

document. What, for example, is to be the relationship between the universities and the polytechnics on which, three years ago, the government falsely pinned a good deal of its hope? Will these institutions be encouraged (as they should be so long as they remain autonomous) to become so good that they resemble universities, will there instead be a foolish attempt to make them second-class institutions, or will the government (or its successor) confess the error of its ways and find some way of linking the two systems (with colleges of education included) into an integrated whole? Then what is to happen to the relationship between universities and the government? Will utter financial dependence continue to be the almost universal rule? The benefits of a broadening of the financial base consist not of mythical academic freedom but a built-in tendency towards the kind of academic diversity which is at present missing. Then there are questions of the financial relationship between universities and their students on the one hand and their teachers on the other. Is it right that British students should be financially dependent either on the local government or their parents? Is there not some halfway house in which the direct cost of university education would not be simply related to the size of its output? And is it not time that the present rigid

scales of pay for academics were softened by more than the tiny percentage which has survived from the recommendation of the Prices and Incomes Board that four per cent of the salary bill should be spent on special awards to hard-working teachers? To say that the neglect of these matters for the proper co-ordination of postgraduate courses is to fiddle while Rome burns would be to exaggerate—but not by very much.

#### RESEARCH ASSOCIATIONS

### Strength in Unison

THE industrial research associations, long since accustomed to life on the edges of public munificence, seem to have embarked on a strategy that will allow them at least to complain about their lot more effectively. Earlier this week, the associations collaborated to form what is known as the Conference of Industrial Research Associations, evidently intended to serve as a more effective voice than the Committee of Directors of Research Associations has been able to be—in some eyes, at least, directors are lowly fellows because they are formally the employees of the autonomous councils which are formally the fountain-heads of policy. The director of the new body is the Earl of Shannon, and it is intended that there shall be a deliberate attempt to provide a solid base from which the case for the research associations can be advanced.

There seems no doubt that the publication of the Ministry of Technology Green Paper on the reorganization of civilian research within the government has fired the zeal of the research associations, which are almost conspicuously left untouched by the proposals for reorganization. For the past few years, the central government's contribution to the finances of the research associations has been fixed at £4 million a year, which works out at about a quarter of the total budget, the remainder of which is supplied by industrial contributions. Although this kind of treatment is familiar enough among the pensioners of governments who have fallen out of favour, it seems to be felt among the research associations that the Ministry of Technology has an influence over policy which is incommensurately great compared with its financial contribution. It will be interesting to see whether the new arrangements will tempt the research associations to make a dash for freedom and do without a subvention. It may be easier to tell which way the wind is blowing on February 11, when the Conference of Industrial Research Associations plans to hold a public meeting at which Dr E. A. Davies, Joint Parliamentary Secretary at the Ministry of Technology, will be one of the speakers.

#### TEACHER TRAINING

### Comprehensive Degrees?

by our Education Correspondent

TEACHERS have very little opportunity to help formulate policy on teacher training. This claim was made by representatives of the National Union of Teachers when they met the Select Committee on Education and Science on January 27. The NUT does, however, have strong views about the way that teacher training

## 100 Years Ago



BOSTON

**Society of Natural History, November 17.**—The president in the chair. Prof. N. S. Shaler read a note on the occurrence of the remains of *Tarandus rangifer* Gray, at Big Bone Lick, in Kentucky. At a previous meeting was presented the evidence in support of the conclusion that one of the large mammals of North America, the buffalo, had recently changed its limits, and had only ranged in the Ohio valley within the past few centuries. The same locality supplies us with evidence that the caribou existed in abundance in this river basin at a time anterior to the coming of the buffalo, and probably not very long after the disappearance of the *Elephas primigenius*. Since the coming of civilised man into America, the caribou has been confined to a narrow area in the north-east part of the continent; it is questionable whether it has ever ranged during this time south of the southern limit of the State of Maine. The position in which these remains were found leaves the precise relationship in time of this species to the mammoths and mastodons a little questionable. There is, however, little doubt in my mind that, if not in existence during the later part of the time of these pachyderms, it came immediately after them. Its bones are always found below the line of the buffalo and the Virginia deer. The remains of this latter species are found only among the most recent deposits of the swamp. The disappearance from this region of this eminently boreal animal immediately after the passing away of the ancient elephants from the Mississippi valley, goes to confirm the conclusion that the climatic change which closed the period of the mammoths was from cold to warmth, and not an alteration of the opposite character.

From *Nature*, 1, 369, February 3, 1870. Shaler was professor of palaeontology at Harvard.