

TWENTY YEARS SINCE THE FOUNDATION OF THE CZECHOSLOVAK ACADEMY OF SCIENCES

The Czechoslovak Academy of Sciences was founded in November 1952. Twenty years elapsed since the important event and on this occasion it would be appropriate to recall the ideas which appeared more than a century ago in the treatise "Akademia" (Praha, 1861) written by the world famous physiologist Jan Evangelista Purkyně. With an exceptional clairvoyance he anticipated problems that were necessary and possible to solve only so many decades later, after the Czechoslovak Academy of Sciences had been founded. Purkyně not only demonstrated the necessity of establishing an Academy for the sake of further development of science, but also propagated at that time quite modern and even revolutionary ideas, e.g. the services the Academy might render to industry. The treatise also presents a lay-out of the specific structure of the Academy with its scientific institutes and a description of research work which ought to be done in particular institutes.

Purkyně suggested that the future national Academy should include linguistic, literary, historical and philosophical institutes, mineralogical-geological, botanical, zoological, mathematical, physical, astronomical-meteorological, chemical institutes as well as institutes for physical geography, physiology and anthropology. This magnificent vision is interesting for the fact that Purkyně reasoned quite realistically when he mentioned, as one of the purposes for establishing the Academy the necessity of concentrating material forces primarily for the research in the field of natural sciences.

Similar ideas, at a higher developmental level of course, and under different historical circumstances, with the goal of building a Socialist state on the great model of the Soviet Union, after 1948 led the Czechoslovak highest state authorities to the decision to organize a top scientific institution of a new type, which would assemble the country's best forces in its membership and at the same time would enable a planned development of demanding modern scientific work under conditions of Czechoslovak Republic.

The Czechoslovak Academy of Sciences was founded and built on the model of the Academy of the USSR and its scientific-organizational structure. However, many problems had to be solved and some obstacles had to be overcome, before a Government committee headed by Professor L. Štoll could be set up at the beginning of 1952, which in a few months prepared all materials and basic data for the Act of Czechoslovak Academy of Sciences which was passed in October the same year. On the basis of this Act the President of the Republic Klement Gottwald at the Government proposal

appointed the first ordinary members of the Czechoslovak Academy of Sciences. Its first ceremonial session on November 17, 1952 marked the beginning of the existence of the Czechoslovak Academy of Sciences (ČSAV).

From that day the activities of our top scientific institution may be dated and accounted for. It should also be kept in mind that the Czechoslovak Academy of Sciences has always been broadly supported and encouraged by the top Party and State authorities. While in 1953 the Czechoslovak Academy of Sciences (including the Slovak Academy of Sciences) consisted of 81, in 1970 already had 145 institutes; e.g. the number of institutes engaged in biological research increased from 16 to 34 during that period. The number of all employees of the Academy on January 1, 1953 was 1,620 and towards December 31, 1972 it reached 14,000.

In many scientific fields the Academy achieved results that have brought us world recognition, be it in mathematical-physical sciences or the research in chemistry, technology or medicine. As for biological sciences the Academy has made great priority advances in human, animal as well as plant virology; in the solution of some basic immunological problems and problems of tissue tolerance; in solving bio-engineering problems in microbiology, primarily as far as the preparation of proteins by unconventional method is concerned; in botany, parasitology*), entomology and in the research on vertebrates and hydrobiology which all contributed significantly to the enrichment of theory as well as practice in public health, veterinary science and agriculture.

This basic goal—to help satisfy the social demands in practical life—has always been the motivation of all great investigations and since the foundation of our Academy it has often been directly expressed and included in its working tasks. As early as 1953 a Committee for the assistance to great constructions of socialism and a Committee for the assistance to Prague reconstruction were set up by the Academy to this effect. By the new Act of Czechoslovak Academy of Sciences (1963) the Academy was directly assigned the development of research activities at the highest level, in solving fundamental, for the economy and society most important theoretical problems relevant to biological, technical and social sciences and in applying the achieved results in practice with all possible speed. In 1965 the first agreement on the cooperation between the Czechoslovak Academy of Sciences and industry—the Škoda Works Plzeň, was concluded. This system of bilateral agreements has been mainly developing in recent years, when similar agreements were signed with General Management of the Kolben-Daněk Works (ČKD), with the national enterprise SPOFA and other institutions.

If we mention the assistance to the social practice as the primary goal of all research work, we also keep in mind the proper dialectical unity of theory and practice and the danger of vulgarization of this problem. The history of science and technology knows many discoveries and inventions which were not directly connected with material necessities of society and for centuries seemed to remain useless, but when the moment arrived they became the basis for a whole technical field. We are also aware of other important problems of modern science: tendencies towards a rapid differentiation of scientific fields and consequently towards a narrow specialization of research workers on one hand, and the increasing necessity for a synthesis of knowledge, for an integration of all information on the other. It is beyond the power of individual nations today to master all tasks demanded by modern society. In this respect the Czechoslovak science, and within its scope the Czechoslovak Academy of Sciences as well, greatly benefit by the fact that they are components of the scientific front of Socialist countries, headed by the Soviet science.

*) On the development of research in parasitology see *Folia parasitologica* (Praha) 17 (2): 97 to 101, 1970.

Since the end of the fifties an agreement has been existing on the scientific cooperation between the Czechoslovak Academy of Sciences and the Academy of the USSR, which has not only proved fully satisfactory, but offered to scientific institutes of our Academy the best possibilities of participation in the joint work. At present let us mention the well-known research work done in the INTERCOSMOS Project or in the United Institute of Atomic Research at Dubno, or investigations less known to the public such as the studies on physical properties of ion crystals and their theoretical interpretation; comparative research on natural foci of diseases; joint work in philosophical evaluation of the revolution in science and technology. A number of scientific disciplines of the Soviet science has greatly influenced the development of science in Czechoslovakia, especially of atomic physics, geology, geophysics, geography or microbiology, virology, parasitology, mammalogy, botany.

The scientific cooperation has become more concrete lately, international scientific teams are being formed and tasks allotted. The twentieth anniversary of the foundation of Czechoslovak Academy of Sciences marks the entry into the second, qualitatively different stage of its existence. While the conditions during the first post-war years of the building of Socialist state enforced the establishment of a top institution organizing for the most part our entire fundamental research, the present stage of the onset of the revolution in science and technology demands a new higher form of this organization. This new form should be reflected in the division of labour within the framework of scientific-technological cooperation in the complex programme of the Socialist economic integration of the countries associated in the Council of Mutual Economic Aid and within the scope of cooperation between the respective academies of the Socialist states. Although we are only on the threshold of the second stage of development, we can already observe great results. While pondering on the twenty years of development of our Academy, we must not forget to envisage the new perspectives of our science.

Vice-President of the
Czechoslovak Academy of Sciences
Prof. Dr. B. Rosický, D. Sc.