

know any law that says I have to'.

One old question that has resurfaced in the latest exchange between Stanford and the patent office, and that may bear on the first patent, is whether Cohen and Boyer are the sole inventors, as Stanford and the University of California claim. In its notice of rejection on 2 August, the patent office cites a statement by Dr Robert Helling — a co-author of the 1973 paper in the *Proceedings of the National Academy of Sciences* that is the basis of the patents that appeared in a news story in the 3 April 1980 issue of *Nature* (p.388). Helling, now at the University of Michigan, is quoted as refusing to sign a disclaimer of inventorship as requested by Rowland.

Helling has not, however, pressed any claims to date. And Rowland, in his response to the patent office, asserts that Cohen and Boyer are the sole inventors, having conceived the idea at "a now famous delicatessen in Hawaii" during a scientific meeting in November 1972. This, Rowland writes, rebuts "any implication that the refusal to sign a disclaimer might be equated with an allegation of co-inventorship".

But Helling told me last week "I certainly am a co-inventor. The three of us were equal partners. I went out there to

develop new cloning procedures; Herb (Boyer) was the one who suggested using plasmids, and asked me if Stan (Cohen) could join us". Helling worked with Boyer at the University of California at San Francisco during his 1972-73 sabbatical.

Helling has been discussing the matter with the University of Michigan's attorney and said "we may do something now", but declined to give any details. A call to the attorney was not returned.

Although a recent court decision overturns the patent office's policy of considering co-authorship *prima facie* evidence of co-inventorship, Helling's statement in the 1980 *Nature* story complicates the matter.

Rene Tegtmeyer, the assistant commissioner for patents, said his office will act "promptly" on the case, perhaps reaching a decision within "two or four weeks". If the patent office stands by its rejection on 2 August, Stanford will then have three months to file a request for reconsideration or a notice of appeal to the Patent Office Board of Appeals. A decision might not be reached before the summer of 1984 — and the case could go on still longer if the board's decision were to be referred to the Court of Appeals for the Federal Circuit. **Stephen Budiansky**

## Science and Engineering Research Council

# Big money for big science?

A potentially important difference of emphasis between the British Science and Engineering Research Council (SERC) and the Advisory Board for the Research Councils (ABRC) was apparent at the publication of the research council's report (HMSO, £4) last week. For while the advisory board said in its advice to the Secretary of State for Education and Science that the time had come to halt the retreat from Big Science (see *Nature* 4 November, p.1) SERC chairman Professor John Kingsman refers to "broadening out from the support of 'big science' to a better

spread of science and engineering". Kingsman says that the advisory board's recommendation would be only one element in the council's decision how best to spend its money next year.

SERC's principal area of concern is the dual-support system through which funds for science research are provided jointly through the University Grants Committee (UGC) and the research councils. The SERC report says little about how far SERC is prepared to go to compensate for the dwindling UGC contribution, but also claims that "the quantity and quality of

research grant applications are being maintained".

Professor I. Butterworth, chairman of SERC's Nuclear Physics Board, is more pointed, saying that the board wants SERC to provide a certain number of permanent posts in nuclear physics attached to universities until UGC is once again able to play its part.

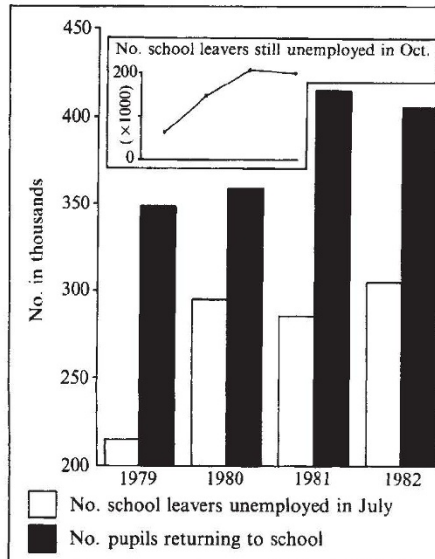
Since 1978, the proportion of support for nuclear physics within SERC's overall budget has dropped from more than 30 per cent to about 20 per cent. The intended opening at Daresbury of the Nuclear Structure Facility (a heavy-ion accelerator) after an extended delay will provide some stimulus but, according to Professor Butterworth, its full utilization will be delayed. There is also a fear that if full support is given to LEP, the electron-positron collider at CERN in Geneva, it may not be possible to fund other particle physics experiments.

To judge from the report, physicists are also concerned that support for such fields as atomic spectroscopy, semiconductor research, superfluidity and superconductivity appeared to be decreasing relative to such fields as biology, chemistry and applied mathematics. Apparently a special committee has been considering criteria to be used in deciding the relative balance of support between different fields, but its conclusions have not been made public. And there is a possibility that the Synchrotron Radiation Source at Daresbury, from which X-ray spectroscopists have derived particular benefit, may be affected by rising costs, which may make necessary a choice by the Science Board between research grants on the one hand and further development and general support of central facilities on the other.

Support for information technology and space science, both recommended by the Advisory Board for the Research Councils, are, however, both booming at SERC. The two fields are beginning to link up, with the recent development of remote control of telescopes via satellite links between the Royal Greenwich Observatory and telescopes in Hawaii. Such developments might pay for themselves in reduced travel budgets for astronomers.

On the more contentious issue of the use of the South African Observatory (see *Nature* 23 September, p.291), the council says it is not in the business of taking political decisions at the expense of the interests of science and that, moreover, it had felt little pressure from the community and none from the government to sever its links with its South African equivalent.

The press conference called by SERC was made all the more bland by the decision not to make the report available in advance. Thus SERC, proud of its autonomy, has followed a government directive resulting from the premature publication in the national press of details of medals awarded for the Falklands fighting. **Philip Campbell**



As the probability of long-term unemployment for the British school leaver has increased (reflected in the October unemployment figures), the number of pupils returning for further education has gone up. There has been no increase in resources made available to schools and extra pupils are being swallowed up by existing classes. However, fears that this would lower the standard at GCE 'O' and 'A' level are not borne out by statistics published by the examining boards, which show no real change in the pass rate during this period. The decline in numbers returning to school in 1982 is at least partly due to the rapid expansion of the Youth Opportunities Programme during 1981-82 from 360,000 to 553,000. **Melanie Kee**