

THURSDAY, OCTOBER 15, 1874

THE UNIVERSITIES COMMISSION REPORT
I.

THE publication of this Report has been awaited with an interest which rarely attends the issue of a Blue Book: and though the Commissioners have taken two years and a half over their labours, the result, both in its matter and its form, fully justifies their apparent delay. We have here presented to us in a concise and intelligible shape, the entire financial affairs of the Universities of Oxford and Cambridge with their Colleges. The whole property of these wealthy institutions, its sources and its application, the probability of its increase, and their annual income and expenditure, are now for the first time laid before the public.

It is in itself no small thing that these ancient corporations, with one single exception, should have been prevailed upon without direct Parliamentary pressure to reveal their most cherished secrets: for it should be remembered that only twenty years ago the first University Commission failed totally in its attempt to extract similar information from the unreformed Colleges, and that even up to the present time not even a University man had materials from which to form a reasonable conjecture as to the wealth of any other College than that of which he might happen to be a Fellow. It must be admitted that the Colleges come out from this ordeal of publicity with a better show than even their friends had anticipated. To produce the elaborate returns which the Commissioners required, an immense amount of additional labour has been thrown upon the College Bursars, who, as the Report bears witness, are not over-abundantly requited for the large amount of work they do as managers of landed estates and treasurers of the general accounts. The Master of Sidney Sussex College, Cambridge, who is also Bursar, has alone proved recalcitrant; but as to all the rest, it is pleasant to read the language in which the Commissioners express their gratitude for the ready assistance which they have received, and the spirit of marked courtesy with which they have been met. It had been generally anticipated that the system of managing estates through these amateur land-agents would not be proved to be economical, but the facts seem to have been unexpected even by the Commissioners, who report that the cost of management of the whole external income averages somewhat under 3% per cent. They also state that they have no reason to believe that the condition of the estates let at rack rent is below the average, though probably less outlay is made than by private landlords who improve their properties. There is, however, a large quantity of land still let on the old system of beneficial leases, concerning which method of letting a clear description is given in the Report, and the agricultural condition of this land is confessedly bad; but this mode of tenure is universally condemned, and is in process of being rapidly extinguished.

With regard to the internal income and its expenditure, the Commissioners are unable, owing to the complicated and varying manner in which these accounts are kept, to arrive at any general conclusions,

but they condemn in unhesitating terms the custom which appears to prevail everywhere at Cambridge, by which the payments of the undergraduates as caution money and tuition fees are made directly to the College tutor, who not unnaturally is induced to regard this arrangement as a private affair between himself and his pupil, so that in some cases information on this subject has been unwillingly given, and in some others altogether withheld. Some disapproval also is expressed of the general mode in which the College accounts are kept, which may be explained by the circumstance that they were never intended for publicity, and in many instances retain the old Latin nomenclature. It was only in a few cases that a correctly drawn balance-sheet was obtainable, and in some cases the accounts of Trust funds are not kept properly distinct, and the balances of such accounts seem to be occasionally borrowed for the general purposes of the College, and no interest allowed. It is further observed that there is no case of audit by a professional auditor. These criticisms, after all, are upon minor matters, but they have a certain importance as showing that the Commissioners have been both searching in their inquiries and fearless in their comments, and also because from the terms of their appointment they were not permitted to make any more general recommendations with regard to the wide question of the uses of academical endowments.

The real value of this Report of course lies in the long and elaborate array of figures which it gives, and in its impressive totals. A mine of reliable information is here afforded to University reformers and all those who are interested in the advancement of science, from which they may learn how vast is the wealth at their disposal, and from which they may securely draw materials for a comprehensive scheme. The total income of the Universities and Colleges in the year 1871, which is the year which the Commissioners have fixed upon for all their calculations, amounted to no less than three quarters of a million, and the number of undergraduates was about 3,500. Of this total, Oxford receives the larger share by more than 70,000*l.*, while the number of undergraduates is just equal. Another calculation gives the external income of Oxford (by which term the Commissioners intend the revenue from endowments) at 336,000*l.*, and the internal income of the Oxford Colleges, which is mainly derived from dues, fees, and profits of establishment, at 58,000*l.*, besides tuition fees at 30,000*l.*, whereas the sum of only 41,000*l.* is spent in scholarships, exhibitions, &c. These figures should be compared with those lately given to the public in the Fifth Report of the Royal Commission on Scientific Instruction, which dealt with such voluntary institutions as University and King's Colleges, London, and Owens College, and from such comparison the conclusion will inevitably be drawn that University education is capable of being made self-supporting, and that the University endowments can only be justified in so far as they encourage, not the teaching, but the advancement of learning and science.

This conclusion is also strongly supported by a more minute examination of the figures in this Report bearing on the income and expenditure of the several Colleges. It has long been well known that the educational utility of a College bears no relation to the value of its endowments,

but this truth can now be enforced by very definite examples. King's College, Cambridge, has a revenue from endowment of 34,000*l.*, and has from 20 to 30 undergraduates; Exeter College, Oxford, has an endowment of less than 6,000*l.*, and educates 180 undergraduates, from whose payments a profit is derived which exceeds the external income by nearly 6,000*l.* A comparison also between Corpus Christi College, Oxford, where the sum of 975*l.* in the year is actually drawn from the endowments to pay the balance of the kitchen and buttery accounts, and Keble College, which has absolutely no endowment and yet exhibits a profit of 500*l.* on the year's account, equally teaches the lesson that out of tutorial and other fees, and fair boarding charges, an unendowed institution is capable of paying its own way, even in the face of competition with extravagant endowments. It appears, then, that by far the larger portion of the University endowments are not applied to educational purposes proper, nor apparently is it desirable that more should be devoted to that object, so that those are proved to be not far wrong who have urged that all this wealth is in the main wasted upon sinecures, and is readily available for the direct advancement of science and pure learning. At Oxford, the Heads of Houses and Fellows, more than two-thirds of whom are non-resident, receive yearly 131,000*l.*, and the remainder of the revenue is expended upon various minor charges which are probably inseparable from the possession of large landed estates and considerable buildings and grounds. It is then to this 131,000*l.* that the attention of reformers must be directed, and the question of its proper uses becomes the more important when it is added that the Commissioners anticipate that in the next fifteen years the Colleges will receive an increase, due to the falling in of beneficial leases, of 123,000*l.* It is probable, nay, almost certain, that this total will be considerably increased, partly by a general rise in the value of land, and partly through building leases, so that by the end of this century Oxford will have a yearly sum of 260,000*l.* upon which there is no present claim of more importance than those of Headships and Fellowships. If the revenues of Cambridge are treated according to the same principle of calculation, the amount paid to scholars and expended in general purposes being knocked off and the probable increase being included, the Colleges of that University will have at the same date about 160,000*l.*, so that Oxford will then appear even more than now the richer of the two. In our next article we shall point out how this large sum might be yet further increased, if the connection with the Church of England, which has always hampered to so great an extent the usefulness of the Colleges, were finally severed, and if all the academical endowments were to be strictly applied to academical purposes; but even without such severance a sufficient surplus is shown to induce the much-desired agreement as to its proper application, so that it may not continue to be wasted, nor diverted, as some have suggested, to the great towns; a mode of action which will induce all towns to do nothing in order that the Universities may eventually help them, and more than ever justify the French criticism that our Universities are nothing more than *Hautes Lycées*, instead of being, as they should be, the active centres of learning and research. It is to a Liberal Ministry that we owe the Commission which has yielded

this valuable Report, but according to all appearances it will be a Conservative Government that must undertake the more important task of inaugurating the work of fundamental University Reform.

METEOROLOGICAL REFORM

WE would invite our readers' attention to an article which appears in this number of NATURE on the necessity for placing Physical Meteorology on a rational basis.

It forms the substance of a paper brought before the recent meeting of the British Association by Col. Strange, who has taken, as our readers well know, a very prominent part in the reconstruction of British Science, and to whom we are indebted for the present very earnest and lucidly argued protest in favour of a more rational way of treating meteorology.

He begins by dividing meteorology into two branches—one of these relating to weather and climate and their effects on organised life; while the other deals with the great physical motions of the atmosphere and with their causes.

To know beforehand the climatic peculiarities of a watering-place or country seat is no doubt of much importance, especially for an invalid who is in search of a healthy locality, but this does not constitute physical meteorology. It forms, we venture to think, a more important and certainly a more difficult branch of inquiry to study the earth's envelope as a whole, to ascertain the nature of the movements to which the moveable parts of it are subject, and finally to investigate the physical causes of these. It is in this latter aspect that the meteorology of the day is so lamentably deficient. The great fault in the present system has been well put by Col. Strange.

Two things have been taken for granted by meteorologists. In the first place, it has been imagined that the sun affects the earth in only one way, namely, by means of its radiation; and secondly, they appear to have taken for granted that this radiant influence is a constant quantity. So much indeed have these most important factors been overlooked, that we believe no systematic effort has yet been made to measure the sun's radiant influence, and indeed no proper instrument has yet been devised by which this can be done in a satisfactory manner. Without doubt the great question for meteorologists is that put by Col. Strange: "Is the sun a constant quantity?"

Now, if the evidence in favour of the sun's constancy were absolutely overwhelming, even then the present system would be at fault, inasmuch as no systematic attempts have been made to measure the strength of the solar influence: but how much more is the system deficient when it refuses to investigate an influence which is certainly predominant and most probably inconstant. To give our readers some idea of the evidence in favour of this latter assertion, let us quote the following words from a letter contained in a report presented to the British Association by a committee appointed to consider the question of scientific organisation:—

"Recent investigations have increased the probability