

and produced an outline scheme which was approved as a basis for negotiation in December. A working party consisting of five representatives from each of the three societies was then set up with Sir James Taylor as chairman, and will report to the councils of the three bodies as soon as they have a positive proposal. When this has been approved it will be for the members to decide whether they wish to support the scheme. It seems likely that some sort of announcement will be made at the annual conference of the Chemical Society and the RIC this April.

As far as other more specialized chemical societies are concerned, the idea seems to be that they should perhaps be included after the details of the collaboration between the Chemical Society, the RIC and the SCI, which have by far the biggest memberships, have been hammered out.

## ENGINEERS

### Jobs for the Girls

In spite of the enlightened attitudes of many countries, the opinion still prevails in Britain that engineering is not a suitable career for women. In France, one engineer in twenty-eight is a woman, and in Syria one in fourteen, while in Russia the figure is one in three. But in Britain, only one engineer in five hundred is a woman, which is nevertheless a great improvement on the situation a few years ago when the number was only one in a thousand.

Last week, the Women's Engineering Society, founded after the First World War when women first made their mark in this male preserve, celebrated its fiftieth anniversary. At the same time "Women in Engineering Year" was launched in a concerted effort to break down the prejudice of teachers, parents, pupils and employers against women taking their place in a profession which needs as many eager recruits as it can get. Conferences, exhibitions, lectures and visits have been organized throughout Britain to demonstrate that engineering does not consist entirely of heavy and dirty work requiring massive physical stamina, and that women have a valuable part to play.

WOMEN ENGINEERS AS A PROPORTION OF ALL ENGINEERS  
IN VARIOUS COUNTRIES (PER CENT)

USSR	31	Germany	2
Norway	10	USA	2
Turkey	10	Italy	1
Syria	7	UK	0.1
France	3.6		

Inaugurating the proceedings at a lunch last week, Mrs Shirley Williams, Minister of State for Education and Science, remarked that there is much very delicate work to be done in, for example, electronics, aeronautics and design engineering, and there is no reason why a girl in engineering should be less feminine than a girl in home economics. The women engineers present, some of them with very senior positions, certainly testified to this.

Much of the campaign is aimed at encouraging girls to study applied science and their teachers not to throw up their hands in horror at the thought. At the same time, more boys need to be encouraged into the

applied sciences, and several schemes are already in progress to show engineering as an attractive prospect to all school children. The Department of Education and Science has produced the magazine *Project*, with lavishly illustrated articles on all aspects of engineering, for fifth and sixth formers. Since 1966, 22,000 copies have been distributed to schools each term, apparently interesting teachers as much as pupils.

A touring exhibition—Technology Today—showing what the everyday work of an engineer involves, has now been on the road for three years and visited hundreds of schools. The department is also organizing Engineers Days and Engineering Weeks which have already been visited by thousands of boys and girls. More than eight hundred schools are now involved in the Schools Council scheme Project Technology, designed to encourage boys and girls to devise their own engineering projects. Although none of the schools involved is exclusive to girls, the number of mixed schools involved has considerably increased since the scheme began, so that girls are being exposed to Project Technology and undertaking projects themselves.

Girls are obviously discouraged to some extent by the attitudes of employers, who often see women in the familiar role of potential mothers on whom all training is wasted. Those firms which do give girls the opportunity to prove themselves, however, find that they can make very good engineers. The electronics industry is now employing increasing numbers of women, especially working with computers, and in civil and chemical engineering efforts are being made to recruit more women.

## FIELD STUDIES

### Consolidation Ahead

THE Field Studies Council seems to have decided on a period of consolidation after the opening last year of two new field centres—the Drapers' Field Centre at Betws-y-Coed in Caernarvonshire, and the Leonard Wills Field Centre at Nettlecombe Court near Taunton in Somerset. According to the council's annual report for 1968, it now plans to extend and improve its present residential centres, and it is also helping in the development of some closely related activities. It has, for example, agreed to establish a Countryside Unit in Pembrokeshire and to act as the Countryside Commission's agent for providing educational and information services through guides, field excursions, lectures and leading organized parties.

Although the Field Studies Council is known principally for its educational work, it is becoming increasingly interested in encouraging research. A step forward in this direction is now being made at Dale Fort Field Centre in Pembrokeshire, where a new biology laboratory is being built. Thanks to a grant of £500 from the John Spedan Lewis Foundation, the laboratory will be equipped with saltwater aquaria and a constant supply of seawater, which the scientific director, Dr J. D. Carthy, says "will greatly increase the facilities for visiting research workers". At Slapton Ley Field Centre in Devon, it is hoped to develop a research programme on productivity studies. The Oil Pollution Unit at Orierton Field Centre in Pembrokeshire is monitoring polluted sites in Milford Haven, and data have been collected in Bantry Bay

in the Republic of Ireland in preparation for any new threat that may arise from the new oil installations there. There has also been a series of field and laboratory experiments in association with University College, Swansea, and a successful symposium on the biological effects of oil pollution on littoral communities was held at the centre in February 1968.

#### HISTORY OF SCIENCE

### Demise of a Department

THE professorial committee of University College London on Tuesday gave a temporary reprieve to the college's History and Philosophy of Science Department. The committee failed to reach agreement on the recommendation of a sub-committee that the department should be closed. Instead it deferred the decision to another meeting. The news will no doubt be taken as a sign of encouragement by those who believe that the history and philosophy of science should be a rapidly expanding discipline in its own right. The failure of the professorial committee to reach agreement must mean that there is in the college a strong lobby opposed to the recommendation to close the oldest department in the discipline in Britain, and the only department in London University which teaches both the history and the philosophy of science in an integrated fashion.

Lord Annan, the provost of University College, said that there had never been enthusiasm for the recommendation but, he said, the financial squeeze will force the college to cut the number of senior staff. Lord Annan explained that the University Grants Committee has been pressing London University as a whole, and University College in particular, to reduce the proportion of senior staff to 35 per cent of the total. At University College the proportion is 45 per cent, and Lord Annan says he has been told that if this proportion is not reduced by at least 2 per cent in this quinquennium, there can be no further promotions in any department. Cutting out the history and philosophy of science would reduce the establishment by one professor, a reader, a lecturer and an assistant lecturer and eventually a second readership would lapse. It would also free a house in Gordon Square.

The response of specialists at other British universities to the possibility of the closure seems to be one of astonishment, disappointment and dismay. It is held that University College has made no effort to make known and discuss the matter. The closure would also mean the removal of a valuable educational option for London University students. Professionals argue, of course, that the history and philosophy of science provides a unique meeting ground for the arts and sciences and gives science students a taste for discursive argument as well as a feeling for the place of science in social history and the history of ideas—the kind of education which the Swann report championed.

Lord Annan says in reply that should the closure be deemed necessary UCL will investigate how much history and philosophy of science can be taught by staff in other departments. They may be able to take over much of the work. And there would still be two readers and a lecturer interested in the history of science, while the philosophy department includes

Professor P. Feyerabend—a philosopher of science who commutes between UCL and Berkeley. Lord Annan also says that with the new course unit system—similar to the credit system of American universities—now in operation, students at University College have the option of more than half a dozen courses ranging from history to psychology.

One of the reasons why University College can seriously discuss the closing of the department is that since 1923 it has never really tried to teach undergraduates. Its one attempt, a course in the history of science for historians, had a hopelessly large syllabus and was a failure. The teaching in the department has been at the postgraduate level, usually with a dozen or so part-time students reading for an MSc. The department can point to a handful of its students who are now lecturers at other universities, and it has no doubt broadened the horizons of many school teachers, but it can hardly claim to have had any real impact on undergraduate teaching in the college. Its critics say that it has not tackled the problem of recruiting large numbers of science undergraduates. A stronger department would have a better case for survival, and who can deny that a professor, two readers and some lecturers should do more than teach a dozen part-time students and the occasional PhD candidate?

Perhaps the real question is why University College has allowed the department to run down in this way. Ever since Professor Herbert Dingle retired in 1955, the college seems to have been in two minds about the value of the department and seems to have done little to encourage expansion. For two years after Professor Dingle left, no successor was appointed; it apparently took the college that long to decide to appoint to the chair Dr Douglas McKie, who had been in the department for years and anyway was close to retirement. When he retired in 1963, the department languished for four years without a chairman, and then the acting head, Dr J. S. Wilkie, was appointed to the chair in 1967. He could well be the last professor and, as he says with hindsight, the discussions about whether to carry on which took place when Professor McKie retired were a taste of things to come. Once again on Tuesday the college showed its inability to make up its mind.

#### LITERATURE

### Reproductive Newsletter

A NEWSLETTER covering new developments in reproductive physiology and intended to interest doctors of medicine as well as the general reader has been launched by the International Planned Parenthood Federation (IPPF, 18 Lower Regent Street, London SW1). *Research in Reproduction* will appear quarterly, in alternation with the IPPF's *Medical Bulletin*; it is edited by R. G. Edwards at the Physiological Laboratory, Cambridge.

In the first issue R. L. Brinster reviews the metabolism of the mammalian embryo before implantation, and there is a note on recent cases of immunological reactions against semen (surprisingly in a virgin after her first intercourse) and against cells in the ovary. Other items include notices of new journals and societies in the field and an account of the *Bibliography of Reproduction*. The IPPF hopes that the newsletter