Correspondence.

"Audi alteram partem."

DIFFICULTIES UNDER THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

To the Editors of THE LANCET.

SIRS,—A week or so after my first attendance on a case of scarlet fever the mother told me that she had noticed a rash on a child who had been sleeping with my patient and that the rash had been followed by peeling, which was now nearly at an end. I examined the cuticle carefully and had no doubt that this had been a mild case of scarlet fever now at the end of the desquamative stage. I thought it my duty to notify it, but struck out the word "urgent" which is printed on the envelopes addressed to the medical officer of health and inserted the words "desquamative stage," thinking that this would indicate—as there was already a case under treatment—that there would be no need for fresh sanitary measures. To my surprise I received a note from the medical officer of health next day in which the following passages occur: "The inspector visited the house at once to make usual inquiries." "The father was astounded to hear that the child had scarlet fever." "The inspector thereupon examined the hands and feet without finding any trace of peeling." "In the circumstances I have thought it desirable to mention the above facts and to ask you whether there may not perchance be an error of diagnosis." In a subsequent letter he says: "I think you should withdraw the notification. I do not see how I could possibly advise the committee to pass the certificate for the payment of the fee." I have since had a letter from the vestry referring to my "neglect to notify the case forthwith" (I may have allowed twenty-four hours to elapse between seeing the case and forwarding the notification), further stating that they "will decline in the present instance to pay the usual fee for your certificate." I should like to know if it is usual for sanitary inspectors to examine cases and correct the diagnosis of medical men. Also, if the vestry are within their rights in refusing to pay for a notification.

I am, Sirs, yours faithfully,
Kensington, Oct. 26th, 1898. ALFRED E. BARRETT.

* * We recommend our correspondent to read our pamphlet entitled "Difficulties under the Infectious Diseases (Notification) Act."—ED. L.

"VITALITY."

To the Editors of THE LANCET.

SIRS,—From Dr. Beale's letters it would seem he does not believe in the correlation, equivalence and transmutation of forces, and that one force may be a mode of another, as heat (and perhaps life) is a mode of motion. He seems to exclude the vital from all other forces and to regard it as *sui generis*, neither transmuted nor transmutable. Vitality, he says, "cannot be derived from non-living matter or from force," but may it not be derived from such matter *plus* force, as locomotive power is from coals and water *plus* heat? Professor Lindley, in his "Introduction to Botany," Ed. 1839, p. 358, says he had some raspberry plants before him as he wrote which had been raised from seeds taken from the skeleton of a man 30 ft. below the surface of the earth, who had been buried with some coins of the Emperor Hadrian. The seeds therefore were 1600 or 1700 years old. All this time they had lain without motion or change of any kind and so might have remained for ever if they had not been exposed to heat, light, air, and water. Before such exposure they might be regarded as so much *quasi* dead matter, waiting for forces to produce in it chemical activity, change, movement, germination—in a word *life*, which the matter *per se* and the forces *per se* could never have generated. As Dr. Beale denies that life can be derived from non-living matter and forces and as there was a time when our earth consisted of these only, how does he explain the first appearance of life upon it? A and B being the only

things in existence, if C appears surely it must be derived from A or B or A + B?

I am, Sirs, yours faithfully,
D. HOOPER, B.A. Cantab., M.B. Lond.
Trinity-square, S.E., Oct. 24th, 1898.

To the Editors of THE LANCET.

SIRS,—My thanks are due to those members of the profession who have taken part in the consideration of that which I have long regarded not only as the most important of all the questions connected with every department of medicine and surgery but a question which has to do with the first principles of natural science and philosophy.

Seeing that the bioplasts, the several particles of living matter upon which the formation, action, and preservation of all the active tissues and organs of a living being depend, are less than the one-thousandth of an inch in length and diameter, and in many cases considerably less than this, the question of the nature of vital change—of vitality—must be considered from the microscopical point of view. I doubt whether anyone who studies the facts and observations to which I have referred will very widely differ from me as regards the conclusions he arrives at.

It is to be regretted that so far no one has criticised the views I have advanced from the microscopical side, which are based upon observations possible only during the last thirty or forty years. Even recently some naturalists, physiologists, psychologists, and pathologists, as well as chemists and physicists, have not only under-estimated the constantly increasing value of microscopical investigation in our endeavour to determine the nature of vital phenomena, but have calmly ignored the important bearing of facts ascertained by microscopical inquiry upon the problem of life. Consequently free discussion, in the absence of which the advancement of every department of natural knowledge must be retarded, has scarcely been commenced.

During the last few months, however, some encouragement has been afforded to students in microscopic investigation in England by the honours conferred upon Kölliker and Virchow, whose lives have been devoted to microscopical anatomy and pathology, while Lister stands pre-eminent in the recognition by the State of his labours in an all-important department of minute investigation.

Dr. T. Glover Lyon's suggestions take us far beyond the visible minute bioplasts consisting of living matter to be found in all those parts of a living organism where vital action proceeds. Is not the state of the "tissue" of a living animal as contrasted with the "tissue" of a dead one dependent upon the never-ceasing interstitial currents of fluid through every part of it—a circulation which is set up and maintained as long as the bioplasm lives, but ceases the instant it dies? "Ethereal forces" and "ethereal waves" also go far beyond anything I can hope to study. Tissue and bioplasm I have seen and have demonstrated to others.

Dr. Harry Campbell will force upon me notions with which I am not concerned. When he has defined what he means by "evolution" it will be soon enough to discuss with him the question of the "evolution of vitality." Surely he may "take his individual *homo* and trace in imagination his evolution from, let us say, his piscian ancestry" to his heart's content, and "travel down his long ancestral lines," and even become "more and more involved," without trying to involve me and my efforts to learn a little more about living matter and the formation and action of tissue in interminable, impossible travel. From the thoughtful interest he has shown, however, I do not despair of his becoming a convert to vitality, and I feel sure if he will only consider the changes which take place, say, in the limbs of a child, as by the process of growth the distance between the peripheral extremities and the brain gradually increases, he will no longer regard growth as it occurs in all things living as a change in any way akin to a physical process such as aggregation—man as a machine constructed or built by the Sun, or man's life to be physical and chemical, and I hope he will regard all vital evolution as absolutely different from all physical evolution, as is life of every kind and of every period from any physical change at present known. But whatever may be our differences all workers and thinkers will acknowledge with Dr. Harry Campbell the absolute truth and eternal application to all our achievements of

Hamlet's profound philosophy with which his letter concludes.

Mr. O'Regan seems to think, with some other authorities, that life is a property of matter and argues that "as matter never had a beginning life as a property of matter never had a beginning"; but does not very much matter exist without the property in question? Still though I may not add anything "to our knowledge," I trust I may escape the terrible fate of being taken "round and round the circle for ever," and I hope Mr. O'Regan will treat my vitality with a little more kindness and consideration than he extends to the assumption that matter has "a real existence."

I am, Sirs, yours faithfully,

Oct. 25th, 1898.

LIONEL S. BEALE.

"WHAT IS 'FIRST AID'?"

To the Editors of THE LANCET.

SIRS,—I quite agree with Mr. Valentine Matthews that it is time that a more definite course was laid down for lecturers and examiners in "first aid." The late Surgeon-Major Shepherd's Handbook has been improved of late, but it is still very unsuitable for a text-book. What good purpose can possibly be served by teaching a class the number of bones in the spine, chest, wrist, and hand, or the total number in the body? The description of the cavities of the heart and its valves is another among the many unnecessary complications. Yet the lecturer dare not omit these details lest a short-sighted examiner fail to pass his class. I once had two large classes of working men "ploughed" almost to a man on the subject of poisons. I confess my teaching had gone little beyond the proper use of an emetic, but for the type of student I am certain it was quite enough.

What is wanted is a book prepared with the greatest care, not one put together in a hurry, as was, confessedly, the present one. In it all that is essential should be printed in large type, with perhaps a few further facts for more ambitious students in a smaller type. The matter should be arranged in logical order. A more complete book could be easily arranged in less than half the space. Examiners should be instructed to examine only on the text-book, or at all events to ground their report on a knowledge of it. A page might be devoted to a list of facts which *must* be learnt and then both lecturer and examiner would be on firm ground.

There are many other details which might be improved in the present course. Thirty is far too many for one man to instruct practically. Paper work should be abolished for all. Such knowledge is often practically useless, and the present distinction between literates and illiterates is illogical. The practical part of a lecture should be the longer. The present direction that half an hour of each lecture should be devoted to practical work is absurd, for with a class of thirty it would mean five minutes' practical work to each student during the course. I try to arrange that each pupil does all the operations at least twice, but of course that means cutting down the "unpractical" part of each lecture to little over half an hour.

I have not much faith in representative committees, and question whether Mr. Matthews's scheme for such would produce a more satisfactory course. I would rather see one able man appointed who should write a new text-book and submit it to all the lecturers and examiners. Those who felt themselves qualified to criticise might apply for, and pay for, a copy, and thus expense to that excellent association the ambulance department of the Order of St. John of Jerusalem might be avoided.

I am, Sirs, yours faithfully,

Ottery St. Mary, Oct. 24th, 1898.

CLAYTON JONES.

"THE WATER TEST AS APPLIED TO SEWER CONNEXIONS."

To the Editors of THE LANCET.

SIRS,—I think this is a matter which should be publicly noticed as in the course of my experience I have found that the so-called water test as applied by some local authorities to sewer connexions is a farce and I have no doubt many engineers, architects, and builders have had the same experience. As an instance a few weeks ago a client of mine bought a house in one of the suburbs which he decided to have redrained. A deposit of £5 was paid to the local authorities for putting in a new 4-in. connexion from

the sewer to the fence. The house-drains were put in under my supervision, laid on concrete beds, and the joints were properly made with cement and allowed to set for four days before the first water test was applied. The joints successfully resisted a pressure of 5 lb. to the square inch. The pipes were then surrounded with concrete and when it had properly set the trenches were filled and watered in and no ramming was allowed until 2½ ft. of soil covered the pipes. The whole of this work was examined by the local sanitary inspector, who was as particular as I was myself about the soundness of joints, &c. The connexion from the sewer to the fence was put in in a very different manner. The joints were made with cement and tested by the local authorities as soon as they were made, before even the cement was dry, and I noticed a workman ramming the clay into the trench a few inches only above the pipes which had no concrete either below or around them. The drain was filled with water which was run off immediately and this was the water test. Further comment is needless. This is a fair sample of what is constantly going on.

Without going into the legal question as to whether local authorities have any right to make a charge for sewer connexions at all, which I very much doubt, I contend that as my client paid £5 for this connexion he should be allowed the privilege of having it examined by his representative, to see that he got value for his money, which in my opinion he certainly did not. If the house-drains had been laid and tested (?) in this way, they would have been promptly condemned by the local authorities. Why, then, should not the local authorities be compelled to do their portion of the work as thoroughly as they make the house-owner do his? for at present they carry out this work in a most unsatisfactory way. If the water test is to be applied to those connexions at all, why should it not be applied properly, as in the case of the house drains? There is no doubt that the ramming process has shaken off the wet cement from the joints of the pipes. To fill a drain with water when the joints have just been made and to let the water run off immediately is *not* applying the water test. A paper bag will hold water until the paper becomes saturated, and so will a drain until the joints become saturated; but then, if the water is allowed to remain in and the cement joints are not set the pressure of water in the drain will force the cement out of the joints. It should be remembered that a great many sewer connexions are a very few feet below the road surface, and if a stoppage occurs the sewage escapes through the leaking joints and saturates the surrounding ground with results known to every sanitarian.

I think this is a subject that should prove interesting to medical officers of health as there must be many miles of this defective drainage both in London and the suburbs. If it is argued that the trenches in the public roadway cannot remain open long enough to give the pipe-joints sufficient time to set, then why should not heavy iron pipes with caulked lead joints be used for those connexions?

I am, Sirs, yours faithfully,

Wimbledon, Oct. 21st, 1898.

JOHN W. MAYNE.

"PRACTICAL HINTS ON CYCLING FOR COUNTRY PRACTITIONERS."

To the Editors of THE LANCET.

SIRS,—Your cycling readers will thank Dr. Emmerson for his paper on "Practical Hints on Cycling for Country Practitioners," in THE LANCET of Oct. 22nd. The hints are valuable, not only for medical practitioners, but for all cyclists, whether ladies or gentlemen. The bicycle has made a revolution in travel and is giving health and strength to those who use it in moderation. I see that the machine is much in requisition among the young people of the theatrical profession, who wisely take advantage of it to get as much country air as possible during their provincial tours. It is wonderful the long distances ordinary riders can cover without much fatigue. A young girl of my acquaintance, ten years of age, rode to a watering-place upwards of forty miles from her home and afterwards spent the greater part of the day on the sands playing with her little friends.

But a greater feat than this was performed recently by the Rev. Henry Watney, rector of Canwick, Lincoln, who rode from Lincoln to a place six miles beyond Newbury in Hants, a distance of 165 miles, in one day, and on the following day he did not feel the least fatigued. Mr. Watney strongly