CAREERS FOR SCIENTISTS

Science Graduates Must Widen their Horizons

THE articles which appear on the following pages are designed to give students who are graduating this summer some assistance in choosing a career. This is the time of year when, traditionally, undergraduates are feverishly trying to decide between the merits of one employer and another, but this year, as in the past few years, there are fewer employers on the horizon and those that are in the market want many fewer new graduate employees than they did in the halcyon days of the early and mid-1960s.

But is the situation now improving? There is some evidence that this year's crop of graduates will find it easier to find a job than their predecessors did last year but it is clear that the prospects are not better in all areas. The message to job seekers is that the traditional avenues of employment are still constricted but that there are reasonable prospects outside the areas where scientists have tended to look for work in the past.

The British graduate had little difficulty in selling his skills until the late 1960s but he now finds that a degree is no passport to employment. The most difficult year for the new graduate was 1970–71 when the British manufacturing industries took on only 6,500 new graduates compared with the almost 8,000 who accepted employment in these sectors in 1968–69 and 1969–70. Although the figures for 1971–72 are not yet available it seems unlikely that they will differ significantly from those obtained for 1970–71, but the cheering note is that the manufacturing industries this year are expected to recruit to a greater extent than they have done in the past two years. The numbers will, however, still be lower than for 1968–70.

Most arts graduates have, since time immemorial, progressed from university to employment in which they have not directly used the knowledge which they acquired as undergraduates. But the scientist after graduating has always expected to apply his knowledge in a more direct fashion. But now this traditional type of employment for the scientists is becoming increasingly less available and in the long term it is probable that this is not wholly a bad thing both for the graduate and his employer. Whatever employment the graduate scientist enters into, and in recent years this has included banking, sales and accountancy which have always been the preserves of the arts graduates, he does not stop making use of his science. He is therefore most certainly not a lapsed scientist, for whatever such a person is he is not someone with a degree in science who is earning his living without directly applying the results of his training.

University careers officers have realized during the past two years that the job patterns for science graduates are changing and the slightly better prospects which this year's graduates face are a direct consequence in no small measure of the efforts which have been made by the universities to find alternative employment for the science graduates outside these traditional areas. Employers, who in the past saw no need for science graduates but who have recently taken scientists on to their staffs, should now be more open to suggestions that they should employ more scientists—presumably in jobs which were until a few years ago the prerogative of arts graduates.

In recent years the numbers of science graduates entering employment have decreased and, not surprisingly, there has been an increase in the numbers taking courses in teacher training after graduating to compensate for this. But the numbers continuing in academic study have remained substantially constant since 1969. One of the most startling statistics to emerge from the articles on the following pages, however, is that between 1970 and 1971 the percentage of first degree mathematicians and statisticians who took up scientific work, which does not include teaching, decreased from almost 32 per cent to 17.7 per cent (see page 380). Physicists also suffered a similar decrease in demand from 29.1 per cent in 1970 to 19.5 per cent in 1971 but biologists and medical students have suffered no such large change, for in 1971 19 per cent of that year's first degree graduates took up scientific work compared with 22.3 per cent in 1969 and 18.9 per cent in 1970. The higher degree graduates fared slightly better but mathematicians and statisticians were still not needed to carry out scientific work to the same extent in 1971 as they were in 1970.

Even if job prospects for scientists in science-based industries are not getting substantially better, there are at least no large scale predictions being made now that the situation must first get worse before it improves. But the job situation in the science-based industries is expected to improve although there is no one in the know who is prepared to be bold enough to set a time on this. It is, however, universally agreed that the heady days for science graduates which occurred in the early and mid-1960s will not return. But, that said, there is universal optimism that the present slump is only temporary. Scientists in the United States have also suffered the same setbacks, but in 1972 the chemical industry in that country broke all records and the industry is starting to move upwards again. The British chemical industry is expected to follow suit soon although it will, quite properly, take time to readjust afterwards before it begins to think of increasing its intake of new graduates. The long term prospects for the scientist in industry are therefore not altogether bleak.