

that by 1967 one in eight children was at a private school. The steady decrease in number and increase in size of the public school systems, which has been one of the outstanding changes in primary education in the US since 1945, have, however, continued; there are now 22,000 systems compared with 101,400 in 1945. The total expenditure on public and private education at all levels from kindergarten to graduate school amounted to \$54,600 million in 1967-68; this is just six times the 1949-50 total and 6.9 per cent of the US gross national product.

There are now 2,374 institutions of higher education in the US of which 61 per cent are private, seven are controlled by the Federal Government and the rest by state, city or town. They offer an extremely wide range of instruction, from two years at junior college level to fully fledged university education with all the trimmings. The number of college students has tripled since the early fifties, when there were 2.1 million students or roughly 24 out of every 100 people aged 18 to 24 years. In 1967 there were 6.3 million at college or 47 per 100 of the age group. The number of university staff, of degrees conferred and of post-graduate students has increased concomitantly. The annual crop of PhD's has risen from 8,800 in 1957-58 to 17,900 in 1965-66 and should reach 25,000 a year by 1969-70. Twenty-five universities conferred more than half of all the new doctorates between 1959-66; the top five in the league were the Universities of California at Berkeley with 3,228 followed by Illinois, Wisconsin, Harvard and Columbia with 2,698 doctorates in the eight years.

CIVIL SERVICE

Patents Office Autonomous?

THE British Patents Office, at present a sub-department of the Board of Trade, may find itself reconstituted as an independent body before very long if the committee which is now looking into its role and functions throws its weight behind one of the guiding lights of the report of the Fulton Commission on the Future of the Civil Service. This would be in keeping with the trend towards greater autonomy for government controlled institutions set in motion by the freeing of the General Post Office from its Whitehall tether, now well under way.

Where the Patents Office is concerned, the possibility of autonomous existence depends on the income which the Patents Office derives from fees for patents. In 1967 it was about £3 million. The suggestion in the Fulton report that some of the civil service departments should be hived off from their parent bodies is one that should be borne in mind by any specialized committee like the one in question. There is little doubt that the conformism demanded of any department by being under the auspices of some larger more monolithic administration is bound to cramp the style of those who see the role of the sub-department as essentially independent of its parent body. This applies just as much to the Patents Office in relation to the Board of Trade as it did to the Post Office and the Civil Service structure in general. Where there is a difference between these two cases, however, is in the ends that are being sought.

One of the questions the investigating committee

will no doubt be thrashing out is the desirability of having a function so closely linked to the law further removed from the sure hands of the established civil service. Would the chance of greater efficiency be worth the risk of slackening the justice of the patents system? There are already many anomalies in patenting, and none more glaring than the lack of efficient international arrangements. If the Patents Office is set up in a new form, will it be as easy to institute the radical changes which may become necessary in the years ahead? These are questions that no doubt exercise the investigating committee.

One of the benefits of autonomy is usually the freedom to draw up salary scales appropriate to the particular needs of the department. This is not likely to prove as strong a motivating force for changing the status of the Patents Office as it was for the Post Office, however. Employees at the former are normally reckoned to be well paid, whereas the shortage of scientists and engineers at the Post Office is at least in part attributable to the rigid salary structure that exists at present.

ROYAL SOCIETY

Encouraging Research in Schools

ONE way to encourage scientists to take up school teaching is obviously to show them that it does not necessarily require the sacrifice of all hopes of making some original contribution to knowledge. With this in mind, and in the hope of perhaps offsetting the swing away from science in sixth forms of British scholars, the Royal Society's Scientific Research in Schools Committee has supported during the past year ninety-six projects ranging from radio astronomy to the ecology of slugs. The eleventh annual report of the committee has just been published.

The society provides the money to support the projects, and it comes from the society itself, from the Atomic Energy Authority and from several industrial companies. This money buys any equipment that may be needed, and occasionally it may be as much as £300, but the grants are usually small—the sum disposed of in a year is usually £3,000-£4,000. An important aspect of the scheme is the fact that the teachers have expert advice with their projects. A teacher with an idea for a project is introduced by the Royal Society to a scientist working on the same or a related topic. The teacher and his adviser discuss the project and if it seems feasible and valuable they work out a plan of research. The Royal Society provides some money if equipment is required.

The society is at present trying to encourage more applied science projects, and is particularly anxious to give women teachers the opportunity of research in engineering, physics and mathematics. Of the ten women listed in the report, eight are engaged in biological research. The other two are Mrs M. H. Hayes of the City of Worcester Grammar School for Girls, who is working on the shape of macromolecules in solution with advice from Professor J. C. Robb of the University of Birmingham, and Mrs M. S. Barrett of Walkden Girls' County Secondary School, Manchester, whose topic is work study in the home, with advice from Miss J. E. Walley of Queen Elizabeth College, London.

Although the proportion of women participating