discussing such scientific institutes, as the Polish Medecine Faculty at the University of Edinburgh, the Polish School of Architecture at the University of Liverpool, the Polish Law Faculty at the University of Oxford, etc. It also mentions scientific institutions, vacation courses, libraries, societies and publications.

CIRCLE FOR THE SCIENCE OF SCIENCE. The Circle for the Science of Science was founded in Kraków in the spring of 1945. In accordance with the plans of its foundens it became a centre of systematic cooperation between the young scientific workers in various branches of science, whose common interest is in the science of science, including all its branches, viz. the methodology, history, sociology, psychology, and organization, of science. The Circle adheres to the logical empiricism and scientific humanism. Its leading idea is the conviction that one of the reasons for the calamities attacking our civilization is the undervaluing and misunderstanding of the role of science, both by the general public and by the scientists themselves, this conviction is the leading idea of the Circle, while its aim is to bring science into a closer touch with the community and vice versa, and to propagate scientific methods in all the fields of public life by accepting the search for truth as a general scientific basis. The activities of the Circle tend into four directions: the purely scientific ones, the publishing, organizing and international activities. The scientific section has regular weekly meetings, at which papers on topics connected with the science of science are read both by its members and by invited guests professors or other scientific workers. A detailed bibliography

pertaining to the science of science, both in Polish and in other languages, is collected. The Circle publishes the LIFE OF SCIENCE, and collects materials for a Yearbook of Polish science (entitled the POLISH MINERVA). The LIFE OF SCIENCE is edited by the chairman of the Circle with the active help of several of its members. 3.500 copies are being printed. Bronisław Olszewicz, Ph. D., Professor of the Wrocław University, is the editor of the POLISH MINERVA, which receives subsidies from the Central Board of Planning. Materials for it are being collected by means of questionnaires; they will also serve for a file register of Polish scientists, scientific institutions, societies and periodicals. It is going to be the first yearbook of that type published in Poland. In the first year of its work the Circle completed a survey of the organization of science in different countries done for the use of the Department of Science in the Ministry of Education. In 1946 the Circle organized and gave financial aid to two courses for librarians working in the libraries of the different departments of the university. It is also publishing printed forms needed by librarians, which is being used all over Poland.

The international section is establishing contacts with scientific institutions, societes and publications abroad. By menas of an exchange or by subscribing, the Circle is receiving foreign periodicals from England, France, Holland. India, Italy, Sweden, Switzerland, the U.S.A. and the U.S.R.R. The Circle is very much interested in the problems of planning in science. It thinks of founding a Polish centre of scientific information and documentation. It also plans the publishing of series of works dealing with the science of science, of monographies and translations of corresponding works of foreign scientists, as also a series of Polish logical and methodogical studies in English.

The results achieved so far by the Circle and the interest they had managed to arouse among scientific workers are the best proof that the creation of such an institution in Kraków has been very advantageous.

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