July 28. He suggested that while these committees had an important part to play in Britain's system of government, particularly in regard to scientific and technical advice, it was desirable to take a closer look at the part they play, the way in which they were developing and their constitutional significance. Mr. Dean said that besides increasing in number, the scope of the Committees was tending to widen so that they dealt increasingly with major aspects of policy and advised on a much broader front than many of the early committees, which were largely technical or specialist. He challenged the necessity for the reports of many of these committees to be confidential, citing some obvious examples of discrepancy.

Mr. N. MacDermot, the financial secretary to the Treasury, who replied for the Government, agreed that advisory committees were a valuable institution of government, but did not think that at present there was any burning issue calling for official examination of the scope and activities of these committees. If a review of their activities was desirable, he thought that the Estimates Committee might be a suitable body to undertake such an investigation, unless it was desirable to appoint an outside body. On the cost of these committees, Mr. MacDermot said that the total cost in remuneration and expenses was about £150,000 a year, in addition to the secretarial services provided for them, which cost a further £280,000. There had been no change in the policy regarding publication of reports, but he pointed out that care should be taken to avoid confusion between the role of Ministers, on one hand, and that of the advisory committees, on the other. Whether the advice was published or not was the responsibility of Ministers on whom responsibility for policy also rested: publication of the advice tended might sometimes exert pressure on Ministers. He thought it was undesirable to make it an invariable rule that the advice of committees must be published, as we might thereby find ourselves deprived of some of the freedom we now had in obtaining expert opinion. Neither Mr. Dean nor Mr. MacDermot referred to the study of advisory committees published in 1960 by Political and Economic Planning or to the earlier study of the use of "Committees in Government", published in 1955 by Prof. K. C. Wheare.

The Nature Conservancy

In a written answer in the House of Commons on August 2, Mr. A. Crosland, the Secretary of State for Education and Science, stated that he had approved proposals submitted by the Natural Environment Council for senior headquarters staff serving the Nature Conservancy. The next director of the Conservancy would be a scientist appointed at the upper level of the chief scientific officer grade (£4,700) and would be supported by a deputy director for the organization and planning of research, and a deputy director for conservation and management. The former would be a scientist at deputy chief scientific officer level and the latter either a scientist at the same level or an administrator at assistant secretary level. These proposals were prepared by a working party, headed by the chairman of the Council, Sir Graham Smith, and were endorsed by the Council and carried the full support of the chairman of the Conservancy.

Towards a Manpower Grid

There is a growing realization that, in raising productivity from the recent levels of 1·5–2 per cent to the 3·5 per cent national target, efficient utilization of industrial manpower plays a critical part. International comparison with other leading industrial countries implies that British management is wasteful in its use of manpower. Viewed from the other angle, restrictive working practices make worse a regressive situation. The apparent full employment of the British economy is, in fact, a spurious interpretation of the real employment situation. Present high employment is falsely bolstered by the overmanning of the profitable sectors of the industry, and retention of labour in industries that have ceased to be fully economic. The degree of real under-employment that this involves is variously estimated; however, qualified observers consider that the elimination of it would release between 10 and 15 per cent of the industrial work force for re-deployment into other work. If Britain is to remain internationally competitive during the next decade, her industry will have to make real inroads into this manpower problem. An article by Michael Hall, manager (recruitment and manpower), Esso Petroleum Co., Ltd., directs attention to the need for more efficient instruments and methods of manpower planning at all levels in industry and at the national level (*Personnel Management*, 47, No. 372; June 1965). Without improved data sources or manpower forecast techniques, it is difficult to see how the massive labour movements, between skills, localities of employment or between employers, that the present economic analyses imply to be necessary can be achieved.

Education of Engineers in Western Germany

In a lecture delivered at the summer meeting of the Institution of Mechanical Engineers at Wiesbaden, Western Germany, in June, Dr. G. Brenken described the education of professional engineers in Western Germany. He began with the school system which feeds the technical schools, whether Technische Mittelschule, Technikerschule or Technische Hochschule. One of the two qualifications of a professional engineer is the Diplom-Ingenieur, obtained after third-level engineering education in Technische Hochschule, normally by a four-year course. Practical training in industry is a prerequisite condition of entry. In 1964, there were 55,000 students in the nine Technische Hochschulen and 4,500 graduates, compared with 13,500 graduates from the 122 Ingenieurschulen with their 52,472 students in three-year courses, and 8,000 graduates from the 220 Technikerschulen with their 30,000 students, which provide day courses of a year and a half and 3–4 years in evening classes for technicians. Most of the professional engineers are later placed in design and planning; only 10 per cent are placed in research and development. The academic education of engineers at Technische Hochschulen has been extended by one to two years over the past fifteen years, although at most of the Hochschulen the courses are still four years (*Proc. Inst. Mech. Eng.*, 179, Part 4; 1964–65).

Institution of Production Engineers

The International Journal of Production Research, published by the Institution of Production Engineers, is a quarterly periodical now beginning its fourth year, and in the latest issue an editorial note deservedly chronicles achievements since its inception (4, No. 1; 1965. The University, Birmingham 15, and 10 Chesterfield Street, London, W.1). First, this *Journal* is truly international in that its advisory board consists of distinguished members from many parts of the world, and it now circulates in forty countries; secondly, it is a useful link between research workers through which progress may be reported and new ideas generated; thirdly, it covers fields of study to-day recognized as constituent parts of production engineering. Among the papers in the present issue are: "The Ductile-Brittle Transition when Machining Perspex", by R. F. Scrutton, which identifies the conditions under which 'Perspex' can be machined in a ductile manner avoiding troubles often incurred with this and other brittle plastic materials; "A Case Study of Programmed Instruction in a Self-Correcting Teaching System in an Apprentice Training School", by B. T. Dodd, concerning accelerated training methods designed to reduce the period of craft apprenticeship from five to four