a risk that conservationists may be found to have embraced unnecessarily authoritarian views of what should be done to preserve the natural environment. Another possibility is that conferences like that at Guildhall this week will have allowed many people to pretend that they are on the side of the angels while caring nothing for the better management of the environment. What circumstances may urgently require is that there should be a more flexible view of the interaction between modern life and the problem of conservation. Is it not important that jet aircraft, much reviled, have nevertheless made it possible for thousands of Englishmen to spend their summer holidays on other people's less crowded beaches? And is it not important that industrial technology has provided them with the prosperity with which to pay their fare? In the long run, the narrowness of last week's conference will be its undoing. Next time round, it is to be hoped that the Duke of Edinburgh will not lend his support to the supposed conflict between technology and the environment but rather to the view that both of them can be exploited to everybody's benefit.

## **100 Years Ago**



In a word, henceforward there must be a portion of every day taken up with teaching children by objects. specimens, or experiments, the nature of the great laws by which the universe is governed. We cannot argue here on the necessity for this knowledge. Look at that great German army, recently spoken of as the most wonderful military engine ever seen on the face of the earth. What makes it so? The intelligence of each individual of which it is composed. It is the same with wheels and pistons, spindles, hammers, chisels, and ploughs, as with guns and bayonets: the more intelligent the man is who wields or superintends them, the more successfully and prosperously will they do their work. Ten years ago Mr. Whitworth astonished the Manchester manufacturers with the account of the machines he had seen in America. "Why should we not have such machines here?" said the Manchester men. "Because," said Mr. Whitworth, "you have not intelligent hands to work them." And for these long ten years we have gone on talking about educating our working classes, and allowing priceless treasures to pass out of our hands. Every portion of Europe, as well as the United States of America, is stealing something of our rightful wealth and increasing our pauperism. because of our stolid indifference to the introduction of those branches of human knowledge which alone can properly develop the powers of industry and application, of which the English people are so wonderfully capable.

From Nature, 2, 509, October 27, 1870.

## OLD WORLD

**PUBLIC EXPENDITURE** 

## **Cuts in Research Grants**

The cuts in public expenditure announced last Tuesday by Mr Barber, Chancellor of the Exchequer, will be received by the research councils, the Industrial Reorganization Corporation and some parts of the social services with dismay. The budget for the research councils, now about £110 million a year, will be cut by £2 million next year, rising to about £5 million by 1974–75. The Industrial Reorganization Corporation is to be wound up completely, and many subsidies will be abolished and charges increased in the social services.

These are casualties of the government's desire to see public expenditure substantially reduced to pave the way for cuts in taxation. Mr Barber's axe has been calculated to remove £1,100 from public expenditure by 1974–75, and to reduce the annual rate of growth in public expenditure to 2.8 per cent a year, compared with a rate of 3.5 per cent which was implied by previous plans.

Although a cut of £2 million from the combined budgets of the research councils does not seem too harsh, the long-term implications are more worrying. Sir Brian Flowers, chairman of the Science Research Council, said last month, for example (Nature, 227, 1284; 1970) that the growth rate of the SRC's budget is already too small for the council to support many important areas of research. It also seems less likely now that the government will be prepared to sanction British participation in the CERN project, on which the SRC has set its heart. Coupled with the announcement of cuts in the budgets of the research councils is the indication that "this field of expenditure is now being critically reviewed to establish whether activities are being carried on which might more appropriately be financed by industry, and whether there is duplication of effort". The review is being carried out by the Council for Scientific Policy, which will report to the Secretary of State for Education and Science.

It is no surprise that the government is to wind up the Industrial Reorganization Corporation. Such a measure is in line with the policy, outlined in the Queen's speech and repeatedly at the Conservative Party conference earlier this month, to liberate industry from government interference. The Conservative Party has always opposed the IRC's powers to influence industrial mergers, and winding up the corporation will result in savings next year of between £20 and £30 million.

As far as education is concerned, Mr Barber had little to say, and no mention was made of the costs of higher education. Charges for school meals will, of course, be increased, and supply of free milk to pupils over the age of seven will be discontinued, both measures being part of Mr Barber's thesis that "where the user can afford it, he should bear more of the cost and the taxpayer less". The same principle guides the government's decision to institute charges for admission to national galleries and museums. Mr Barber did, however, commit the government to spending an additional £110 million during the next four years on the social services, chiefly for new hospital facilities.