JPRS: 4596

11 May 1961

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By Dr Bela Lengyel

- Hungary -

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CSO: 1664-S/1

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[Following is the translation of an article by Dr. Bela Lengyel in Felsooktatasi Szemle (Higher Education Review), Vol X, No 1-2, Budapest, January-February 1961, pages 9-12.]

Not long ago, in 1958, I proposed in the pages of the Review some ideas of mine regarding the scientific activities pursued in universities. The reason for taking up the same topic so soon is, on the one hand, that certain measures taken during the past two years have considerably promoted certain aspects of scientific work and, on the other, that the immediate future will bring about planning which might determine for several decades to come the direction of both the research and academic programs of universities.

There have been developments in the course of the past two years which should be mentioned here with praise: the final regulation of aspirantship, the permanent curriculum for obtaining the doctor of philosophy and doctor of natural science degrees (which carry a scientific title also), the determination of administrative procedures with regard to extramural assignments for the purpose of combining scientific research with practical requirements, the fact that the interaction with foreign countries increased, and last but not least the necessary and desirable development in financial support of the scientific activites in the universities.

When we consider, too, that the plan for scientific research presently in preparation and the reform of education -- certain factors of which are intimately related to the scientific-research activities of universities -- are now being discussed and shaped nationally, we feel called upon to look at the scientific work in the universities, and at the points of departure for long-range development, with all the inherent problems and results of these areas.

The following investigations pertain to the Lorand Eotvos University of Sciences, yet they may be of interest to other institutions of higher education as well, as the more than 100 departments of our University are diversified not only in the fields of the sciences studied, but also in the methods of research.

The Department of Political Science and Law shows the relatively least complicated picture, with unified organization and methods of work prevailing. This obviously results from the fact that the field of this Department — in contrast to the other two major Departments dealing with more diversified fields -- is itself unified. This unity is evidenced by the cooperation of the related divisions. At the same time, the scientific activities here are interwoven, through personal and thematic channels, with those of other organizations involved in legal and political scientific activities in this country, such as Department II of the Academy, and the League of Hungarian Jurists; this cooperation is inevitable and not to be criticized however it serves to cloud the academic character of scientific activity and renders difficult the evaluation of the scope and merit of the work accomplished.

The Department of Natural Sciences is characterized by being supported in practically all divisions by stipends from the Academy of Sciences, which, thus assumes interest in the scientific activities of the university; this interest is being expressed by supervision, approval and support of work plans for scientific research. On the other hand, this is the only Department which undertakes scientific research required for practical purposes, usually for industrial application. These studies for extramural purposes often unite in a happy fashion the profound study of new scientific methods with their application for practical use. Similar to the Department of Political Science and Law, it was possible to realize here too the fruitful cooperation of related divisions and institutes; we also succeeded in harmonizing the scientific and academic programs.

The scope of the Department of Liberal Arts is even more heterogeneous, resulting in the fragmentation and small number of students of the various divisions. This circumstance alone makes it more difficult to achieve planned programs and perspicuity in this Department. The situation is aggravated further by the lack of "target" stipends from the Academy, lack of contact with the Academy and with other national organizations, and the difficulty involved in the supervision of subject-matter of the various divisional scientific projects. The cooperation between the related divisions is slight, sometimes non-existent. Those divisions which do receive "target" stipends from the Academy are in contact with this organization, although supervision by the Academy often is exercised in financial matters only, rather than in the evaluation activities of the divisions.

The negative aspects accompanying the positive ones do not by any means stunt the development of scientific work at the University. The publications of faculty members of the University are contained in the bibliographic service of the University Review, in a comparative listing for 1954 and 1959.

That there is a progress is quite obvious; the problem is to assure the planned, purposeful flow of work and devise ways for its direction. Two circumstances render this problem highly timely. One of these is the preparation of the prospective scientific plan which, if approved, will

very likely map out for decades the direction to be followed in scientific operations. The other is inherent in the fact that there are several Research Groups of the Academy now functioning in our University, organizationally separate from the rest of the university structure; these are as follows:

Geochemical Research Laboratory
Academy Research Group of Archaeology
Academy Research Group of Theoretical Physics
Academy Research Group of Electrochemistry
Academy Research Group of Inorganic Chemistry
Academy Research Group of Quantitative Analytic Chemistry
Academy Research Group of Polypeptide Chemistry
Academy Cooperative in Zoography and Coenology
Academy Cooperative in Botanical Taxonomy

This is indication that the Academy wishes to utilize increasingly the research facilities of the university.

The timeliness of examining the organizational possibilities for planning, supervising and evaluating the scientific activities pursued at our university grows more evident than ever. I have long and unswervingly professed the conviction that this task may be tackled only through, and with the organized assistance of, the Academy, as opposed to certain other propositions requiring a greater degree of independent action on the part of the University. It is true that university departments as centers of scientific work carry great weight: the number of faculty personnel engaged at the more than 600 university and college departments is about equal to that of staff working in the scientific research institutes.

The above are national figures. Within one university -- with the possible exception of a few institutes of higher education with highly specialized scientific program -- it would be hardly possible to form scientific teams in all areas of study of sufficient numbers and qualification to be able to perform the planning and evaluation of its own work. It is best then that this task should be the responsibility of the Academy, which is the highest-level national organization to direct scientific activities.

This view is supported by the procedures of planning. Most of the topics assigned to this University by the Council of Science and Higher Education belong in the Academy's sphere of authority; not one of them in that of the Ministry of Education, the supreme authority of the University itself. The Academy initiated action directly with the competent divisions regarding the topics for which it is responsible, while the University, as an organ of the State, is not officially aware of the extensive planning activities. The president of the Academy informed the President of the University about the superimposition of the Research Groups on various divisions only after action has been taken, directly approaching the members of the faculty to enlist their services as Heads of the Groups; these are valid indications for the Academy's assumption of responsibility for the organized scientific activities of the university.

Does this mean then that the university administration does not assume responsibility for scientific research? On the contrary, in the first place it may rightfully expect to be oriented in everything that is being planned, which is easily done by routinely routing one copy of the departments' annual work plans approved by the Academy, and one copy of the yearly evaluation to the Administration.

The Administration needs to apply itself to such issues as the working relationship between related divisions, the academic and research program of the Department, the course of sciences not represented at our university, the balance of the faculty's educational and scientific activities, the professors' contribution to scientific growth of younger faculty members, the application of the materialist principle in scientific work, etc.

Further, the Administration has the responsibility to make the Academy interested in the scientific activities of divisions not receiving a "target" stipend along with those divisions which do, in the approval and supervision of the scientific plans. It must take note when serious lag occurs in research work, either in the divisions or with individual faculty members; this is aided by documentation compiled on a year-by-year basis for each and every person involved in scientific activities.

It has the task of directing in part — or in whole, in the case of special divisions — the aspirant training program, of promoting work toward doctors' degrees, all activities that are part of the important task of building reserves for the scientific ranks.

The Administration has a responsibility to steer and develop industrial research conducted at the divisions of the Department of Natural Sciences, which constitutes a desirable and vital link between the requirements of practical life and theoretical scientific work.

Another important job of the Administration is to help and promote university publications. The Annales, the foreign-language scientific journal of our university, has been regularly published since 1957, in the following sections:

Sectio Biologica
Sectio Chimica
Sectio Geologica
Sectio Historica
Sectio Iuridica
Sectio Mathematica
Sectio Philologica

Interest in the publications, both on the part of authors and readers, is growing rapidly. We have, through the Annales, the benefit of exchanging many hundred foreign scientific journals, which is a gain not only from the scientific point of view, but which also saves foreign currency. Many interested people from home and abroad wish to obtain the Annales on a subscription basis.

Along with these successes, there are difficulties involved in the smooth flow of material and technical publication facilities. In view of other departmental and divisional publications, the request that the

University Press be returned to the possession of the Lorand Eotvos University of Science keeps recurring with increasing urgency and frequency.

Scientific activity without the necessary financial-technical conditions is unthinkable. There are several serious problems in this respect, especially in connection with the Department of Natural Sciences, which call for immediate action. Overcrowding need to be mentioned first among these. The constant, expensive remodeling and extension of the Trefort Park plant solves hardly anything. Natural scientific research becomes increasingly complex, requiring more and larger modern facilities and equipment. Even if these were available, setting them up would encounter difficulties. Nothing is happening to radically eliminate the problem of overcrowding even though the issue is kept warm continually. The Ministry of Education should handle this situation with due attention and greater dispatch.

The University has been provided with instruments during recent years in increasing measure since we have been able to expend considerable sums on instrumentation. On the other hand, there are many complaints as to the insufficiency of service staff (lab assistants, workshop staff). The other two Departments joint in with requests for librarians. The appalingly small library staff in comparison to the extent of the library network hinders the management and use of the libraries.

The difficulties concerning technical staff is caused by the difference in wages between those offered by the university and similar positions in industry; the small salaries result in obtaining staff with lower qualifications than needed for the job. Elimination of these deficiencies in the interest of scientific work is a not unimportant part of the tasks of the Administration.

The thoughts expressed above had the objective of outlining the major trends in the scientific activities pursued at the Lorand Eotvos University of Science, and of pointing out some of the problems encountered in the future development of research. The next will have to be the development of organizational forms devised to serve the purposes of scientific research activities with the least amount of red tape, in the most "productive" way possible.

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