period being 16·2 in London and 15·5 in Edinburgh. The 165 deaths in Dublin showed an increase of 40 upon the low number in the previous week; they included 18 which were referred to diarrhoea, 4 to whooping-cough, 2 to "fever" (typhus, enteric, or ill-defined), 1 to measles, 1 to scarlet fever, 1 to diphtheria, and not one to small-pox. Thus 27 deaths resulted from these principal zymotic diseases, against 18 and 23 in the preceding two weeks; these were equal to an annual rate of 4·0 per 1000, the rate from the same diseases being 2·2 in London and 1·0 in Edinburgh. The deaths attributed to diarrhoea, which had increased in the previous four weeks from 7 to 18, were again 18 last week. The 4 deaths from whooping-cough exceeded the numbers in recent weeks, while the fatal cases of "fever" showed a decline of 1. Four deaths from violence and 6 inquest cases were registered; and 48, or nearly a third, of the deaths occurred in public institutions. The causes of 25, or 15 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

ON THE INADEQUACY OF THE VISION TESTS SANCTIONED BY THE BRITISH ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—Science has been well defined as measurement, and in no branch is it so palpably true as in that of anthropometry. Anthropometry is solely and wholly measurement; but for measurement to be science it must be comprehensive, and it must be accurate. This is my excuse for questioning the adequacy of the tests of vision that are usually employed in anthropological investigations.

In the laboratory of the Bath meeting of the British Association for the Advancement of Science, held in September, the eyes were submitted, in the first place, to an examination for colour blindness, carried out by means of a modification of Holmgren's worsteds; secondly, the judgment of the eye, which is in great measure another name for the education, was tested by means of a line of ten inches, which had to be divided by the eye alone in half and also in thirds. A right angle had to be estimated and a square formed, suitable apparatus being supplied. At the Bath meeting, for some unexplained reason, no other test of vision was attempted, although it appears to be usual on such occasions to measure the visual acuity by noting at what distance from the eye "brilliant" type can be read. This ends the examination of the sight. Such a test gives no clue to the refractive condition of the eye; for anthropometrical purposes it tells us nothing; to the statistician it furnishes valueless statistics, and to the politician it teaches no lessons. One person may be myopic to several dioptries, yet be able to read the type at a normal distance; or, again, another may be hypermetropic, and still be able to focus the same type at 33 centimetres. Suppose observations to be made on such distinct people as, for example, (a) the inhabitants of the West-end of London, (b) those of the East-end, and (c) a rural population far removed from urban influences. Three more diversified classes of the community it would be difficult to imagine, racial descent, inherited habits, and local modes of life varying within the widest limits; and yet it is quite conceivable that in applying such a test of visual acuity as is sanctioned by the British Association, the results in the three instances might be much the same. It is quite possible that we might find the distance at which the average West-end inhabitants could read the test types reduced by myopia as a consequence of education; the distance at which the natives of the East-end could read the same reduced by corneal opacities, and other results of inherited syphilis; and the average acuteness of vision of the countrymen reduced to a like amount by hypermetropia, the refractive condition of undeveloped races; and so we should get a dead sea of sameness that would render our task hopeless and our efforts useless. The tests of the British Association do not differentiate these various causes in any measure. All we can know is that the acuity is reduced, but we are left in

entire ignorance whether the reason is racial, educational, or morbid.

Now, let us turn for a moment to the object of these anthropometric measurements. Are they a mere fad to amuse the pseudo-scientific whims of the public at these annual gatherings, or are they intended to serve any higher purpose? Doubtless they are meant to be of service to the anthropologist in the first place, but they are also of extreme importance to the hygienist, and through him they may serve high State purposes. To do this the details must be accurate. Suppose it were attempted to utilise the results of the vision tests that have been accumulated in the laboratory, we should find so many hundreds or thousands of individuals had been examined, and that the mean distance at which these people could read the smallest type was so many centimetres. We should also know that a small percentage of them were colour blind, and we should see that the figures were slightly different for the two sexes. The numbers tell us nothing, can help us in no way; no one is one whit the wiser for them, and, more serious still, they are absolutely uninteresting. The conditions that affect the acuteness of vision may be broadly divided into two classes: first, the refractive; secondly, the morbid. It should be with the first of these that the anthropologist should deal, and Cuignet's method offers at once a simple and accurate manner of so doing. All the apparatus required would be a Galezowsky mirror, an oil lamp, and a pair of reversible spectacles containing in the one eye-frame a + 5 D spherical glass and in the other a + 1 D. A portion of the room could be curtained off for examination, and with these instruments all ordinary errors of refraction could be qualitatively if not quantitatively noted in less than a minute for each person. Cases of mixed astigmatism might take rather longer, but they are fortunately rare; and simple and compound astigmatism could be included, as myopia or hypermetropia, according to the refraction. As the laws governing Cuignet's method are optical rather than ophthalmological, their application comes within the range of the man of science, even though he has had no special medical training, and there would be, therefore, no difficulty in finding those skilled to make the observations. From a vision test such as this results might be tabulated that would be of value to the anthropologist and to the State. For if the hypermetropic eye is, as Donders says, an imperfectly developed eye; if it is, as he says, hereditary; and if, as Landolt says, the hypermetropic type of face resembles the Mongolian, it needs no argument to prove the great importance of the subject to the anthropologist. Myopia is increasing *pari passu* with our civilisation; our mental vision expands as our physical vision contracts. Where will it end? How will it end? We know not. But to the State, in which the dictum holds good *Salus populi suprema lex*, it must be of imperial consequence to find out the laws which regulate the inheritance of good sight.—I am, Sirs, yours truly,

W. M. BEAUMONT,

Bath, Sept. 20th, 1888.

Surgeon to the Bath Eye Infirmary.

THE TEACHING OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—The excellent article upon chloroform in your issue of Sept. 15th will, I trust, do much good in the direction of impressing upon those concerned the importance of systematic teaching in both the theory and practice of that branch of our art which I venture to term the "science of anæsthetics." Those who still view with favour the indiscriminate employment of chloroform have found an able exponent of their opinions in the person of Mr. George Foy, whose letter appears in your issue of Sept. 22nd. I do not in any way wish to raise the oft-repeated question, "Which is the safest anæsthetic?" or to enter into the controversy to which such a question would undoubtedly give rise; but I would point out: 1. That many of the figures and opinions quoted by Mr. Foy are taken from American sources, and it is, to say the least, somewhat curious that it is precisely in that country that the administration of ether is most universal, and, in fact, I think I am right in saying that in some States the fatal result following the administration of chloroform renders the attendant physician or surgeon liable to censure by the coroner's court, or even to more unpleasant

legal proceedings; but I do not, of course, admit the advisability or even the practice of such a proceeding. 2. That even Mr. Foy himself admits the importance of "judicious administration," and holds that the high mortality "is due to faulty administration." In face of these important deductions, it is, I think, high time that some effort should be made to place the teaching of anæsthetics upon a more satisfactory basis than at present holds in many—I had almost said the majority—of our schools. The authorities, in whose hands rests the drawing up of the curriculum, are painfully solicitous that the candidates for the various degrees and diplomas should produce evidence that they have been duly instructed in the difficult and dangerous art of vaccination; but practice in methods of anæsthetisation still remains optional, and shares the fate of most permissive legislation.

I am, Sirs, yours truly,

J. FREDK. W. SILK,

Anæsthetist to the Great Northern Central Hospital.
Pemberton-road, Upper Holloway, N., Sept. 1888.

To the Editors of THE LANCET.

SIRS,—I fully agree with Mr. Foy in his objections to your leader on chloroform in THE LANCET of Sept. 15th, and I venture to think you can hardly have reflected on the awkward position in which many a country practitioner may be placed by your suggestion that at every coroner's inquest on a death from chloroform the question should be asked, "Was there any reason why ether could not have been administered instead of chloroform?" Thousands like myself, who have used chloroform for twenty years or more in all sorts of cases—hospital cases, dispensary cases, police cases, in private practice, for accidents, midwifery, &c.,—are, it appears, to be debarred from using what we have hitherto found to be a safe anæsthetic (none of my cases having even given me any anxiety as to the result so far as the chloroform went), or are to use it with the unpleasant foreboding that should anything untoward happen, THE LANCET will be quoted against us for not having used ether. It is true that if we happened to have Holmes' "System of Surgery" at hand we might quote the reiterated opinion of Sir Joseph Lister expressed therein as to the safety and superiority of chloroform; but any hostile party who had read your leader would be quite prepared to set that down to "the strong predilection among Scotch surgeons for chloroform," and the *ex cathedra* utterance of THE LANCET would have a most damaging effect upon the reputation of the unfortunate practitioner. We are entitled, therefore, I think, to ask the grounds upon which THE LANCET has come to its decision. When I read the leading article of Sept. 15th first, I supposed it to be based upon six fatal cases which have apparently not been published; but in the editorial note appended to Mr. Foy's letter these seem to be quietly dropped, as are also "statistics" and "individual preferences" further on, and it is apparently solely on the strength of "the proofs given of its physiological action in mammals" that we are asked to admit the danger of chloroform as compared with ether, to put aside the experience of American surgeons on this point, and to accept the unsupported statement that far fewer deaths (in proportion) occur from ether than from chloroform. It may be so, but I do not think any jury of either English, Irish, or Scotch surgeons would agree to come, on such evidence, to such a conclusion.

I am, Sirs, yours obediently,

Sept. 25th, 1888.

H. NELSON HARDY.

ON THE RELATION BETWEEN RED AND GREY HEPATISATION OF THE LUNG.

To the Editors of THE LANCET.

SIRS,—I communicated to Dr. Sturges some years ago the results of observations made upon cases of pneumonia which were the subjects of inquests by Mr. Bedford, the coroner for Westminster, to whom I was under great obligations for giving me opportunities of illustrating my lectures to the students of the Westminster Hospital on forensic medicine. These cases are referred to by Dr. Sturges in his work on Pneumonia, and we discussed the truth of the doctrine that red pneumonia may become, and does become, grey by a

process of degeneration of the contents of the air vesicles. It was a singular fact that in all these cases death occurred without premonitory disturbance of health, and that the individuals were going about a few hours before. Finding now that students are being taught generally that there are three stages of pneumonia, and knowing that this doctrine is not supported by post-mortem observation, it seems to me that it would be well if the matter were made the subject of inquiry. When a student attempts to explain how the degenerated cells of red hepatisation, which are simple leucocytes, become the large nucleated pus cells of the grey form, he has to fall back upon his teachers for the responsibility of his opinion. So far as clinical experience goes, it must have been observed by many how a well-marked case of consolidation of the lung may recover without expectoration, and without any evidence of the formation of pus. It would seem that there are two distinct forms of pneumonia, the red and the grey, and that there is not necessarily any connexion between them. The cases above referred to are, it is true, very rarely met with in hospital practice, because they are so rapidly fatal; but they are the cases from which we best learn how to explain the differences between red and grey hepatisation of the lungs.

I am, Sirs, yours obediently,

Savile-row, W., Oct. 1888.

ROBERT J. LEE.

"WHOSE TURN NEXT?"

To the Editors of THE LANCET.

SIRS,—The question of "Whose turn next?" may properly be asked in connexion with criminal prosecutions of medical men. We read in the pages of THE LANCET almost every week of some unfortunate medical man being the subject of these nefarious practices of the public. It is nearly a weekly editorial "wail" that Mr. So-and-so has had to face the agonies of a law court in defence of his character and reputation as an upright and honest man. Or, it may be, your editorial sympathy is related in congratulating some fortunate individual whose position of integrity has been vindicated. It is worthy of THE LANCET to be, as it is, the stout and unflinching champion of the profession, which depends upon its uncompromising aid in advocating the claims of justice in these painful and disgraceful acts. Although it commonly turns out that many of these cases are trumped up either from a spirit of pure malice, or to extort money, or to ruin a man's life, still the costly proceedings fall upon the purse of many who, from various social circumstances, are utterly unable to meet the pecuniary outlay. Innocence is no protection, nine times out of ten, from the disastrous law costs. Surely something can be done in the way of a defence fund. Appeals are constantly being made, and subscription lists appear in the columns of THE LANCET to defray, either wholly or in part, the expenses of defending such actions. Is it not time for the profession as a whole to bestir itself, and form a substantial "defence fund" based on sound commercial lines and dispensed by a committee of well-known men? These prosecutions are becoming universal, so that no medical man is safe, except perhaps the chief consultants in our large towns, whose safety depends upon the fact that their patients are mostly accompanied by a parent or friend during their visits. With the ordinary general practitioner it is otherwise, and it is upon his devoted head this horrid catastrophe falls. Three or four years ago I brought this question forward, and a small committee of inquiry was formed to approach the General Medical Council, but it was found to be powerless in aiding the idea by any practical help, although much sympathy with it was felt. After the evidence of the Medical Sick and Annuity Society, as to what can be done by careful organisation and energetic action, it seems to me to be a small matter to promote a medical defence fund, maintained and administered by medical men alone, without the intervention of extraneous persons. Pray, Sirs, will you help this question, and give it a "lift" by one of your powerful leaders? I have a strong hope this question will be taken up *con amore* and brought to a successful issue within a reasonable period of time, and not left to be discussed *ad Græcas Kalendas*. We are in sore plight, as witness the case of Dr. Gloster in last week's issue.

I am, Sirs, yours obediently,

Southport, Oct., 1888.

G. B. BARRON.