Correspondence.

"Audi alteram partem."

OPHTHALMIC SURGERY AT THE COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—Few persons can have failed to notice the difference between the style and manner of the jovial spirits who "walked the hospitals" five and twenty years ago and of the anxious students, "composed in suffering and in joy sedate," of these latter days. Some have thought that the native gaiety of youth has been eliminated by the Argus-eyed vigilance of beadles, tutors, and deans, and by the hampering restrictions, and compulsions of the Examining Bodies, with their constantly multiplying examinations. This opinion is, it seems, erroneous. The change has been wrought from within, not introduced from without. The gravity and solemnity of the modern Asclepiadæ are the results of gradual awakenings of conscience, the slow and silent evolution of a new moral sense.

In the report of the last meeting of the Council of the Royal College of Surgeons in to-day's issue of THE LANCET, p. 1046, it is stated, in reference to a resolution adopted by the Council with respect to the teaching of Ophthalmic Surgery and the introduction of this subject into the examinations of the College, that the following recommendation was unanimously adopted by the Court of Examiners—namely, "The fact that candidates are liable to be tested in regard to the use of apparatus employed in the various special surgical departments has more effect in leading them to acquire such knowledge than any enforcement of attendance in those special departments."

To those who have no misgivings about the wisdom and efficacy of the modern examinational system this authoritative dictum will indeed be welcome; since it emanates from a body which has always been one of the most zealous votaries of this system. The utterance is not only significant in itself, but it gives us a glimpse of Utopia. If it be true that the fact that candidates are liable to be tested in certain subjects is more likely than enforced attendance to direct students to those departments of knowledge which have hitherto lain outside the prescribed course of study, how much more potent must its influence be in respect of those branches of knowledge which through habit and custom have come to be regarded as the Curriculum *sine quâ non*! Henceforth, it will be neither necessary nor desirable to enforce attendance in the departments of anatomy, physiology, medicine, surgery, and midwifery. It will be enough for the student to know he is "liable to be tested" in those subjects. And when in the fulness of time the nascent virtues of the medical student have attained their culmination in the Categorical Imperative of Kant, we may withdraw even the mild incentive of examination. The student, absorbed by a passion for wisdom and knowledge, will have realised Pythagoras' ideal of the true philosopher; his soul, too, will have reached its *ἐντελέχεια*. The suggestion of examination will be a reflection upon his probity and his honour. But what alas! will become of the tribe of professional examiners? Their occupation will be gone. Will the profession allow men who for ten, twenty, or more years have enjoyed the emoluments of examiner-ships to suffer because medical students have grown too scrupulous? Assuredly not. We evidently are nearing the threshold of the delicate question of Compensation for Disturbed Examiners.—I am, Sirs, yours truly,

JOHN TWEEDY,

Professor of Ophthalmic Medicine and Surgery in University
May 10th, 1890. College, London.

THE CONTINUOUS ACTIVITY OF NERVE CELLS.

To the Editors of THE LANCET.

SIRS,—In his valuable article in THE LANCET of this date, Dr. Gowers supports the doctrine that nerve cells do not pass under stimulation from a state of complete inactivity to one of action, and then subside into inactivity once more. It is a great gratification to me to find that so high an authority as Dr. Gowers supports a doctrine which I have long held, and have endeavoured (fruitlessly, I fear,

until now) to induce neurologists to accept.¹ I should, however, carry the doctrine further than Dr. Gowers explicitly does; although it is probable, from hints that he gives, that he has already reached nearly the same conclusions. "We can," he says, "by attention become conscious of impressions from any part at any time. The part on which the body rests must be the seat of continuous stimulation of the nerve endings, and the movement of the blood in the arteries must everywhere coöperate with pressure, &c." My own opinion would be that in addition to currents projected from these sources every molecular process of nutrition and detrition, of repair and waste, of absorption, assimilation and excretion, is a source of ingoing currents which pass upwards, even to the very highest of nervous arrangements, the substrata of consciousness. Dr. Gowers believes that nerve currents run continuously, not only from the central nervous apparatus to the muscles, but from the muscles back to the central nervous masses; and in this belief I entirely concur. But I would ask him if he would not concur in the further doctrine that the ingoing currents already spoken of as started by the molecular processes have not also their outgoing equivalents in "motor" currents which regulate the activity of these processes? In the case of some glands the existence of such "motor" currents has been proved. Is it such an unwarrantable hypothesis that in the case of the closely similar process of nutrition also they exist?

Dr. Gowers speaks of the probability of the existence of many ingoing currents besides those which he enumerates, currents which he thinks are not powerful enough to influence our consciousness. In this, again, I should be disposed to more than agree with him. I should suppose not only that these additional currents that I have spoken of do exist, but that they do influence consciousness very powerfully. It is to me inconceivable upon what our consciousness of our own selves, as distinct from our consciousness of the outside world and of our relations with it, can be founded if not upon such a nervous action as we both suppose. That the action of each individual gland or organ is definitely represented in consciousness, so that we can tell when, and how vigorously, it is working, is not supposed for a moment any more than it is supposed that the action of each individual cell is definitely represented. What is contended for is that the vigour of all the nutritive and visceral processes, as it is regulated by outgoing nerve currents, so it is a cause of initiation of ingoing nerve currents, which have, vivid or faint, definite or indefinite, some conscious accompaniment; and the totality of the conscious accompaniment is our consciousness of self; our self-consciousness is the conscious personality, the conscious *ego*.

The continuous exertion of control by nerve centres is a matter upon which I have entered fully, both in the book already mentioned and in a paper on Inhibition in *Brain*, No. xliii. It will not be necessary, therefore, to show how completely I am in accord with Dr. Gowers in this subject. In only one particular do I find myself unable to agree with him, and that is in his description of the two forms of nervous activity. One, he says, is induced and excited by stimulation, the other is continuous and is the subject of control. My interpretation of the facts would be that there are two forms, which are both continuous. One is the controlling activity, whose continuous powerful action is from time to time intermitted, though never quite removed; the other, the controlled activity, whose continuous slight action is from time to time stimulated and allowed to break out in strenuous exertion by the intermittent removal of the other.

In conclusion, I come again nearly into agreement with Dr. Gowers, for in "The Nervous System and the Mind" I have advanced the view that the former activity is exercised by the cerebellum and the latter by the cerebrum.

I am, Sirs, yours obediently,

Catford, May 10th, 1890.

CHARLES MERCIER, M.B.

BARRACKS.

To the Editors of THE LANCET.

SIRS,—Although I have no claim to any special knowledge of barracks, and must plead complete ignorance of those military considerations which doubtless complicate the sanitary questions involved in their construction, I nevertheless venture (as a taxpayer who will be called upon to contribute

¹ The Nervous System and the Mind, pp. 47, 76, 85, &c.

to the £4,000,000 which the Government is about to spend) to offer a few remarks *à propos* of Professor Notter's lecture, an abstract of which was given in your columns on April 26th. One must cordially echo Professor Notter's hope that sufficient area will be given in any new barracks which are to be built. Why soldiers should live and sleep in buildings of three or four storeys with internal stair-cases it is hard to conjecture, unless it be for military reasons.

The first law of sanitation is "Spread out," and it cannot be wise economy not to put this law in force when expensive necessities like soldiers are concerned. If it be necessary to build barracks in the centres of large towns, it is impossible to attain any high ideal of sanitation; but many barracks are in the country where land is cheap, and there can be no doubt that the physical and moral well-being of the soldier must be, in no small degree, proportionate to the amount of open space around his dwelling. If, in addition to the ground occupied by buildings, parade ground, &c., there be a minimum of ten acres of cultivable land for every thousand men, there would be some chance of the sanitation of barracks being *complete*, and a colony of young soldiers would not be obliged to pass on their refuse to be dealt with by an outside authority. The *incompleteness* of sanitation by water carriage is the opprobrium of modern hygiene, and it certainly seems to be unworthy of that proud independence which is the chief characteristic of the soldier that he should be allowed to pass on his refuse to be a danger and an expense to others instead of a profit to himself.

The "Royal Barracks" at Dublin, according to the interim report of Mr. Rogers Field, have some *three miles* of underground sewers; and the sewage of these barracks, together with the sewage of a neighbouring prison and infectious hospital, flows directly into the Liffey at the upper end of the town. What is the good of an Act of Parliament to prevent the pollution of rivers, when those in the pay of the Government, and living in Government buildings, are allowed to set so bad an example? It is not surprising to find typhoid in a building provided with three miles of sewers, because if we know anything about typhoid, it is that the vast majority of cases have water-carried excrement as their penultimate cause.

The question I wish to ask is whether three miles of underground pipes are absolutely necessary for the well-being of a soldier? The training of a soldier at home has for its object the rendering him fit to take the field, and what does a soldier do when he finds himself encamped in a foreign country thousands of miles from his underground pipes? The proper bestowal of excrement and slops is a thing which every soldier must be taught in order that his camp may be wholesome. Why should he not be taught this important duty at home? Why should the taxpayer be burdened with the cost of pipes and other perishable apparatus in order that the soldier may be less fitted to take the field and that his risk of typhoid may be increased? Surely, the daily burial of excrement and the due filtration of slops can be managed without much difficulty if a moderate amount of cultivable ground be provided. In a girls' school or in a house full of ladies and ladies' maids (especially the latter) there might be difficulties, but there should be none in a community of young adult males who are subjected to military discipline.

I am, Sirs, your obedient servant,
Wimpole-street, W., May, 1890. G. V. POORE, M.D.

ALBUMINURIA AND LIFE ASSURANCE.

To the Editors of THE LANCET.

SIRS,—With reference to Dr. Tyson's letter, which appeared in your issue of the 3rd inst., may I point out to you that the Rock Life Assurance Company has for some time past adopted the method suggested in the concluding paragraph—viz, to charge any extra premium as a debt on the policy when such extra premium is charged in consequence of an unfavourable medical report, and this debt is diminished each year until at the expiration of the term for which the life may be expected to live the debt is cancelled and the sum assured is payable in full on subsequent death.

As an example, take a life aged twenty-five next birthday for £1000, which in consequence of the medical report has

been rated up five years, making the life to be charged as thirty instead of twenty-five.

Annual premium, age 25, without profits, for £1000	£	s.	d.
Annual premium, age 30, without profits, for £1000	17	2	6
	19	13	4
Difference	£2	15	10

Expectation of life at age twenty-five is thirty-eight years and a half. The debt on policy first year is £2 15s. 10d. × 38½ = £107 9s. 7d., or sum assured, £892 10s. 5d.; second year, £2 15s. 10d. × 37½ = £104 13s. 9d., or sum assured, £895 6s. 3d., and so on, decreasing by £2 15s. 10d. each year until at the expiration of thirty-eight years and a half the full sum assured of £1000 is payable at death. If, therefore, the life in his own opinion is a first-class one, and subsequent events prove that it is so, then the life suffers no hardship in having paid an extra premium for a second-class life, as, on his living to his expected term of life, the full sum assured is payable at death, and the ordinary premium only has been paid for the benefit. Mr. G. S. Crisford, the actuary of the company, has kindly furnished me with the above figures.

I am, Sirs, your obedient servant,
Wimpole-street, May 10th, 1890. F. DE HAVILLAND HALL.

To the Editors of THE LANCET.

SIRS,—Dr. Tyson's letter, published in THE LANCET of the 3rd inst., on "Albuminuria and Life Assurance" refers to a subject of great interest to both the general public and the medical profession. I infer from his letter that he is of opinion that whenever the smallest quantity of albumen is found in the urine of persons proposing to insure there is a probability of an unfavourable opinion being given on the life, leading to rejection on that ground solely, no matter how favourable other indications may be. I incline to agree with Dr. Tyson that there should not be a sweeping condemnation of proposers whose urine may give only a slight indication of albumen, but who, like Dr. Tyson's patient, are in robust health. I have made notes from the claim papers of persons who have died insured in the Sceptre Life Association. On examining these documents for the past fourteen years, ending Dec. 31st, 1889, I find that 1025 persons have died. Of these, 44 deaths have been caused by diseases of the urinary organs, or a little over 4 per cent.; but of these 44 only 23 have died from Bright's disease, or slightly more than 2 per cent. of the whole, being a very small percentage of the total mortality, especially when compared with the deaths from many other diseases. This mortality is remarkably low when we remember how frequently albumen is found in the urine, and would tend to encourage the idea that many recover from albuminuria, and that it is not a sufficient cause in all cases for condemnation, but that the proposer should have a chance given him on some such terms as indicated in Dr. Tyson's letter. It would be of great service if the medical officers of our life assurance companies would give the result of their experience on this question as a guide, so that, whilst protecting the interests of the companies by our advice, we may avoid giving unnecessary pain and disappointment to proposers for life assurance.—I am, Sirs, yours truly,

Willesden, May 13th, 1890. ROBT. BENTHAM, M.D.

THE INCUBATION OF ENTERIC FEVER.

To the Editors of THE LANCET.

SIRS,—A father brought two sons from Portsmouth to a healthy hamlet in the Midlands on Sept. 2nd, 1889. One boy was ailing at the time, and took to his bed on the 4th, when I was called in and found his case to be one of enteric fever. The father nursed him assiduously through the delirium, but on the 14th was obliged to return to Portsmouth, taking with him his second son. On the 23rd, as I learned, the father was taken ill with typhoid, and he eventually died. On the 30th, the other boy, after ailing for some time, was laid up with the same complaint. The questions I wish to raise are:—1. Did the father contract the complaint before leaving home? If so, the incubation must have been at least twenty-one days; or did he take it from an insanitary house on his return, when the incubation must have been nine days or less? 2. What was the incubation in the case of the second son, and where was he infected? 3. Did they both contract the fever from the first case? In this case every care was taken as to cleanli-