

The second session of the Congress considered in detail the problems mentioned above, namely, the political and economic framework required for the cultivation of independent scientific research in a free society. There was general agreement that the overwhelming role of the State in providing the finance for scientific research and for education in general is unavoidable. It is also obvious that even under the best set-up this would involve a certain amount of restriction of academic freedom. The discussions therefore mainly centred on the methods of reducing the centralised control to the minimum and providing the maximum freedom to the scientist and the intellectual.

It would be certainly wrong to say that science is nowadays delivered helpless into the hands of the State and its freedom destroyed, merely because it becomes dependent on the discretion of the State, exercised through its power to grant or refuse financial support. As Ludwig Raiser says, "Liberty can perfectly well be maintained in investigations supported by the State, so long as there are adequate guarantees that the State will respect the independence of the scientific domain, and of the methods of procedure appropriate to it, and will keep strictly to its role as protector and sponsor and not transgress into that of a dictator". The need for an authority constituted by the State, but composed essentially of academic people, who would be in charge of the distribution of funds for research is therefore obvious. The system adopted in England, where Parliamentary grants are administered by the University Grants Committee, was universally considered to be the ideal solution. It is indeed gratifying to note that this system has

now been adopted in this country. It constitutes a relationship which presupposes mutual confidence and thus also implies the necessary freedom for both parties.

It would be appropriate to mention also another type of freedom which the academic worker must have, which was pointedly raised by Andrade. One of the results of the regimented organisation of research has been "in destroying the leisure of a professor. I would mention three words—committees, reports, correspondence. When I was young, they meant 5% of a physicist's time; now I leave it to you, gentlemen, whether it is 80%, 85%, 90% or 95%, but it is something like that. . . . Who is going to say in these days, 'I will keep this young man for the next ten years at leisure on the off chance that he will produce something?' But they did when I was young; perhaps once in three times they picked a dud, but the other two were the men who made advances in science".

The extent to which the State financing of research might react on the freedom of choice of subjects for research was also considered during the session. Tarski draws attention to the fact that while scientists, physicists and chemists in particular, have wide opportunities in the United States, philologists in general were at the bottom of the hierarchy until very recently they came greatly into demand with the development of the subject of mechanical translation. No solution appears to be in sight for this situation; it is bound to arise with any form of economic support. This whole issue of the material dependence of the scientist on the community is worthy of the most careful attention.

CONGRESS AND EXHIBITION AT FRANKFURT, 1955

THE Congress of the European Federation of Chemical Engineering, 1955, will take place in Frankfurt am Main from 14th to 22nd May, 1955, at the same time as theACHEMA XI Chemical Engineering Exhibition and Congress. The Congress will be arranged in collaboration with all the member associations of the European Federation of Chemical Engineering.

More than 600 firms from 12 countries, will be presenting their new developments and established ranges of production for discussion in the Congress. Instruments for measurement and control to deal with the numerous variables of State and properties, with a degree of accuracy to meet the exacting requirements of modern science and technology, will be demon-

strated by specialists from about 50 firms from 5 different countries. Individual lectures will be delivered during the afternoon and will deal with specific scientific observations and technical developments.

TheACHEMA XI Lecture Course will be organised byACHEMA as an introduction for native and foreign students to the vast field of chemical engineering. Lectures will be held in the mornings followed by an inspection of various apparatus and machinery. The final programme for the Congress of the European Federation of Chemical Engineering will be sent to the members in due course.

Further details can be had from: Dechema, Frankfurt am Main, W-13, Germany.