

Simpler ways to good research degrees

The Royal Society has rebuffed the British government on its plan to reorganize the courses followed by graduate students, but both parties should be more concerned with undergraduate courses.

BRITAIN retains the distinction of enabling people to earn a research degree in the shortest possible time. Technically, a student can spend three years as an undergraduate and two years in putting together a thesis, emerging after five years as a fully fledged PhD, perhaps aged only 22. In many parts of the world, the United States and Germany for example, this is more commonly the length of time spent on a PhD course alone. Although such lightning progress towards a research qualification is now less common than formerly, the question remains of whether it can be wise.

The question has become an issue with the British government's plans for the reorganization (yet again) of British science, published a year ago. Among other things, it was proposed that for most students wishing to embark on a research degree, there should be a special year of study intercalated between undergraduate and PhD studies. But this year of study was intended to be a preparation for research that would be educationally valuable in itself, and which would earn the qualification of MRes.

For the research community, the rub came in the government's guess that research councils would in future spend more on MRes students and less on potential PhDs. Not unnaturally, the Royal Society set up a study group, under Professor Joe Vinen, to consider the proposal (see *Nature* 369, 91; 1994) and, in the light of the study group's report, rejected it as "educationally unnecessary". But the government and the research community are not so far apart as may appear. Indeed, what separates them is chiefly the now-common British question of who will pay for what, and how much.

By advocating the intercalated year and a three-year PhD course, the government has accepted that the normal education of a researcher should occupy seven years from university entrance to a PhD qualification. Vinen and his colleagues enthusiastically accept that implied promise, perhaps forgetting that it may be withdrawn if the government does not get its MRes. But the essence of their argument against the new proposal is that there is already such a variety of patterns of university science courses in Britain that it would be better to build on that than to introduce something entirely novel. Many undergraduate courses already last four years and the fashion is spreading. And there are many places at which the extra year could be fitted seamlessly onto the beginning of a spell of work towards a PhD.

The weakness of the Vinen argument is that it makes too great a virtue of diversity, much of which has arisen because

of the stratagems by which different universities have sought public funds to support longer undergraduate courses. Especially because British higher education can no longer rely on a supply of school-leavers with exactly the right specialist qualifications in science, the crying need is that every undergraduate science course should last for four years. In passing, it should give students a sense of the real world outside their institution. It should also give them an understanding of what research is like, and is about, for research is an essential element of science. A degree of uniformity is necessary. And it is worth fighting for on educational grounds.

The weakness of the government's case is that its extra year is a poor substitute for a uniform four-year undergraduate course. Its introduction could well be an intolerable distraction for serious students and an overly miscellaneous experience for others. The difficulty, of course, is that the Office of Science and Technology (OST), which is masterminding the reorganization of research, has no direct influence over undergraduate education, but can persuade research councils to pay stipends to graduate students, if inadequately. Vinen and his colleagues draw attention to a related anomaly; four-year courses are an extra expense for students or their parents, graduate courses an extra cost for the government. The Royal Society and OST should join forces to fight for properly financed four-year degrees.

Meanwhile, more attention should be paid to the needs of graduate students and of research. Part of Britain's present difficulty is that the output of PhDs exceeds the foreseeable demand for academics and that the slack is not fully taken up by industry. That, of course, is both a measure of British industry's shortsightedness and a cause of British industry's poor economic performance: it employs too little skill. The British government should be seeking to remedy that state of affairs. Then it would find that young people are again enthusiastic at the prospect of a life in science. □

Anglo-French dispute

European air transport is a long way from being the free market on which the European Union has set its heart.

As recently as a century ago, either Britain or France would have declared war on the other last Monday. The issue that divides the two governments is accurately reminiscent of classical *casus belli*, that of whether transport vehicles