

The whole computer display was apparently taken over from the museum in Stevenage and seems not to have been embellished on its transfer to London because of the staff shortages at the Science Museum. It seems, however, to be the museum's plan to install a regular computer and mathematical section in the course of the next few years. The hope is that this will run to 4,000 square feet. Completion depends on the effect of Government economies.

UNIVERSITIES

Graduates to Order

How far should universities tailor their courses to produce the kind of graduates the economy needs? This was one of the problems discussed at the academic consultative conference organized by the Committee of Vice-Chancellors and Principals last week. One of the problems, of course, is that manpower planning is in any case something of an inexact science, but nevertheless there seems to have been agreement that manpower considerations should play an increasingly important part in university decisions. Professor C. A. Moser, Director of the Central Statistical Office, gave a paper which examined the present status of manpower planning, and how its influence on university development interacted with the other pressures—student demand, and cost—to produce the final balance of courses.

Mr S. L. Bragg, Chief Research Engineer for Rolls-Royce (and a member of the University Grants Committee), set out to define the needs of the employers. He took the line that industry needs a large number of generalists and only a few deep specialists. "The whole problem of manpower planning is in the training of the generalist, and will be solved when we can successfully carry this out." With generalist courses, graduates would be sufficiently flexible to make detailed planning unnecessary. But Mr Bragg seems to have been uncertain whether it was essential to have general courses in order to produce generalists. Was it possible, he wondered, to persuade people that specialization was only a vehicle of education, not its purpose?

Professor G. C. Moodie from the University of York and Professor M. Swann from the University of Edinburgh (whose paper was read in his absence by Professor J. G. Ball from Imperial College) discussed the internal academic and administrative changes that manpower planning imposes on the universities. Professor Moodie said that the changing situation would force universities to establish stronger central powers of decision-making, but that this would happen in any case, whether or not manpower planning was the determining factor. He suggested the formation of a central planning agency in each of the universities, staffed by senior academics (not necessarily deans or heads of departments), which would act as an advisory committee. The agency would be responsible for dealing with all the issues that require decisions of policy—it would, for instance, treat requests to fill vacant lectureships as if they were requests for new posts, and back up its recommendations to senate with statistical and other evidence. The task of these CPAs, Professor Moodie said, was not to pre-empt all decision making and all policy initiatives, but to act as a new lens through which these decisions and initiatives should be focused.

ENVIRONMENT

Planning Pollution

IN contrast with many other research topics, the aim of studying air pollution is either to remove the phenomenon itself or to minimize its effects. The terms of last week's conference organized by the Royal Society assumed that the elimination of pollution at source was not yet a practical possibility, and most of the papers presented dealt with the measurement and theory of the diffusion of alien particles in the atmosphere. It was pointed out, however, that the advent of nuclear power on a large scale could well remove the need for a long-term solution to the pollution from power stations.

The contributors to the conference, drawn from Europe and North America as well as Britain, dealt with three specific aspects of pollution—measurement techniques, theories of plume rise and particle concentrations and a variety of more general problems about the atmosphere and plant design. Several speakers referred to experiments carried out at Tilbury, where the plumes emitted by the three power stations in the vicinity were used as subjects for study.

Among the contributions from the Central Electricity Research Laboratory at Leatherhead was a description of the use of a pulsed-light rangefinder (LIDAR)—based on the detection of the backscatter from a pulse of ruby laser light—to measure the concentrations and dimensions of chimney plumes at some distance from the stacks. Another paper from Leatherhead contained a general review of the more conventional methods of particle measurement, including a new gauge to measure the "nuisance value" of the dust as a function of particle concentration, velocity, and size. Some of the meteorological aspects of pollution received attention. The effect of the vertical migration of particles on the crosswind spread of a chimney plume was covered in a paper from the Meteorological Office at Bracknell, and an Italian contributor described how standard meteorological balloons are being used to study the lower atmosphere in the locality of proposed power stations. This type of surveying apparently has particular significance in a mountainous environment.

The most systematic analysis of the chimney stack problem came from Professor K. W. Klug of Darmstadt, who presented a flow chart of the assumptions required to calculate the distance and value of the maximum concentration of dirt from a plume. In another paper, Mr A. J. Clarke of the CEGB outlined in simple terms the pollution factors that must influence planners of power stations. It seems that the dirt concentration varies roughly as the rate of emission and inversely as the square of the height of emission, but overall decisions on chimney construction are still based on qualitative judgments.

RONAN POINT

Who is to Blame?

FEW will derive much comfort from the Tribunal of Enquiry into the Ronan Point disaster of last May (*Nature*, 218, 718; 1968) when a section of a 22 storey block of flats collapsed at Newham (HMSO, 9s 6d). The tribunal finds some grounds to criticize everyone