

realistic, however, when he states that historians will probably regard the 1970s as the time "when near adulation of science gave place to feelings ranging from grave doubts to at worst a neo-Luddism based on fear".

Sir Frederick is emphatic that the clock cannot be put back to remove the current disillusionment with science, and he stressed that "to attempt to stop any further scientific research is both wrong and impracticable". Sir Frederick also felt that it is impracticable to stop work on branches of science that "serve the baser needs of man and nation" because one cannot predict in advance the outcome of research. On accepting that scientific work must continue Sir Frederick asked whether the scientist has a moral right to suppress his findings and to stop pursuing a particular topic. He suggested that the scientist should weigh up the advantages and disadvantages of his work and make this knowledge known.

When Sir Frederick was talking on the prospects for science in Britain in the 1970s his listeners were possibly most attentive. But with his review of the future of the research councils yet to be published Sir Frederick merely defined the problem. He asked whether research within the universities should keep pace with the expansion in higher education and whether research should be concentrated in "centres of excellence". Sir Frederick did not believe that such centres would involve the risk, as feared by some people, of not producing good scientists from the less favoured institutions provided the present system of both University Grants Committee support and research council support is maintained. He did issue a warning, however, that a shortage of money will possibly require more inter-university collaboration in research.

Sir Frederick also mentioned collaboration between scientists and social scientists. He said that it was almost certain that a much closer relationship must develop between science policy, social economic affairs and government policy but there was no clear way how this relationship is to be achieved.

INDUSTRIAL RELATIONS

Battle or the War?

THE majority ruling of three Appeal Court judges last week means that Mr Jack Hill has won his battle with C. A. Parsons, the Newcastle engineering company who dismissed him for refusing to change his trade union. It remains to be seen, however, whether the United Kingdom Association of Professional Engineers (UKAPE), of which Mr Hill is a member, has won the war.

The appeal was against Mr Justice Brightman's decision earlier this year that under the law as it stands he could

not prevent Parsons from dismissing Mr Hill for refusing to leave UKAPE and join DATA—the Draughtsmen's and Allied Technicians' Association—who, by working to rule twice and striking once, won a closed shop agreement from the company (see *Nature*, 233, 5; 1971). When Mr Hill refused to join DATA, he and thirty-seven other engineers were given a month's notice. Mr Hill sued the company for wrongful dismissal and both he and UKAPE saw the resultant action as a test case.

Not so the company apparently. The day after the appeal decision Mr Kenneth Peplow, the general secretary of UKAPE, said that he had been informed by the company's solicitors that UKAPE will have to fight the remaining cases individually, but at the moment Parsons will not confirm that further action will have to be taken.

If thirty-five more actions are needed (two engineers have left the company since July) then Mr Peplow sees it as "a campaign of spite", but adds that he cannot believe it has been generated by the company. "It makes one wonder," he said last week, "what influences and pressures have been brought to bear so that a company is no longer in control of its own destiny."

Mr Harry Smith, DATA's public relations officer, said this week that they are "disappointed", but he was not prepared to commit himself on what DATA expects of the company until the association had met its legal advisers yesterday and representatives of the company next Tuesday, but they are clearly reluctant to accept last week's ruling as a test case.

Whether it is a test case may prove to be an academic question, however, as any writ issued now is unlikely to be heard before the relevant clauses of the Industrial Relations Act become law early next year. As UKAPE have registered as a trade union under this act, and DATA have deregistered, then it would appear that UKAPE will be in a stronger legal position.

UKAPE's determination to see this through is reflected in its appeal for a defence fund of £1 million launched last week. UKAPE has 11,000 members but is hoping that it can raise £5 a head from the 200,000 engineers in Britain. UKAPE is determined to fight for recognition wherever it is denied, according to Mr Peplow, and the new act could give it the opportunity to do so effectively. Mr Peplow emphasizes that UKAPE is determined to act legally and to adhere to the code of ethics that it maintains is the distinguishing feature between professional associations and trade unions, but it is equally determined to protect what it sees to be its rights. Companies other than Parsons may have to face up to UKAPE soon.

STEEL

Rationalizing Research

THE British Steel Corporation's efforts to rationalize and coordinate the research performed in its own laboratories is coming to fruition, according to a report which surveys the work in progress (*Steelresearch 71*, British Steel Corporation; 1971).

Steelresearch 71 is the first comprehensive annual review of the research activities of the corporation, which now cost about £9 million a year. As well as describing the work of the laboratories attached to the corporation's six product divisions, the report also covers the activities of Bisra which, since 1967, has gradually evolved from an autonomous research association into the corporate laboratories of the British Steel Corporation. The decision that a separate annual report is no longer to be published is a clear sign that the amalgamation of Bisra into the corporation's research structure is now almost complete. Almost 95 per cent of the £2.7 million spent by Bisra comes from the British Steel Corporation and it now has an important role to play as the central body responsible for research of an innovative or long-term nature (for example operational research devoted to increasing the efficiency of all aspects of the corporation).

The corporation's other research activities have centred on the product divisions (for example the special steels division and the tubes division) which themselves evolved from the four groups formed on a geographical basis when the corporation was created in 1967. There has inevitably been wasteful repetition of research and during the past year there have been particular efforts to minimize it. Because of their expertise in on-line non-destructive testing, for example, the laboratories of the tubes division at Corby have assumed special responsibility for the development of these techniques; the Swinden laboratories of the special steels division at Rotherham have, for similar reasons, been designated a centre of expertise in the machinability of steels.

The reorganization of research activities reflects the work of the research committee whose wide ranging brief is to "review and coordinate the research and development work of the divisional and corporate laboratories". A spokesman for the British Steel Corporation said this week that further rationalization along similar lines could be expected when other areas have been identified in which the drawing together of projects would be fruitful.

The corporation also spends £100,000 a year in universities and a further £60,000 a year on about sixteen fellowships, usually tenable for two years.