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University Grants in the Civil Service Estimates.

IN view of the recent economy campaign, the debate on the Education Estimates for the present financial year, on April 12, was awaited with interest, but apparently the economists did not get the same support in the House of Commons as was given in certain quarters outside. The Estimates were passed without alteration, and the vote for grants in aid of Universities and institutions of University rank was agreed to without discussion. This means that there is an addition of half a million to the annual University grant, together with a special non-recurrent grant of 500,000*l.* for superannuation purposes.

Under the heads of education, science, and art (Civil Service Estimates, Class IV.) the total estimate for the United Kingdom for the year 1921-22 is 67,038,295*l.*, of which sum 1,500,000*l.* is allocated to Universities and institutions of University rank. That is to say, these higher institutions will receive about one-fourty-fourth of the total estimate. On the face of it this seems far too small a proportion, and a closer examination confirms the view. The fact is that the Government has been slow to recognise the necessity of greater financial assistance for the Universities, and perhaps the Universities have not been importunate enough on their part.

While this additional annual grant will be welcomed, it is scarcely necessary to say that it is insufficient to meet the present needs. University teachers are notoriously underpaid, so much so

that grave doubts are felt as to the supply of adequately qualified teaching power in the future. Even if the new grant were solely devoted to increases in salaries it would be insufficient. For example, with the same allocation as last year, in the case of one of these institutions it would mean no more than an average all-round increase of about 20 per cent. With University salaries at their present level such an increase would most assuredly not meet the exigencies of the moment. But the salary problem is not the only one with which the University is faced. Other pressing financial needs will have to be met, and, while the new grant will tend to ease the strain, one cannot but feel that it is hopelessly inadequate.

It is illuminating to compare this state of affairs with the provision made by the Government for the Civil Services. On p. 7 of the Estimates will be found a statement regarding the rate of bonus applicable to salaries and wages. This rate ranges from 130 per cent. of the pre-war remuneration in the case of small incomes to 45 per cent. in the case of the larger incomes, the maximum bonus payable being limited to 750*l.* per annum (500*l.* in certain cases). Thus, to take one example, the estimated bonus for the Administrative Staff of the Board of Education for the year 1921-22 is 209,915*l.*, which works out as an average all-round increase of about 67 per cent. upon pre-war salaries and wages. Similarly the bonus proposed under the heads of administration and inspection for the United Kingdom is not far short of half a million, with almost the same percentage increase. This is the sort of provision the Government makes for its own Services. Having in mind the index figure for the cost of living, we are not prepared to say that this provision as a whole is excessive. Our contention is that in the present financial strain it is the duty of the Government to give special assistance to the Universities, and at least to treat them as liberally as its own Services.

If it is argued that the Government has increased its subsidies it must be remembered that the field over which the grants have been distributed has been gradually extending. An inspection of the Estimates on p. 54 shows that four London medical schools are receiving for the year 1921-22 in the aggregate 26,030*l.* over and above what they received in the previous year. If we interpret a footnote correctly, this slice out of the grant is to make provision for clinical units. No doubt this is a necessary object, but it is seriously to be questioned whether it was one of the purposes

contemplated when the grant was originally made. One would think that such provision should be made by special Parliamentary vote. Further, on the same page, it will be seen that the sum of 80,000*l.* is allocated to five institutions which did not receive a penny from this source in the year 1920-21. Two of them—Oxford and Cambridge—are each to receive 30,000*l.* Now we do not for a moment begrudge them these grants. But, by extending the field of the distribution, a large sum, in the cases just mentioned 106,030*l.*, has been diverted from institutions which otherwise would have benefited from it, and this fact ought not to be overlooked.

It cannot be too strongly urged that Universities and institutions of University rank are in an anomalous position in that they are compelled by force of circumstances to look to the Government for assistance. Their financial burdens, largely due to the crisis through which the country is passing, cannot be met from their normal sources of income. Benefactions are problematic. To raise the fees to meet the additional and necessary costs would be to make them so high as to prevent a large number of deserving students from entering the University, with ultimate loss to the community and nation. Already the fees charged are considerably larger than those which prevail in the United States of America. It is facts such as these which make the problem of University finance so difficult and the necessity of further Government assistance so imperative.

If our legislators have any doubt about this necessity, let them examine the figures on p. 54 of the Estimates, and note the relative disparity between the grants for England and Scotland. Six Scottish institutions are to receive 180,000*l.*, whereas forty-two English institutions will get only 591,180*l.*! A footnote makes it clear that the Scottish estimate includes 72,000*l.* awarded by Scottish Acts of Parliament in 1889 and 1892 respectively. The right of Scotland to so large a sum is not questioned, since, no doubt, when these Acts were passed the Scots were willing to forgo other privileges in order to make better provision for their own higher education. Our point, however, is this: whatever may be the genesis of the grant or grants, the total sum is relatively much larger than that assigned to England. If such a sum is necessary for Scotland—and we do not doubt it is—surely the Government should see that a proportionate sum should be given to England.

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One other point. The Estimates provide for a sum of 500,000*l.* for superannuation purposes. This is intended to be a special non-recurrent grant in aid of certain Universities, colleges, medical schools, etc., to assist them to provide retrospective benefits for senior members of the staffs under the Federated Superannuation System of the Universities. In a previous issue we have already criticised the proposal and expressed the opinion that this sum will fall far short of the amount necessary for the purposes indicated. Unless a grave injustice is done to the senior members of the staffs, the grant will have greatly to be increased, or an opportunity given them to come under the School Teachers (Superannuation) Act. It is certain that a very large number of University teachers would gladly avail themselves of the latter alternative.

Colloidal Theory.

An Introduction to Theoretical and Applied Colloid Chemistry: "The World of Neglected Dimensions." By Dr. Wolfgang Ostwald. Authorised translation from the German by Prof. Martin H. Fischer. Pp. xv+232. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1917.) 11*s.* 6*d.* net.

The Chemistry of Colloids. Part 1, *Kolloidchemie.* By Prof. Richard Zsigmondy. Translated by Prof. Ellwood B. Spear. Part 2, *Industrial Colloidal Chemistry.* By Prof. Ellwood B. Spear. Pp. vii+288. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1917.) 13*s.* 6*d.* net.

AFTER reading the books the titles of which stand at the head of this article, one is inclined to ask whether the word "colloid" as it has come to be used does refer to a definable state of matter, or whether it is not, in fact, used as a convenient label for a heterogeneous group of states which have only this in common, that they are not easily assimilated to the ordinary doctrines of molecular physics.

It is agreed that the word refers to systems in which one state of matter is dispersed through another, but it is claimed that there are no natural boundaries between such systems and coarse settling suspensions on one hand, and true molecular solutions on the other.

Having convinced themselves that there are no natural limits, both Dr. Ostwald and Prof. Zsigmondy select arbitrarily certain sizes of particles or degrees of dispersion and define mixtures which lie between as colloidal. This