

Hungary steers a course without UN aid

Hungary's Academy of Sciences is now working out its Five Year Plan for 1981 — 1985, the first in which it will be entirely without the support of the United Nations Development Programme. For although by 1975 the Hungarian economy had passed the formal criterion for a 'fairly well-developed country', careful management of the UNDP funding ensured a certain carry-over beyond the official termination date. Furthermore, careful negotiation with the UNDP administrators cut down the expenditure on administrative overheads, so that an unusually high proportion of the funds available actually went on the equipping of Hungarian science, rather than on the expenses and infrastructure associated with the presence of international 'experts'.

A leading figure in these negotiations was Dr Bruno Straub. A biochemist of some renown, since the mid 1960s he has had an impressive second career as an administrator for scientific projects. In 1969, he was appointed a Vice-Chairman of the International Atomic Energy Agency committee for working out a nuclear safeguard agreement, and after the withdrawal of the chairman, Kurt Waldheim, from active participation, he took over as *de facto* chairman. In 1971, he was elected to the executive board of the International Council of Scientific Unions, serving on its Environmental Commission. And in his native country, Dr Straub applied his skill and renown as an organiser of science to a problem which, as a biochemist, he felt to be a major priority — the sad state of Hungarian biology.

Since the Hungarian economy is considerably dependent on agriculture, the development of the country's biological expertise seemed to him a matter of pressing concern. Unfortunately, in the mid-1960s, Hungarian biology was firmly in the hands of what Dr Straub described as "the old people". These, he explained, were "biologists and zoologists, only interested in systematics and taxonomy". Such an attitude, Dr Straub explained, found a certain support among the administrators. Not for ideological reasons — Lysenkoism never took hold in Hungary and the principle of a free inflow of information always held good.

The problem was simply one of finance. "You can do taxonomy cheaply, but experimental biology means instrumentation. You can get simple things here in Hungary or else from Poland — but sophisticated work means dollars; and that means a special decision of the government."

By tapping the UNDP aid to Hungary (about \$1 million per year over five years), it became possible for the Academy of Sciences to construct and equip a modern biological research centre at Szeged with

four institutes — biochemistry, biophysics, plant physiology and genetics, with a fifth institute, enzymology, sited in Budapest. Between 1973 and 1978, the Szeged Centre received some \$1.2 million from UNDP, more than 50% of which was spent on equipment, with the participation of foreign experts reduced to "just those who could really help us".

In return for this special arrangement, Hungary had to undertake to give scholarships at Szeged to trainees from developing countries, to whose problems Hungary is still fairly close. Dr Straub, who had accepted the post of General Director of Szeged in 1973, on the understanding that it should be a rotating leadership between the five sections (he resigned in 1978), was able to persuade the Academy of Sciences to support this scholarship scheme. "While the UNDP money was still coming in, they were quite keen about it", he explained, "now they are a little less happy, but still, the scholarships continue". Luckily for intending applicants, the working language at Szeged is English, and the third-world trainees at present include representatives of Vietnam, Korea, a number of African countries, and (so goes the Szeged joke), a citizen of Lancashire.

Research at Szeged varies from basic investigations of immunological reactions in blue-green algae, through studies of the genetic basis of nitrogen fixation (with relation to lucerne, Hungary's most important legume), to contract research funded by agricultural concern. According to Dr Farkas, Director of the Institute of Plant Physiology, such contract work can raise the salary of those involved by up to 10 to 50% — though not, unfortunately, his own, since Directors and Vice Directors of Academy Institutes are not allowed to accept contract payments. The government, he explained, is trying to bring in material incentives (ie bonus payments) in a number of aspects of scientific life, both for economic reasons ("it works out cheaper in the long run") and also to stimulate creativity. He himself was not entirely happy about the contract scheme, he said, pointing out that many people would prefer to see a regular increase in basic salaries. Work for the agricultural cooperatives, such as the current project on the technology of vegetative propagation of vine-stocks, was "a burden, but beneficial". Nevertheless, he intimated that he would not be sorry if the Academy were to reverse its present policy on bonus payments, by setting a limit as to how far an individual scientist can augment his salary. Otherwise, there might be a real danger that scientists would be distracted from their main line of research.

Whatever the temptation at the laboratory-floor level, Hungarian science

does not intend to abandon fundamental research. According to Dr Istvan Lang, Deputy General Secretary of the Academy of Sciences, fundamental research accounts for some 14% of Hungary's total R & D costs. "We think we must keep it at this level, and the state budget gives it a long-term guarantee."

There is no question of a cut-back; the main problem is what sort of fundamental research should be carried out. Hungary, he said, with about 0.9% of the total world capacity for research, clearly must be selective, and has tended to concentrate on fields in which Hungarian scientists had already made a name — mathematics, physics, and biochemistry. Within these fields, there is a certain amount of "target orientation". For example, Hungary wants to develop the pharmaceutical industry. "Hence we hope that a young biologist will choose his work with this in mind, rather than getting attracted to space biology, say!" (Though Hungary does, in fact, have a space biology programme, as well as a five year project at Szeged on the asymmetry of living matter, now being phased out in the words of its director, "until we find another living system or make life artificially, to provide material for comparison".)

Responsibility for science planning is divided between the Academy of Sciences and the National Committee for Technical Development, both of which are subordinated to the Government Science Policy Committee, headed by Gyorgy Aczel, one of the Deputy Prime Ministers. Policy decisions taken by the Science Policy Committee are binding on the Academy, Secretary Lang explained, "But what you have to understand is how our planning system works. We are a centrally planned economy, but we don't plan everything centrally."

As an example of academic freedom, Hungarian style, he cited his recent work for a special council to decide on future development of the Lake Balaton area. "When I was elected head of the Council, I chose as our first task the evaluation of all existing data, and the preparation of recommendations to the Government. These were discussed and approved by the Council for the Environment and Nature Conservation. Next a regional development plan was elaborated on the basis of these recommendations".

"Our forecasts shocked public opinion," he continued "We had to point out that if nothing changed, if the input level remained the same and the rate of control the same, then in 15 years' time, Balaton would be green with eutrophication and unacceptable as for leisure use".

It is, perhaps, not a matter of great surprise that the new plan was accepted on June 10.

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