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### University Stipends and Pensions.

NO one disputes that "there is no organised intellectual unit higher or more comprehensive than a University," and few, on reflection, would differ from Sir John Seeley in affirming that the education in England is what the Universities choose to make it. Not only are the Universities and institutions of University rank the highest product of our educational system, but they also have the power of influencing the trend of thought and ideals in education to an incalculable degree. To a large extent, therefore, the advance to a higher plane of civilisation is dependent upon their free and untrammelled development. In pursuit of truth, whether in philosophy, or science, or technology, independent of material considerations, they are pioneers of research, blazing the trail for industry, commerce, and those human efforts which add to the sum of life's happiness. Anything which acts as an impediment or hindrance to this development cannot be viewed simply as an injury to the institutions themselves; it is an injury to the community, to the nation, and to civilisation. If this be true, one or two facts of capital importance require to be considered in the light of a few principles. For the moment, however, let us examine the broad relations of the State to the University.

The State can no more dispense with the co-operation of the Universities than the Universities with the co-operation and assistance of the State. Their interests are mutual and their services reciprocal. The influence of the University ramifies through the whole of the administration of the country, its great Departments of State and its two legislative Houses, its local governing bodies and its courts of justice. Obviously the State cannot afford to see the Universities or the University colleges wilt under economic pressure. Now this is precisely what will happen if it does not take a clearer view of its responsibilities and their

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logical implications. The University grant, demonstrably insufficient in pre-war times, is absurdly inadequate now. Not merely have money values changed to an extraordinary extent, but the demands upon the Universities in regard to accommodation, equipment, and facilities for research have increased to an almost equal degree. If to these be added the necessary adjustments in salaries of the staffs, the inadequacy is still more apparent.

The State will have to recognise these facts and, if for no other reason than that of enlightened self-interest, to assume heavier financial responsibilities. As matters stand at present, those borne by the State are altogether disproportionate to the services rendered by the Universities to the nation. In consequence, the statement is as true to-day as it was when made ten years ago that our newer Universities are "a composite figure in which progress and poverty are the prevailing hues." But such increased financial responsibility should not absolve the State from preserving in its traditional integrity that freedom which is the life-blood of an institution coeval in origin with Parliament itself. It is platitudinous to say that no one wishes to see the Universities, new or old, in any sort of intellectual subjection. Unfortunately, however, intellectual subjection is too often the outcome of material subjection. A wise State will show its wisdom in preserving in all its integrity that from which it derives, indirectly though it be, its vital energy, and through which it renews its spiritual life from generation to generation.

On broad and general grounds we have argued that the State has responsibilities to the institutions of higher learning of which it cannot divest itself, and that these responsibilities are such as can be fulfilled only by much more generous financial support than is given at present. It is necessary, therefore, to indicate how seriously these institutions are affected by the lack of this support. The question of stipends and pensions alone will be considered. Too often a university is conceived in terms of stone and mortar; essentially, however, it is a corporation, a society of human beings, a body of teachers and students. To say that an efficient and highly qualified staff is fundamental is simply to express a truism. Such a staff is the product of many years of patient and unremitting study. If by any mischance or lack of vision the flow of able and gifted students to this higher teaching is checked, the loss will be irreparable. That such a result

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is not a remote possibility is becoming sufficiently obvious to those who are watching the present trend of University affairs. A teacher does not enter on his career in the hope of amassing riches. With such an ambition the teaching profession is among the last to which he would resort. Debarred from the financial prizes possible to a business career, he has the right to expect emoluments which will enable him to live decently and to move in a social circle to which his education and training entitle him. This is especially true of the University teacher.

Now, as a matter of fact, the stipends of University teachers in this country at the present time, particularly in the non-professorial staff, do not conform to this standard, but fall miserably short of it. A large proportion of assistant lecturers and demonstrators, full-time teachers, receive no more, and some much less, than 250*l.* a year—a salary or wage which, under present conditions, would be accepted by no self-respecting mason or miner. The grade of lecturer, comprising as it does a great number of men and women who can never hope to attain professorial rank, however well qualified for it by ability and experience, fares little better. The average salary of this class ranks somewhere near 400*l.* a year, and one may take it that the pre-war value of this sum is approximately equal to 200*l.* a year. If the average rate of remuneration of such posts remains at these figures, it requires no gift of prophecy to predict that the flow of talent to the teaching staffs of the Universities and University colleges will inevitably be checked.

The question of the remuneration of the non-professorial element is most important. The numbers are great, the aggregate hardships intolerable. But the stipends of professors as a whole also show little relation to the emoluments in corresponding positions outside the University. A large number of professors receive less than 800*l.* a year, and considerably more than 80 per cent. less than the professorial salary indicated by the Association of University Teachers as a minimum—viz. 1100*l.* a year. Obviously, again, the gift of prophecy need not be conjured up to predict the result. Already the professorial ranks have been, and are being, depleted by the superior inducements offered in industrial, scientific, and commercial business organisations. It is futile to argue that public benefactions should make good these pressing needs. One cannot dragoon public benefactions. It is too much to expect the local authorities and the students to make good the

deficiencies. Generally speaking, both contribute reasonable proportions. The matter is a State affair, and the State must implement to the full its responsibilities.

The present position regarding superannuation is very unsatisfactory. As a general principle, it may be laid down that anything which restricts the field from which the University recruits its staff is inimical to University interests, and hence, in the long run, to education in general. Now the effect of the School Teachers (Superannuation) Act, 1918, is to restrict this field. Any school teacher eligible for its benefits cannot accept an appointment in a University without sacrificing pension rights, in whole or in part. Thus it interposes a barrier—in some cases insurmountable—between the University on one hand, and the technical colleges, the training colleges outside the University, and the schools on the other. The free transfer of teachers to the University is hampered. Already cases are on record of candidates refusing University appointments on finding that acceptance would entail a loss of pension benefits accruing from the Act. It would be most unfortunate if service in schools—a most useful experience for a future University teacher—is to be a bar to later service in the University.

Another effect of the Act is to draw an invidious distinction between existing University teachers and other teachers. Ninety-five per cent. of the whole teaching profession are now eligible for pension benefits incomparably superior to any previous teachers' scheme; while 5 per cent., the University teachers, are excluded, and excluded without any compensation. The position is illogical, unjustifiable, and detrimental to education. One or two illustrations will make this clear. In the University of London some schools of the University come within the provisions of the Act; the rest do not. Thus transfers from one school to another within the same University are made difficult or even impossible. The principal of the Government School of Art attached to a certain University college is said to be the only principal of such a school who is not qualified under the Act—this solely because his school forms part of the University college. In other districts neighbouring institutions engaged in the training of teachers are distinguished from one another in the matter of superannuation, because one forms a department of a University and the other does not. This is in spite of the fact that the two institutions are doing the same kind of work, for the same purpose, under the same authority (the

Board of Education), and that their students do their teaching practice in the same kind of schools under the same local education authority. These facts would be highly diverting were their consequences not so serious.

This anomalous state of affairs has provoked much criticism in University circles. What complicates matters is the fact that there exists a contributory pension scheme in the Universities—the federated superannuation scheme—which is thought by some to be superior to the Teachers Act in certain respects, such as in cases of death during service and of retirement before the age of sixty, and in the form of benefit on retiral. As against these the Teachers Act is non-contributory, it is retrospective, and its benefits are calculated upon the average salary in the last five years of service. The whole question has been considered by a conference of representatives from the Universities of England and Wales, at which it was unanimously resolved to lay the case before the Chancellor of the Exchequer in terms of the following resolutions:—

“(1) That this Conference is of opinion that the interests of English and Welsh education as a whole demand the institution of a scheme of superannuation for University teachers and administrative officials conferring benefits not inferior to those granted under the School Teachers (Superannuation) Act, 1918, and of a like retrospective character; (2) that such a scheme should make due provision (a) for the superannuation of persons who enter the service of a University or University college so late in life as to be unable to acquire the service qualification necessary under the School Teachers Act; (b) for meeting the case of persons who retire before the normal age of retirement; and (c) for meeting the case of persons who die on service. (3) That any scheme of superannuation for University teachers and administrative officials should be of such a nature as to allow (without loss in respect of superannuation) the transfer of a person employed at a University or University college to another approved educational or scientific institution in Great Britain or *vice versa*.”

The term “institution,” of course, includes schools. These resolutions have been accepted by the Association of University Teachers. Whatever be the result, it is a great step forward to have secured unanimity on essentials. The resolutions have clearly demonstrated the present absolute inadequacy of the federated superannuation system and the difficulty of patching up its deficiencies as regards retrospective benefits, interchangeability of teachers, and the amount of retiral allowances or annuities.

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### Aerography.

*The Principles of Aërography.* By Prof. A. McAdie. Pp. xii+318. (London: G. G. Harrap and Co., Ltd., 1917.) Price 21s. net.

FROM time to time it has been a subject of remark by the learned that a book on meteorology has to be a collection of essays, because the available material does not lend itself to exposition in a connected treatise. The substitution of the new name aerography for the older meteorology has not changed the leopard's spots. Indeed, Prof. McAdie has made the peculiarities of the subject more remarkable by presenting a work which is partly a collection of meteorological essays, and partly the note-book of a physicist interested in the study of the atmosphere.

Out of eighteen chapters, the first four are a recitation of the physical meteorologist's “credo,” which includes absolute units as a theme with variations, preceded by a brief history. There follow nine chapters, which are partly note-book and partly essay; then the essay gradually extends its claim in chapters on atmospheric electricity, precipitation, floods, and notable storms, until it fully asserts itself in a chapter on frosts. Finally, a couple of pages of solar influences lead us to an appendix of conversion-tables and an excellent index.

It is the characteristic of the note-book which will appeal most to the reader. We find a summary of references to the results of modern aerological research which are frequently wanted and not elsewhere at hand. Very useful information about investigations with kites, pilot balloons, and sounding balloons is put in an attractive form. It includes, on p. 19, a table of extreme elevations reached by various means, and much other information of like character. The whole is well illustrated by photographs, maps, and diagrams. It is rather discursive. It begins with the troposphere and stratosphere; winds follow the “major circulation” and the “minor circulation.” Ocean currents get a “look in” with the major circulation.

The “credo” is interesting; it shows how careful one has to be in choosing words to express one's meaning. The student has to think when he reads: “The gas constant for the air is not constant. It varies . . . owing to the non-adiabatic character of the atmosphere.” “It should be remembered that a gram of ice is by weight a little more than a cubic centimetre, and if pure ice is used only 73 calories are needed” (for liquefaction). Very little unorthodoxy is