muscular rigidity to pronounced convulsions and opisthotonos. The factors which chiefly determine the extent of the muscular action are: the stage of general narcosis at which the syncope sets in; the suddenness and completeness of the arrest of circulation; the presence of any cause calculated to facilitate the induction of cerebral anæmia, such as the sitting posture; the condition of the muscular system as regards vigour and stability. The following cases taken from THE LANCET list illustrate the influence of the above conditions.

Case 55, a male, aged 30 years; operation, removal of necrosed bone from finger; duration of administration, from three to four minutes. Sitting posture. Symptoms: "Raised hands and trembled, kept spitting at the lint; appeared about to vomit. Suddenly he was violently convulsed as if in an epileptic fit." Here are associated an obviously slight degree of narcosis; the sitting posture conducive to cerebral anæmia; a young man with only a trifling ailment, therefore probably with vigorous muscular system. The arrest of circulation from the syncope produces "violent convulsions."

Case 83, a girl, aged 12 years; operation for necrosis of tibia. Symptoms: "Deadly pallor, twitching of muscles about mouth, eyes rolling up, pupils dilated, stertorous breathing." In this instance the syncope came on at a much more advanced stage of the anæsthesia, and the patient was presumably recumbent; the muscular disturbance was therefore slight.

These two cases are examples of many set forth in THE LANCET report and show the two extremes of muscular disturbance induced by chloroform syncope.

I have heard about, and been asked the treatment for, cases in which there occurs rigidity or fixation of the respiratory muscles in a condition of expiration. I have never seen any such symptoms, but imagine that such a condition is merely part of a general muscular action due to cerebral anæmia. It is most probably the contraction of the muscles immediately preceding dissolution. No doubt it is equivalent to the "sudden stiffening of all the muscles" which is referred to by Dr. Russell as exhibited by cats, when the cerebral circulation is interrupted. The only treatment under such circumstances is to attempt to restore the circulation, but at such a late stage there is very little chance of success except by direct massage of the heart. In this connexion Dr. Russell's remarks about the length of time the brain and heart can withstand the loss of circulation are very interesting and encouraging. If the brain can survive the loss of circulation for five minutes and the heart a much longer period of arrest, surely chloroform accidents should be more amenable to treatment? That they are often so hopeless is due to the fact that the symptoms of danger are not recognised sufficiently early. If the brain can do without circulation for five minutes the basal centres which are more fundamental in their nature should survive still longer. We are thus confronted by the fact that the respiratory centre, for instance, may be exhibiting energy for some minutes after cessation of the circulation; that the patient may, and no doubt does, continue breathing or making respiratory efforts for some time after the heart has ceased to beat or at least to beat effectively. This possibility makes it all the more necessary for the respirations to be studied carefully during chloroform administration, in conjunction with the circulation. Any alteration in the rhythm or character of the respiration, especially of the nature of an acceleration, should be viewed with suspicion and be checked by observation of the circulation. Failure of the circulation is indicated at once by exaggeration of the respirations, with which are associated pallor and dilated pupils. These symptoms may set in at any period of the inhalation, but almost invariably occur within the first few minutes of the administration.

I think that a proper appreciation of the first signs of danger under chloroform and prompt treatment will do more to diminish the number of fatalities than the use of any apparatus, however ingenious.

I am, Sir, yours faithfully,

ALEXANDER WILSON, F.R.C.S. Eng.,

Honorary Anaesthetist, Manchester Royal Infirmary;

Honorary Lecturer on Anaesthetics,

University of Manchester.

Manchester, April 20th, 1909.

THE UNIVERSITY OF LONDON AND THE STUDY OF ANTHROPOLOGY AND ETHNOLOGY.

To the Editor of THE LANCET.

SIR,—In the article on "An Imperial Bureau of Anthropology" published in THE LANCET of April 10th, you say that "the Universities of Cambridge and Oxford have established boards of anthropological studies, with the power of granting diplomas to those who have qualified by studies under their direction in prehistoric and historic anthropology and ethnology (including sociology and comparative religion, physical anthropology, and psychological anthropology). While the students at Oxford and Cambridge are thus provided for, no opportunities are given to students in London."

May I point out that for the past few years, owing to the munificent generosity of Mr. Martin White, the teaching of the subjects to which you refer has been carried on in London by two University professors of sociology, Mr. L. T. Hobhouse and Dr. E. A. Westermarck, and by a University lecturer in ethnology, Dr. A. C. Haddon (who holds a similar post at Cambridge). Sociology forms part of the curriculum, as an optional subject, both for the B.A. honours degree in philosophy and for the B.Sc. honours degree in economics, and the London classes in this subject are flourishing. The University is at the present moment making efforts to secure a permanent endowment for ethnology similar to that which has already been provided for the chairs of sociology, and for the past 12 months the Senate have been in communication with the Colonial Office with a view to ascertaining whether that Office would be able to assist and coöperate with them in the establishment of an ethnological department on a satisfactory basis.

With reference to the concluding paragraphs in your article, I beg to point out that the University has recently established a board of studies in ethnology.

I am, Sir, your obedient servant,

W. J. COLLINS, Vice-Chancellor.

South Kensington, S.W., April 27th, 1909.

* * We are glad to know from Sir W. J. Collins that a board of studies in ethnology has now been established by the University of London; in the last issue of the Calendar of the University (1908-09, p. 153) it is stated this board "is not yet instituted."—ED. L.

THE VASO-MOTOR THEORY OF EPILEPSY.

To the Editor of THE LANCET.

SIR,—In his admirable Goulstonian lectures embracing the above subject Dr. Alfred E. Russell is kind enough to refer to a work of mine in which are set forth almost identical views. He says: "Francis Hare maintains that the explanation of the aura is to be sought in the peripheral vaso-constriction which he postulates as preceding the cardiac inhibition."¹ The reference is accurate but incomplete. Some epileptic auræ felt at the periphery are certainly due to peripheral vaso-motor action, whether constrictive or dilative. In proof whereof I have adduced the following paragraphs from Hilton Fagge and Trousseau respectively.² "The patient perhaps experiences a sensation of coldness or weight in a limb; and the part is found on examination to be pale and cold to the touch, and to have its sensibility distinctly blunted" (Fagge). Others of the vascular changes may be peripheral and dilative. "A local determination of blood may occur in the finger, for instance, causing it to swell, reddening the skin and rendering it successively within a very short time red, and of a more or less deep violet colour. The swelling is real, not apparent, for rings previously easy suddenly become too tight for the fingers" (Trousseau). So much for peripheral vaso-motor action as explaining some auræ felt at the periphery.

That, however, is but one side of the subject. On the same page I go on to say: "But many auræ are unassociated with appreciable objective changes in the part whence they

¹ THE LANCET, April 10th, 1905, p. 1031.

² The Food Factor in Disease, 1905, vol. i., p. 335.

seem to arise. Then it is not unnatural to believe that invisible vascular changes, similar in character to the visible peripheral vascular changes just described, are taking place in the cerebral centres and are the immediately responsible factors. On this view, we can understand many of the auræ of the special senses, observable also in migraine; and we can appreciate the time differences between the auræ of epilepsy and of migraine."

I am, Sir, yours faithfully,
Upper Norwood, April 25th, 1909. FRANCIS HARE.

THE PROXIMATE FACTOR OF DELIRIUM TREMENS.

To the Editor of THE LANCET.

SIR,—In my letter which appeared in THE LANCET of April 17th, p. 1136, I stated that "there are many more regular or continuous drunkards than periodic drunkards, but the latter are just as liable to suffer from delirium tremens as are the former." Dr. F. Hare considers that the opinion I express is not in accordance with generally received views.

It is difficult to determine what the generally received views are, for a reference to the works of various writers will demonstrate that opinions differ on the point. I base my opinion on the histories of 896 cases of inebriety, the records of persons who have been admitted into the Dalrymple Home Retreat. Of this number 669 were regular drinkers, 215 of whom had suffered from delirium tremens. The periodic inebriates numbered 227, of whom 74 had had delirium tremens. In both classes the delirium tremens percentage works out at about 32. By periodic inebriate I mean persons who at regular or irregular intervals give way to outbursts of alcoholic excess; between the outbursts they are either temperate or are total abstainers. The 669 regular drinkers mentioned above are entirely composed of the soaker and the chronic alcoholic who manifests occasional outbursts—types referred to by Dr. Hare. I have found that these persons, as well as the periodics, can have their liquor cut off suddenly with perfect safety.

Dr. Hare further finds that my statement is opposed to his experience at the Norwood Sanatorium. His experience there, unless I misread his report, has consisted of 13 cases of delirium tremens which occurred among some 200 admissions during a period of about two years, a number which appears to me totally insufficient as a basis for contention.

I am, Sir, yours faithfully,
April 26th, 1909. F. S. D. HOGG.

THE RÔLE OF THE SALIVA IN THE TRANSMISSION OF TUBERCLE.

To the Editor of THE LANCET.

SIR,—In connexion with the instructive article by Dr. N. Neild and Dr. E. V. Dunkley on "The Rôle of the Saliva in the Transmission of Tubercle"¹ the following may be of interest to your readers. A patient attending the inoculation department at the London Hospital, suffering from lupus of the nose and naso-pharynx, is by trade an envelope folder. I questioned her to-day about the details of her work and find that her duties are folding, gumming, and sticking envelopes. The gum is applied with a brush and the flaps are then pressed down; should there be any excess of gum pressed out along the flaps, this has to be licked off with the tongue of the folder so that the envelopes shall not stick together when piled up. It seems, therefore, that if tubercle can be transmitted by licking envelopes the danger may be to the sender as well as to the receiver.

I am, Sir, yours faithfully,
York-street, Portman-square, W. G. T. WESTERN.

THE DISAPPEARANCE OF MR. JOHN DAVIDSON.

To the Editor of THE LANCET.

SIR,—Among the documents found since the disappearance of Mr. John Davidson was one in which he speaks of his inability to face the effects of cancer. His family wish, in the circumstances, to discover on what grounds he based his belief that he was suffering from this disease, and I write on

their behalf to ask if you will allow me, through your columns, to request any medical man whom Mr. Davidson might have consulted in the last few years to communicate with me at this address if he feels himself free to do so.

I am, Sir, yours faithfully,
36, Roland-gardens, S.W., April 23rd, 1909. GRANT RICHARDS.

AN AMBULANCE SERVICE FOR THE METROPOLIS.

To the Editor of THE LANCET.

SIR,—I think that if Mr. H. Nelson Hardy (who writes under the above heading in THE LANCET of April 24th) had read with care the Blue-book containing the report of the Ambulance Committee, or your article upon it in THE LANCET of April 3rd, he would have seen that the question of providing an ambulance service for London, if such a service is to be efficient, economical, and useful, is hardly to be solved by the Home Office authorising the purchase of ambulances by the police. Ambulances have to be housed, maintained, and manned, telephonic communication must be so established as to enable them to be speedily summoned, and all this has to be paid for. Also, as your article makes clear, the service in order to be of real utility will have to be so arranged that it can deal not only with street accidents but with those on private premises, and with other cases which, though needing removal by ambulance, are not accidents. The committee was pretty fully informed as to the excellent work carried out in the City under Captain Nott Bower; it had his evidence and that of a large number of other witnesses, including police surgeons and other members of the medical profession; it had visited and examined on the spot the systems in use at Manchester and Liverpool; it had detailed information from a number of provincial boroughs, and also from Paris, Berlin, New York, Boston, and other foreign cities. The question of police administration is thus summed up in his memorandum to the report by Sir William Collins, who says on this point: "There is much to be said for the police undertaking the duty. If the Metropolitan Police were a municipal force, as in the City and the provinces, there can be little doubt that the duty would fall to them. As it is, there appears to be no disposition on their part to undertake it, and my colleagues consider it undesirable for various reasons to assign this additional work to them." There are many reasons which render it highly desirable that the Metropolitan Police should continue to be under the control of the Home Office and not of the London County Council, but it seems to me that London would hardly acquiesce without protest in the Home Office being authorised by Act of Parliament to levy such a rate as would be required for duties not connected with the essential functions of the police, or that it can be desirable for a body responsible only to that department to control an enlarged ambulance service. If the proposed service were confined to the removal of those suffering from street accidents within the strictly metropolitan area it might be different.

I am, Sir, yours faithfully,
April 26th, 1909. E. A. A.

CARDIFF MEDICAL SOCIETY.—The annual address of this society will be given in the lecture-hall of the Young Men's Christian Association on Friday, June 4th, at 3.30 P.M., and will be delivered, as was announced in THE LANCET of April 24th, by Dr. J. Lucas Championnière of Paris, President of the International Surgical Society, who has taken as his subject the Modern Treatment of Fractures. The annual dinner of the society will be held on the same evening at the Royal Hotel, Cardiff, at 7.30 P.M. Dr. Lucas Championnière will make the presentation of the Lynn Thomas and Skyrme Fund after the dinner. All members of the profession are cordially invited to be present at the dinner, and as the occasion is a special one it is hoped that as many as possible will avail themselves of the opportunity. Tickets (7s. 6d. each) can be obtained from the honorary secretaries, Mr. F. P. S. Cresswell, 24, Windsor-place, Cardiff, and Dr. William Martin, 17, Windsor-place, Cardiff, and it is requested that application for them be made as soon as possible, and in any event not later than May 28th.

¹ THE LANCET, April 17th, p. 1096.