

THURSDAY, JULY 13, 1876

THE UNIVERSITY OF MANCHESTER

I.

WE have already alluded to a recent movement for procuring a University Charter for the Owens College, Manchester. While this took its origin in the teaching staff of the college, it has now, we believe, spread beyond these limits, and is at present engaging the earnest attention of the governing body of that institution. A pamphlet, drawn up by the members of the senate, and embodying their views, has likewise been sent to some of the most eminent men of the country, and replies have been received on the whole decidedly favourable to the object.

Under these circumstances we may be pardoned an attempt to discuss, however imperfectly, the present state of the higher education of this country, and to point out in what direction, and according to what principles, an improvement of the system may, in our opinion, most properly be brought about.

We shall therefore begin by a definition. Let it be understood that when we use the word University, we mean an institution in which, as far as training is concerned, the higher education of the whole man is contemplated. Now this means more than mere intellectual training—far more than mere intellectual instruction—for it means such a training as will turn out a man of high cultivation in all his powers—one able to take a leading part in the progress of his race. Such a cultivation has a four-fold aspect, moral, intellectual, social, physical. It may perhaps be giving undue prominence to this latter element, to insist upon the neighbourhood of a considerable river as a *sine quâ non* in founding a University, but this is only an extreme expression of the views entertained, we doubt not, by the authorities of Oxford and Cambridge, that a University should contemplate the physical training of its undergraduates, as well as what we call training in its higher forms. If these be the true functions of a University, it is almost superfluous to say that such an institution, in common with everything possessing vitality, must be constantly reforming itself, so as to adapt its training to the ever-varying and ever-advancing requirements of the age; and it is most certainly the part of a wise Government to consider how far the present institutions of our country meet its educational wants, and if they do not, to consider whether they cannot with propriety do something to supply these legitimate requirements.

Now this at once leads us to ask in the first place, What are the most distinguishing characteristics of the present age, or rather, perhaps, in order to limit our inquiry, of the British citizen of the age? what are, in fine, the essential conditions which the statesman must not ignore, but by which he must consent to be guided in all his attempts to legislate on the question?

In the first place, he cannot ignore what may be termed the religious difficulty. Perhaps, roughly speaking, about half the inhabitants of the country may be regarded as attached more or less to the Church of England, while the other half differ more or less widely from the tenets of that

Church. Here it is evident that this difference of opinion does not imply any want of interest in religion, but the very reverse. What it does indicate is the line that must be pursued in all future legislation on the subject. The statesman must deal with men as they are, and in consequence of this difference he cannot afford, and indeed he will not attempt, to place the higher education of the country in the hands of one religious body, however powerful, whether this be the Church of England on the one hand or the positivists on the other. Such a policy may have been possible, perhaps even desirable, a couple of centuries ago, but it is neither possible nor desirable now.

In the next place, the statesman cannot ignore the fact that certain branches of knowledge and their applications have developed of late years in a very wonderful manner, so as almost to fix a new epoch in the progress of our race. The present is eminently the scientific age of the world.

Again this wonderful progress of scientific knowledge has added greatly to the wealth of the nation, especially in its larger centres of industry, and there is in consequence a very persistent and most praiseworthy cry for increased facilities for higher cultivation. Nor is this cry limited to scientific culture alone, in which case it would be less praiseworthy; but it embraces general cultivation, having, however, especial reference to these recently-developed branches of knowledge which have made our great cities what they are, and in which progress is necessary to a continuance of their well-being.

Now these inevitable conditions are not merely destined to regulate all future steps that may be taken for the spread of higher education, but they have already modified the position of the present institutions of our country, and besides this they are even now determining the action of Government in a variety of ways. The increased endowment of research, the loan collection of scientific instruments, and other developments which these will inevitably bring about, are indications that our present rulers are very much alive to the true welfare of the country. We are, however, here engaged rather with the future of the higher education, and we shall now show in what manner the principles we have dwelt upon have already modified our existing Universities.

To make this clear, let us begin by a brief description of the chief Universities of England and Scotland, and for this purpose we may confine ourselves to the two great English Universities, the four Scotch Universities, and the University of London.

The two great English Universities have come down to us from a time when the people of England practically thought alike on religious matters. Until recently these institutions bore all the marks of this ancient unity, inasmuch as they only gave their degrees and Fellowships to members of the Church of England. But it is well known that by recent enactments, not only degrees, but Fellowships may be held by those who are not members of the national Church. Nevertheless, while open to all, these Universities yet retain an especial relation to the Church of England, and we believe there is no widespread wish to see the connection violently altered.

In many respects these Universities are institutions

of great excellence, while in some respects they are altogether unique. In principle they embrace a very complete system of culture, in practice, however, it is found that their system is more especially adapted to the wealthier classes of the community. Judging of a tree by its fruits, we must not forget what a brilliant galaxy of statesmen, divines, philanthropists, and men of the highest general culture, have owed their training to these great Universities. It is when we come to strictly scientific professions, such as medicine and chemistry, that the deficiencies of these institutions begin to appear; neither Oxford nor Cambridge has turned out an appreciable number either of distinguished physicians or distinguished chemists. Those who are desirous to become proficient in these branches of knowledge almost invariably go elsewhere. The same may perhaps be said of the science of engineering.

It has been proved a great misfortune to the country that these two Universities have unwarrantably neglected the scientific training of their graduates. Nor is it untrue to say that in the past generation they have produced statesmen of unquestionable eminence, but yet profoundly ignorant of the scientific requirements of their country. It is only now, after a somewhat prolonged agitation, that the minds of the rulers of this country are becoming awake to the paramount value of science in the development of our resources.

Let us now briefly consider the four Universities of Scotland. These institutions educate a far larger proportion of the people of Scotland than Oxford and Cambridge do of the English people. They are the training-schools rather of the middle than of the upper classes of the community. They excel in those branches in which Oxford and Cambridge are deficient, and they are deficient in those respects in which Oxford and Cambridge excel. Good medical men and men of good acquirements in various branches of science are produced by these Universities, but the accomplished scholar or mathematician is not produced—at least to any great extent. Nor, so far as we are aware, is any attention given to the physical training of the undergraduates. The Scotch Universities are not now connected with the Established Church of Scotland, except in the fact that there is a theological faculty attached to each of them, and that the Church of Scotland looks to that faculty alone for the theological training of its ministers. They are in the habit, however, of giving theological degrees with praiseworthy impartiality to eminent divines in all the somewhat numerous divisions of the Presbyterian Church, and occasionally to English Nonconformists.

The University of London is different from all these, inasmuch as it is entirely unconnected with any religious denomination. It had its origin, if we mistake not, in the wish to give degrees to those who, from adverse circumstances, had been unable to receive a University education, but who were yet possessed of the requisite information implied in a degree.

At the present moment a large number take advantage of this institution, and we believe that nearly 700 candidates presented themselves at the recent matriculation examination. Of these, however, the great majority are not unattached students, but are probably connected with some metropolitan or provincial college that has not the

power of granting degrees. Thus the University of London is at present the degree-giving body for the alumni of a considerable number of colleges scattered throughout the country, and in virtue of this position it has a very great influence in regulating the studies at those institutions.

We have thus briefly described the present position of the higher education of this country, and it remains to consider in what respect the present system is deficient and how this deficiency may be remedied, consistently, of course, with those conditions which we have stated, and which no legislation can possibly ignore. This, however, must be reserved for a future occasion.

GALILEO AND THE ROMAN COURT

Galileo Galilei und die Römische Curie. Von Karl von Gebler. (Stuttgart, 1876. London: Trübner and Co.)

THIS work supplies a continuous and detailed narrative of the circumstances under which Galileo incurred the hostility of the dominant party at Rome at the opening of the seventeenth century, and was by their influence denounced to, and ultimately tried and condemned by, the supreme tribunal of the Inquisition. An Appendix contains the text of the principal documents referred to in the body of the work. The whole forms a volume of rather more than 400 pages.

Such an undertaking, though it may, at first sight, appear a mere piece of surplussage to those who know how extensive is the already existing Galileo literature, is yet abundantly justified by recent events. Within the last ten years original documents published in France and Italy, and German critical researches based upon them, have completely overthrown the view hitherto held by the most competent writers on this subject, and compelled the adoption of a diametrically opposite conclusion. All previous narratives of the trial of Galileo are thus necessarily superseded, and its history must be entirely re-written. Without attempting to explain the nature of the evidence which has brought about this change of view, a task much beyond my present limits, I propose to state wherein the change itself consists, and to what extent the opinions hitherto held concerning the conduct of the prisoner and of the Court are affected by it.

The essence of the charge against Galileo was, as we learn from the sentence finally pronounced, that after having been formally prohibited by the Inquisition from defending the Copernican theory, he had, in his Dialogues on the two rival systems of the universe, openly contravened this order, and so committed a clear act of contumacy, or, as we should call it, contempt of Court. On the question whether the accused had actually defended Copernicanism in his Dialogues, modern writers were able to form an independent judgment by the study of his incriminated work; but the statement about the injunction personally laid upon him by the Inquisition rested solely on the assertion of the Court itself, unsupported by one tittle of corroborative evidence. It is therefore a remarkable circumstance, and no bad illustration of how much may be done by strong asseveration, that the best historians, including some by no means antecedently inclined to repose a child-like confidence in the veracity of the Holy Office, one and all accepted its statement