

He was always interested in the training of young scientists, and his work created a branch of Soviet chemistry that produced many young polymer scientists. He was one of the organizers, and editor in chief, of the Soviet journal *Vysokomolekulyarnye* (high molecular compounds). In Britain his name is familiar in, for example, the documentation of rubber and plastics. His classic work, *Short Sketches in the Physical Chemistry of Polymers*, written in collaboration with Slonimskii, and the Kargin balance for thermomechanical testing of polymers, are often referred to. His work on the thermodynamics of solutions of high molecular compounds and on the structure of polymers made a fundamental contribution to the foundation of modern theories concerned with the processing of plastics, rubbers and synthetic fibres.

Kargin was greatly respected by his own people and by scientists all over the world. He was an international figure, unlike some of his scientist colleagues who rarely left the Soviet Union. For his outstanding scientific achievements he was made a Hero of Socialist Labour, awarded the Order of Lenin three times, the Order of the Red Banner twice and several medals. He also received the Lenin prize and three State Prizes. He became a corresponding member of the USSR Academy of Sciences in 1946 and an Academician in 1953.

Correspondence

Research Associations and Higher Education

SIR,—It is clear that the future of higher education in this country is still uncertain. Even so short a time after the Robbins Report another such study has been called for in the recent Parliamentary Select Committee Report on university reform. This report followed an independent attack on the government's seeming indifference to the well-being of polytechnic development (*Nature*, **224**, 1; 1969).

The trouble with the so-called binary system is that polytechnic training can hardly be regarded as providing a parallel route comparable with that of the university. I would suggest that the status of the polytechnic could be dramatically changed simply by linking the polytechnic movement with that of the industrial research association (RA). Research associations are largely financed by levies and subscriptions from member firms but receive public grants *pro rata* through the Ministry of Technology, although initially it was ordained that they would become self-supporting after a reasonable period. The ministry should now say that this time has arrived and it should divert the grants in a phased operation to the polytechnics, to be used either in developing postgraduate work or in enlarging their sphere of activities in ways of their own choice. The industrial federation would be encouraged to transfer its present RA activities either to the nearest polytechnic or to polytechnics *en bloc*, sharing equipment, buildings and staff so that in effect the RA would become the postgraduate faculty of the polytechnic. The union of the staffs would bring about the oft-claimed advantage of research and teaching being shared.

Where geographically a total transfer would be difficult, firms at present contributing to their RA could make a separate but similar arrangement on a regional basis.

Independent of degree work, special short courses involving expertise at varying levels of the industrial scene would become common and because the RAs do not recognize academic terms their influence would break down this hangover from the university past and ensure a more efficient use of buildings and equipment. This would not mean, of course, interference with the freedom of the industrial federation to continue its present RA; all it would be asked to do would be to pay for it.

I also suggest that the process of setting up of industrial advisory centres in the universities should be halted and the scheme centred on the polytechnics. This would avoid the present waste of effort whereby the Ministry of Technology sets up its industrial liaison officers in universities and polytechnics, although they offer the same service as has already been offered for years by the RAs, often in the same town.

Difficulties of course there would be, but they would not be formidable. The proposal would also silence those critics who suggest it is time that the cost-effectiveness of the RA movement was looked at.

Yours faithfully,

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Enzymes at Houston

SIR,—In the note "Enzymes at Houston" (*Nature*, **223**, 336; 1969), you wrote that "the mood of practising doctors in Britain seems to be running somewhat against enzyme assays just now, at any rate for purposes such as the diagnosis of myocardial infarction". This is not correct. Assays of enzymes, released from damaged myocardial muscle, are increasingly used in diagnosis of infarction. A sharp rise of the serum glutamic-oxaloacetic transaminase (SGOT), maximal at about 24 h after infarction and lasting for only a day or so, is of great value in the detection of myocardial cell damage; this estimation is particularly useful if the electrocardiogram is already abnormal from previous myocardial disorders. A rise of lactic dehydrogenase (LDH) at 4–7 days after infarction is of less value. In other fields of medicine, assays of serum glutamic-pyruvic transaminase (SGPT) provide valuable evidence of liver cell damage, and serum creatinine phosphokinase (CPK) measurements are useful in muscle disorders associated with rapid cell degeneration. The use of other enzyme assays is being explored.

Yours faithfully,

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No Peace for the Wicked

SIR,—Many biologists must disagree with the over-optimistic attitude of the editorial "No peace for the wicked" (*Nature*, **224**, 629; 1969). In particular, it is difficult to understand how anyone with a knowledge of the figures can say that population increase is unlikely to be a social disaster. At present the world population is too large for the amount of food available, in spite of continued agricultural advances. How much longer will our luck last? Little thought is given to the danger of disease, perhaps a new variant of influenza or something similar, sweeping through these large, under-fed, populations of *Homo sapiens* with all the subsequent social upheaval caused by very high death rates.

Isn't it time that biologists and others thought a little more about the advantages of stable populations? After all, species that show large fluctuations in numbers, with all the "misery" of population "crashes", are in the minority.

A stable population could have enormous economic advantages and Britain could set an example to the rest of the world. Man not only needs food and shelter, but also enough room to be able to own his home, for we appear to be a territorial species. We all desire a high degree of education for our children, yet the present system is in chaos for lack of funds. Haven't we perhaps