too many foreigners arrive in the United States saying they are going to study, but really plan to stay afterwards and work. This is a "backdoor immigration policy", he said, which must be reformed as part of a general tightening of US immigration.

The provision may have originated with an engineering activist, Irwin Feerst. Feerst says there was no consideration of a change in the old law regarding students, until he sent out a special issue of an independent newsletter he publishes to engineers around the country. Three hundred responses he received, he says, indicated that professional US engineers want to "throw the foreign students out". Feerst spoke to Senator Simpson and testified to this effect in December. According to Feerst, there is

Nationality of foreign students in the United States 1980–81

Regions	*Selected sub-totals*	*Totals*
Africa		38,180
Nigeria	17,350	
Europe		25,330
UK	4,440	
Greece	3,750	
FRG	3,310	
France	2,570	
Eastern Europe + USSR	1,670	
Latin America		49,810
Middle East		84,710
Iran	47,550	
Saudi Arabia	10,440	
North America		14,790
Oceania		4,180
South and East Asia		94,640
Taiwan	19,460	
Japan	13,500	
India	9,250	
		311,640

Source: Institute of International Education

no shortage of engineers in the United States, only a "cabal" of academic engineers and corporate executives who are publicizing the alleged shortage so they can hire foreign graduates at lower pay.

However, the Institute of Electrical and Electronic Engineers (IEEE), the engineers' umbrella society in the United States (where Feerst has often run as an "alternative" candidate for president) does not favour the change in Section 212 as it is now written. Richard J. Gowen, chairman of IEEE's manpower task force and a candidate for president of IEEE, says that foreign engineers are being offered jobs at salaries that may be as little as 25 per cent of the salaries paid to US-born engineers. Gowen wants the proposed Section 212 to be changed to allow only "professional" hiring of foreign graduates. That is, a foreign graduate would have to go home unless his prospective employer certifies that he will be paid at least 75 per cent of what a US citizen would be paid in the job.

So far, Congress has been mainly concerned with getting the immigration reform bill through, and seems little disposed to tinker with the minor provisions. On the other hand, organizations like IEEE are becoming very active on the issue, as they begin to realize its implications. **Deborah Shapley**

EEC budget

Windfall ahead

Brussels

An unexpected shortfall of £280 million (500 million European Currency Units) in the European Economic Community's agricultural expenditure has resulted in an extra £19.6 million (35 million ECUs) becoming available for the European Community's research programmes in 1982. The strength of the dollar, favourable prices on the world market for agricultural goods and good weather have all helped to reduce the EEC's agricultural subsidies. Most of the extra money will be allocated to the joint research centres and in particular to nuclear safety research, but around £3.7 million will go to the indirect action programmes.

The budgetary revision highlights the degree to which the European Commission's ability to meet its goal of revitalizing scientific research and development in Europe, and thus create new jobs for scientists, is linked with the long-standing quarrel over agricultural prices, the British budgetary contribution, the reform of the Community's budget and the Common Agricultural Policy and even the Falklands crisis. If an agreement could be reached on lower agricultural prices for this year, as the British are demanding, an even greater sum could be set free for other areas of expenditure. The cooperation shown by the other member states over the Falklands crisis has now made it more difficult for Britain to push for budgetary reform. But if Britain achieves its objectives in the Council meetings this week, not only will its contributions be reduced, but it should lead to greater Community outlays in other areas including research.

The Commission's preliminary draft budget for 1983 reflects the hope that the other nine member states will agree to shift the emphasis of Community spending. Thus, the text emphasizes a "significant reinforcement of financial resources for energy policy, innovation and research and development". This includes increasing expenditure on energy research by 120 per cent although the total sum for payment appropriations will still be small, at £58.4 million.

Most of the extra money for this year will go towards the Supersara project on reactor safety at the joint research centre at Ispra in Italy. An extra £4.2 million will be needed this year as the project is overshooting its budget and will probably continue doing so until 1990 to the tune of £168 million.

The entire programme for the joint research centres is, in fact, now being reviewed and some changes are certain to be reflected in the 1984–87 research programme. Under consideration is a temporary increase in staff by 161, to provide replacements for scientists expected to retire in the next few years. Apart from streamlining research on nuclear safety, the handling of radioactive wastes and the control of fissile materials, a new institute for developing countries is planned at Ispra for training in energy planning, new energies, remote sensing techniques and the inventoring of resources. The Commission is also hoping to increase staff for research into solar energy, fusion, the rational use of energy and the study of high temperature materials.

Again, the success of these proposals will depend on the attitude of the member states, who will be influenced by the amount of money in the budget left over after provisions have been made for agricultural subsidies. **Jasper Becker**

Polish arrest

Expel and detain

The expulsion from Poland, last week, of two US diplomats and the arrest of Dr Ryszard Herczynski bodes ill for the resumption of normal academic exchanges between Poland and the West. The two diplomats, Scientific Attaché John William Zerolis and First Secretary for Cultural Affairs, James Daniel Howard, found in Dr Herczynski's flat, were accused by the Polish ministry of foreign affairs of "pursuing activity conflicting with their diplomatic status". Their presence in the flat appears, however, to have been entirely in the line of duty; they had gone there to confer with Dr Herczynski and with Professor Wladyslaw Fiszdon, a former pro-rector of Warsaw University, on the forthcoming joint US–Polish symposium on fluid mechanics.

Dr Herczynski, a mathematician specializing in fluid dynamics, is employed at the Polish Academy of Sciences' Institute for Fundamental Problems of Technology. Although now accused of having been "one of the inspirers of activity contrary to our *raison d'être* in the scientific milieu", he has never been associated with the dissident movement. In autumn 1980, however, he founded the "Society of the friends of science" — a semi-popular organization based on the then current principles of the liberalization of learning.

It was presumably for this reason that, during the night of 12–13 December 1981, he was taken into custody and interned for some two weeks. Although the authorities now claim that before being released, he signed an undertaking to cease such activities, Dr Herczynski's friends insist that not only did he never sign such an undertaking, but that at the time of his release there had been no mention of any such document.

The arrest of Dr Herczynski was, according to official sources, effected as he handed Mr Zerolis a packet of material "damaging to the interests of the Polish People's Republic", apparently com-

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prising a personal letter to his son, at present studying in the United States, an unidentified leaflet and an anonymous "Code of conduct during this testing time" addressed to Polish academics. Dr Herczynski now faces trial before a summary court. **Vera Rich**

NATO civil research

More wanted

Applicants for NATO (North Atlantic Treaty Organization) fellowships will have less chance of success this year than ever before. Applications have risen by 30 per cent, while the number of fellowships (about 800) remains constant. The NATO science committee will have to apply "new criteria" to make selections, a spokesman said last week. One possibility is that group applicants will be favoured over individuals.

NATO staff pinpoint four reasons for the increase in applications — financial difficulties among the 15 member countries, an increase in the number of papers now citing NATO as a supporting agency, a deliberate "willingness" on the part of NATO to expand the programme and a policy of greater visibility, including advertising in *Nature*.

The willingess to expand, however, is restricted to the NATO Science Committee, headed by Frenchman Professor Robert Chabbal (at present NATO's Assistant Secretary-General for Scientific and Environmental Affairs). The Civil Budget Committee, from which Chabbal draws his funds, is not so willing. To cope with the increase in applications for fellowships and for summer-school sponsorship, and for increased travel costs, the committee would have to increase its budget next year by 25–30 per cent in real terms, to $23–24 million. In fact, it may be lucky to get 15 per cent extra, just enough to cover the depreciation of the Belgian franc.

Pressing his case, Chabbal claimed last week that the NATQ civil science programme (which completely avoids military research) is substantial and important. It accounts for half of all summer-school and training fellowships. Schools such as the Ettore Majorana at Erice, Sicily, and Les Houches in the Alps, get 60 per cent of their money from NATO, said Chabbal.

Meanwhile the committee will press ahead with new plans. It runs advisory panels which help to provide seed money for communications in new fields, largely by establishing "advanced workshops", and this year it will create two new panels: one on global transport mechanisms (in the atmosphere, ocean and mantle) and one on the selective activation of molecules (for example by laser). These panels would be expected to launch six workshops a year for a maximum of five years.

The committee is also experimenting with links between an industry in one country and a university in another, in a programme dubbed the "double jump". Finance will be *à la carte* — only interested countries need support it. So far only two such fellowships have been organized, but many more are planned — Dr Mario di Lullo, organizer of the "double jump" programme, believes that it will not run into the protectionist difficulties that sometimes face the European Commission — that one nation's industry does not reveal its secrets to nationals of another. **Robert Walgate**

British biotechnology

Out of the blue

In an unusual move, the British University Grants Committee is earmarking part of its annual budget to develop a specific topic — biotechnology. The committee plans that £800,000 will be spent in each of the next three academic years on fostering biotechnology in a handful of universities. The committee had previously been reluctant to earmark grants, preferring that universities should spend their income as they wished, relying on the research councils to encourage centres in particular topics by means of research grants.

The scale of the recent budget cuts seems to have prompted a change of heart. The committee, worried that universities may pare all their activities rather than cut them selectively, clearly hopes that earmarked grants will make the future pattern of university research more pointed. The £800,000 set aside for biotechnology will be taken from the money reserved for restructuring the reduced university system which in the next academic year (1982–83) will be £50 million. Most of that sum is expected to be spent on payments to redundant academics, leaving uncertain the amount available for fostering priorities.

So far, three centres — at University College London, the University of Birmingham and the University of Manchester Institute of Science and Technology — have been awarded annual grants of £100,000 each to develop biotechnology. Five other centres are expected to receive similar grants soon. The money will be paid as a separate item in each of the next three years, after which it will be incorporated in the recipients' recurrent grants.

The grants committee says that the recipients must decide for themselves how to spend their extra money. Nevertheless, it expects them to forge closer links with industry, chiefly by encouraging the process engineering side of biotechnology, to develop postgraduate rather than undergraduate courses and to appoint some permanent staff, thus fulfilling the recommendation of a Royal Society report which nearly two years ago called for twenty more university posts in biotechnology.

The research councils welcome the new grants, seeing no conflict between the grants committee's assessment of priority and their own. The Science and Engineering Research Council, in particular, welcomes the grants as a way of supporting staff and equipment which could not be paid for out of its research awards. **Judy Redfearn**

Development and drugs

More not less

The latest shot in the long-running battle between the pharmaceuticals industry and its detractors, in which the health problems of developing countries provide the battleground, has been fired by the Office of Health Economics (OHE). Despite its governmental sounding title and Whitehall address, the office is sponsored by the UK pharmaceuticals industry and its main task is to carry out research on the economic aspects of medical care. Its latest contribution, *Medicines, Health and the Poor World* by David Taylor, is a response to recent criticisms of the industry's marketing practices.

The large multinational companies have been accused of over-aggressively selling unsuitable drugs in the developing countries, leading to only a minimal improvement in the health of the population and sometimes proving positively harmful. Chief among the industry's critics have been aid organizations such as Oxfam and War on Want and the pressure group Social Audit.

The report acknowledges that some drugs have been "inappropriately" sold in the past but claims that the industry itself is now more capable of policing its methods of promotion and that the important role of drugs in improving health care in developing nations may be obscured by concentration on abuse in some areas.

Although a typical poor nation may spend around a quarter of its central government health budget on pharmaceuticals, the report says, 60–70 per cent of the people do not have regular access even to the most basic drugs. So while it is important that those drugs now being sold to the "wealthier" members of developing societies are properly advertised and correctly used, it is even more important to find ways of getting the basic drugs to the mass of the population deprived of them. Whether the past performance of the multinational companies has contributed to the weaknesses of governmental health services in the developing countries, or whether the unavoidable difficulties have limited the ability of the drug companies to act effectively, remains a point of conflict.

Better distribution of a limited range of medicines and vaccines, together with research aimed specifically at new pharmaceuticals for the developing world, are the urgent needs, says OHE. The World

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