

THURSDAY, MAY 15, 1879

THE VICTORIA UNIVERSITY

THE movement for founding a new university in the north of England has progressed considerably since the question was discussed in these columns in July, 1876. It has now shaped itself into a final memorial to the Privy Council, which will be presented to the Lord President by a peculiarly powerful deputation this very day. Let us hope that the reply will be a favourable one, believing as we do that the educational welfare of the country demands an increase in the number of its universities. It may be desirable to say a few words about the progress of this movement.

On July 20, 1877, a memorial addressed to the Privy Council was presented to the Lord President praying that Her Majesty should be advised to grant a charter to the Owens College, Manchester, to be thenceforth called the University of Manchester, with power to grant degrees in Arts, Science, Medicine, and Law.

A slight modification of the original programme has now been made with the view of providing more effectually for two of the objects contemplated in the former memorial, viz. (1) for an ample and sufficient control over the proposed university, as a national place of education and learning, by the Government of the country; and (2) for the incorporation in the proposed university, on equitable terms and on satisfactory conditions, of other colleges besides the Owens College. This is not the place in which to discuss in detail the constitution proposed. We may, however, remark that Owens College is to be named in the charter as the first college of the new university, and that Manchester is to be the local centre of this institution.

In consequence of this modification the support to the memorial will be, we believe, even more powerful than that formerly given and may be taken as fairly representing the opinion of two great counties in the north of England. The Lord President has consented to receive simultaneously two deputations, one headed by the Duke of Devonshire, president of the Owens College, and the other from the Yorkshire College, Leeds, headed by the Archbishop of York.

Since this scheme has been before the public the most persistent objection urged against it has been advanced by those who maintain that the teaching and examining functions of a university should be perfectly distinct. It may be worth while to discuss this objection from two points of view, endeavouring to ascertain in the first place what is the present practice in this country of the existing universities, and then to find what course is best in principle.

Let us begin with the London Examining Board, which has no teaching staff connected with it, and ask ourselves whether its machinery secures an absolute separation between the examining and teaching elements. There can only be a negative reply to this question. The Senate of the London Board frequently select examiners who are teachers in one of the two London colleges or in Owens College, Manchester; that is to say, in institutions which send numerous candidates to the London examinations.

The result of this system must inevitably be that (with-

out any blame being attributable to any one) the pupils of such an examiner have an advantage over other candidates whose teachers are not so represented. Thus, with respect to this Central Board, only a partial separation between the teaching and examining elements has been found practicable, and a very questionable advantage has been given to certain candidates in the examinations.

Let us next take Cambridge, as representing one of the great English Universities. Here it is the practice that the Committees who arrange the branches of study for the various examinations should consist very largely of professors and lecturers, who likewise form a large portion of the examining body. Occasionally a private tutor is chosen as an examiner, in which case, for a few months preceding the examination, he is expected or required to give up those of his pupils who are coming forward as candidates.

Now, while this system is infinitely preferable to that of the London Board, yet even here the former pupils of the private tutors who have been chosen examiners must, we think, have a small advantage over the others, which is, however, reduced to a minimum inasmuch as the Boards of Examiners for a subject consist of four men at least. In the Queen's Colleges, Ireland, the practice is different. Here there are four colleges, which form together one University, and it is, we believe, the custom that, in conducting examinations for degrees in any college, the professors of that college should associate with themselves an outside element consisting of certain professors from the other colleges of the same University.

The practice in Scotland is somewhat similar to that in Ireland, the chief difference being that, whereas in Ireland the external element consists, we believe, of members of the teaching staff of one of the other colleges, in Scotland it consists of graduates of some one of the Scotch universities who are not engaged in university teaching in Scotland. Should the Victoria University succeed in obtaining a charter, its practice will be very similar to that in Scotland, and it must, we think, be owned that one advantage of this system is that by it all candidates are placed upon precisely the same footing.

All this, however, might be freely allowed by those who advocate an entire separation between teachers and examiners. They might reply that any such advantage is more than overborne by the manifest tendency to lower the standard of efficiency when the teacher is permitted to take any part in the examination of his pupils.

This subject has been very fully discussed in a recent report of the Royal Commissioners appointed to inquire into the universities of Scotland, one of whom was the well-known author of the "herring-brand" comparison. The following is a quotation from this report (page 49).

"The examination of the students of a university for their degrees by the Professors who have taught them, is sometimes spoken of as an obvious mistake, if not abuse: but those who are practically acquainted with university work will probably agree with us that the converse proposition is nearer the truth. In fact, it is hard to conceive that an examination in any of the higher and more extensive departments of literature or science can be conducted with fairness to the student, unless the examiners are guided by that intimate acquaintance with the extent and the method of the teaching to which the learner has had access, which is possessed only by the

teachers themselves. . . . The admirable influence which the Scottish universities have hitherto exerted upon the people of the country has been due not only to the prolonged and systematic course of mental discipline to which their students have been subjected, but to the stimulus and encouragement given to inquiring minds by distinguished men who have made the professorial chairs centres of intellectual life; and we cannot think it desirable that any such changes should be made as would tend to lower the universities into mere preparatory schools for some central examining board."

We are gratified to think that the sentiments which we expressed in these columns nearly three years ago should have received the sanction of such high authorities. As the subject is one of great importance, our readers will perhaps allow us to repeat the objections we then raised to the establishment of a Central Examining Board (see NATURE, vol. xiv. p. 255):—

"The Calendar of the Central Board must inevitably embody only the best-known and most widely-diffused results of knowledge—not that which is growing and plastic, but that which has already grown and hardened into shape—the knowledge, in fact, of a past generation which has become sufficiently well established to be worthy of this species of canonisation. A very powerful inducement is thus offered to the professors of the various colleges to teach their pupils according to this syllabus, and a very powerful discouragement to attempt to alter it. They may be men of great originality and well qualified to extend and amend their respective spheres of knowledge, but they have no inducement to do so. . . . It is the old and time-honoured custom of killing off the righteous man of the present age in order the more effectually to garnish the sepulchres of his predecessors. Our readers are well aware that the natural philosophy course has changed its character very greatly of late years, and that for this we are much indebted to Professors Sir W. Thomson and P. Guthrie Tait. But could these men have done this under the system of a Central Board? If they had succeeded it must have been, as Galileo succeeded, against the attempt made by the ruling authorities of his day to stop his voice and strangle his originality."

It has always been a source of infinite amazement to us that a single man of eminence should come forward to advocate the gigantic apparatus for cram implied in a Central Examining Board.

May the day be far distant when the rising generation shall all be required to feed upon such rations! One is tempted to think that the advocate of this system must surely have suffered a transmutation similar to that which overtook Bottom, who, in consequence, entertained quite original notions on the subject of food. "I could munch," said that worthy, "your good dry oats. Methinks I have a great desire to a bottle of hay; good hay, sweet hay, hath no fellow."

ORGANISMS IN THE BLOOD, AND THE GERM THEORY

The Microscopic Organisms found in the Blood of Man and Animals, and their Relations to Disease. By Timothy Richards Lewis, M.B., Army Medical Department, Special Assistant to the Sanitary Commissioner with the Government of India. (Calcutta, 1879.)

WE have here in a small illustrated work an able critical *résumé* of some of the most important facts previously known on the subject together with

others not hitherto published, tending not only to increase our knowledge, but also to throw light upon the general question of the relations of the microscopic organisms found in the blood to disease.

Nearly two-thirds of the work refers to the existence in the blood of vegetal organisms of the type of Bacteria, Bacillus, and their allies, while the remaining third relates to the existence in this situation of animal organisms. We have in this latter part a brief but interesting history of what is known concerning the existence of Nematoid hæmatozoa in the lower animals, and also of what has been learned concerning the embryos of the *Filaria sanguinis-hominis*, first discovered by the author in 1872, in the blood of persons suffering from Chyluria.

It seems evident from the account here given that we have still almost everything to learn as to the source and parental forms of these embryo Nematoids found in the blood of man. The hypothesis of Manson concerning the part played by mosquitos as intermediate hosts (within which some of the embryos swallowed may undergo development, and from the bodies of which parent-forms, capable of infecting man, may find their way into drinking water) seems, from the careful observations made by Lewis, to be rendered more than doubtful. The relations of these organisms to the morbid conditions with which they are associated are, indeed, full of the most puzzling difficulties. It is somewhat doubtful whether the mature form of this helminth has yet been discovered, notwithstanding the observations of Dr. Bancroft in Australia, and of Dr. Lewis himself (as referred to on pp. 85–89). The fact of the persistence of the envelope of the ovum as a diaphanous sheath, surrounding each of the young embryos found in the blood of man, would seem to the writer strongly to suggest the probability that the embryos in question have been liberated at once into some portion of the vascular system, rather than that they have entered it from without by penetrating its walls. If such a process of struggling through tissues were to take place, their thin diaphanous envelopes would stand a good chance of being torn and left behind.

Nematoid helminths have long been known to occur in the blood of many birds, and Dr. Lewis says: "I have examined a considerable number of the ordinary Indian crow (*Corvus splendens*), and have found that the blood of nearly half of those which have come under my notice have contained embryo hæmatozoa of this character. Sometimes they are in such numbers as to make it a matter of surprise how it is possible that any animal can survive with so many thousands of such active organisms distributed throughout every tissue of its body. The birds did not appear to be affected in the slightest degree by their presence. In their movements they are very similar to the nematoid embryos found in man; they are, however, considerably smaller, and manifest no trace of an enveloping sheath."

Again, observations made many years ago by MM. Gruby and Delafond went to show that 4 to 5 per cent. of the dogs in France harboured microscopic nematodes in their blood; Lewis ascertained in 1874 that more than a third of the pariah dogs of India are similarly affected, whilst Dr. P. Manson has shown that this kind of parasitism affects at least an equal proportion of dogs in China. The embryo nematodes belonging to dogs of these