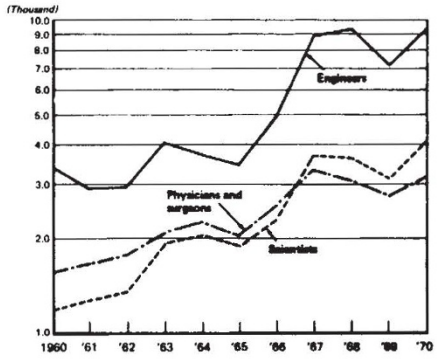
the influx the previous year. In the fiscal year 1970, 13,337 scientists and engineers and 3,155 doctors entered the United States from abroad. This represents a sharp reversal of the downward trend between 1968 and 1969 when the influx of engineers and scientists dropped from 12,973 to 10,255 and of doctors from 3,060 to 2,756.



Immigrant scientists, engineers, and physicians, by broad occupational group, fiscal year 1960–70.

One reason for the increase is the 1965 revision of immigration quotas whereby quotas from Asian countries were increased at the expense of those from Europe. Engineers and scientists from Asian countries, particularly India, the Philippines, Taiwan and Korea, have pushed up the Asian brain drain from 4,000 in 1968 to 4,900 in 1969 and 7,500 in 1970.

The country most seriously affected by the brain drain is India, which in 1970 lost 2,900 engineers and scientists and 242 doctors to the United States. The second most serious casualty is the Philippines, with a drain of 1,550 engineers and scientists and 770 doctors. In Europe, Britain is still the heaviest loser, being forsaken by 680 engineers, 220 natural scientists, 40 social scientists and 192 doctors, an aggregate slightly greater than that of 1969.

The largest category in the brain drain is that of the engineers, who last year formed 9,300 or about 70 per cent of the total. Within this category, fewer aeronautical engineers entered the United States last year than in 1969, but all other engineering specialities flocked in in greater numbers, making an overall increase of 30 per cent. The influx of natural scientists swelled by 25 per cent to 3,260, and at 770 the number of social scientists was half as large again as the inflow in 1969.

Since February this year immigrants to the United States have been required to have a job offer for which Americans are not readily available. This condition may not reduce the brain drain in any serious way but will merely tailor the rest of the world's loss of scientific manpower more closely to the needs of the United States job market.

Short Notes

by our Washington Correspondent

Sickle Cell Anaemia

LEGISLATION to set up a new institute of the National Institutes of Health devoted to sickle cell anaemia was proposed recently by Representative Ella T. Grasso. The disease, which affects one in every 400 to 500 blacks, kills half its victims before the age of 20. The theoretical basis of the disease is rather well understood. Ingram's discovery of the single amino-acid change in sickle cell haemoglobin was one of the earliest triumphs of molecular genetics—but medical interest in developing a practical treatment has been curiously slow.

The NIH's most recent contribution to the field was a research grant in support of a procedure, widely publicized as the first "fully effective" treatment, which consisted of injecting high concentrations of urea intravenously. The budget statements prepared by the Nixon Administration last February promised that research on sickle cell anaemia would be "substantially expanded". President Nixon was even to have mentioned the disease in his State of the Union message but the reference was dropped from the final draft, apparently on the grounds that sickle cell anaemia is not well known among the general public.

More recently the administration announced a pilot genetic counselling programme to advise prospective marriage partners among the 10 per cent of the black population that carries the sickle cell gene of the genetic risks involved.

Lost Nerve Gas

THE US Army is still in trouble over the matter of 200 canisters of VX nerve gas it managed to lose in a small Alaskan lake in 1966. The canisters, scheduled for destruction, were stored on the frozen surface of a lake in the army's Gerstle River test area, but the order for destruction never came. One sunny day in May, the lake thawed and the canisters sank to the bottom, leaving only confused rumours of their existence. No records of the canisters' fate being maintained, it was not until two years later that the army thought of draining the lake to see if the rumours were true. By August 1968 the recovered munitions were being disarmed, and nine months later the army got around to announcing the incident. Local residents had not been warned at the time, it was explained, because the lake site was remote from populated areas and there was no sign that any of the canisters had leaked. The incident might have been forgotten as just another example of chemical and biological weapons being handled in cavalier fashion, but that two soldiers stationed at Fort Greeley, the Alaskan test area, died during the time the nerve gas canisters were being recovered from the lake. Pneumonia, the army said. Recently, Senator Mike Gravel of Alaska wrote asking for a fuller account to the Secretary of Defense. The doctor attending one of the soldiers, Gravel's letter stated, had written in a progress report that he didn't think the illness was due to pneumonia, and one of the soldier's assignments had been cleaning gas-masks.

Pot Will Follow Porn

THE high value attached by President Nixon to rational inquiry as a means of arriving at solutions was amply demonstrated by his reaction to the report of the Commission on Obscenity and Pornography which reported last year. Further demonstration was provided two weeks ago at a news conference held at San Clemente, California. Asked about the question of legalizing marihuana, a subject now under study by a presidential commission, Nixon stated, "I am against legalizing marihuana. Even if the commission does recommend that it be legalized, I will not follow that recommendation." Like the judge in the Manson case and the review board in the Calley case, the commissioners investigating marihuana now know to what conclusion the evidence must lead them.

Chemists Out of Work

SOME 5,000 of the nation's 186,000 chemists and chemical engineers are now out of work, according to a survey conducted by the American Chemical Society, and another 12,000 are in varying states of insecurity ranging from temporarily unemployed to part-time employment and post-doctoral positions. The ACS survey estimates that at least 11,000 of these 17,000 need new jobs but they will be competing with the 1971 crop of graduates—16,000 bachelors, 3,000 masters and 3,000 PhDs, at least half of whom, or about 11,000, will be actively seeking immediate professional employment. The number of jobs needed for chemical scientists in the coming months could thus rise to some 22,000, which is more than double the number of jobs available in a normal year.

The estimates of unemployment are based on a survey taken among ACS members; 2.7 per cent of the 27,000 members responding reported they were unemployed as at March 1, 1971. Unemployment was worse than average among those under the age of 25, seven per cent of whom were jobless, and among women chemists, of whom 6.3 per cent were unemployed.