

displaced inwards as a partially pedunculated tumour by uterine contraction, be presented at the os and cause death from hæmorrhage unless its presence and clinical significance are recognised and the tumour rapidly enucleated and delivered per os. A medical colleague recently informed me of a patient of his who died from hæmorrhage from this very cause in a well-known London hospital for women.

Uterine fibroids, on the other hand, situated "external" to the central vascular zone of the middle coat of the uterine wall, do not give rise to uterine hæmorrhage, whether sessile or pedunculated, for very obvious reasons, because contraction of any muscular fibres external to them does not compress the venous channels in the middle coat. Reverting to "inner fibroids," my experience leads me to class them as to their liability to produce hæmorrhage by their situation in the uterine wall. Fibroids situated below a line joining the insertion of the Fallopian tubes are more liable to produce hæmorrhage of the kind described than fundal fibroids. Of those situated below the insertion of the Fallopian tubes, lateral cornual tumours are most prone to cause hæmorrhage, because the efferent vessels of the uterus emerge here; then tumours in the cervix and anterior wall, then tumours in the posterior wall; and lastly, and least, fundal tumours.

Finally, from the clinical-operative point of view, the classification I propose as "inner" and "outer" fibroids has a practical bearing on treatment, because the probability is that where a uterus is the subject of an "outer fibroid," any others will all be found external to the vascular zone of the uterus, and can on abdominal section be removed by myomectomy without fear of hæmorrhage. This will permit us to leave the uterus, perhaps enabling the patient to become subsequently a happy mother. On the other hand, uterine fibroids situated internal to the vascular zone can be removed without much hæmorrhage by dilatation of the cervix, with or without splitting of the anterior lip, by blunt dissection out of the uterine wall with the fingers and dissector or by previous *morcelement*, followed by enucleation and delivery, which I have repeatedly successfully done, even treating tumours as much as 5 lb. in weight. This latter procedure also leaves the woman with the power of subsequently becoming a mother.

I am, Sir, yours faithfully,

F. W. FORBES-ROSS, M.D. Edin., F.R.C.S. Eng.

Harley-street, W., Nov. 29th, 1911.

DREAMS.

To the Editor of THE LANCET

SIR,—In an annotation in this week's LANCET upon Mr. Havelock Ellis's book on dreams you quote the late Sir Samuel Wilks's remark that "the dreamer merely forms a mental picture, and the description of it he calls his dream." To my mind, however, the question how we form "a mental picture" still waits for a reply. Each individual among us, as the late Sir Francis Galton remarked, is a composite cellular creature made up of a bi-parental half, a grand-parental quarter, and the residue of definite fractional parts of earlier forebears. We also believe that the chromosomes, "the individual entities" as Mr. C. E. Walker calls them, "are distributed from cell generation to cell generation, from parents to offspring in a manner that coincides exactly with the behaviour of the individual characters." ("Hereditary Characters," p. 213.)

Now as regards dreams during "the solemn watches of the night," I have often recalled visions of my parents, seldom of my paternal grandfather, more frequently of my maternal grandfather, whom I personally resemble in many respects, and occasionally of my dead son. According to biometricians, there are twice as many molecules (or atoms or ions) in my body that have directly sprung from my two parents as there are others originating in my four grand-parents. The chances of a parental atom knocking at the portals of my sleeping brain, and in that way exciting a "mental picture," are therefore many times greater than are those affecting a grand-parental atom. This suggestion, I fancy, accounts in my case for the repeated dreaming of parents. It would be interesting to know whether my experience coincides with that of others. I have been led into this train of thought through another experience. On two or more occasions I have indulged in a hearty meal of under-done beef late in the evening, and have gone to rest shortly

afterwards. I have notes of two dreams after such a meal, written soon after the event. In each dream I was crossing an open space, when suddenly savage-looking cattle obstructed my path, and I took to my heels, to awake in a cold sweat, with an uncomfortable sensation in my head and—stomach! Is it possible that here we have the Machiavellian stimulus of a semi-devitalised ox-cell upon my dormant cerebrum? I am, Sir, yours faithfully,

Hove, Dec. 9th, 1911.

W. AINSLIE HOLLIS.

UNIVERSITY AND COLLEGE REFORM.

To the Editor of THE LANCET.

SIR,—May I state with regard to your short account of the meeting of the Fellows and Members of the Royal College of Surgeons of England, published in THE LANCET of Nov. 25th, that I did not venture to "prophecy" what the Royal Commission on University Education in London would or would not do. I just warned the Council *not* to rely solely upon the side issues (to them) of the numerous University regulations or the extraneous representations of the Polytechnic or Royal College of Science or other bodies, and which the Royal Commissioners were chiefly considering. No doubt my motion with regard to the M.D. and M.B., B.S. degrees and the Conjoint Examination Board of the Royal Colleges has occupied, and still does occupy, the attention of the Council on behalf of the Fellows and Members—a vital point for their future welfare; and so far there was no actual need to carry my division on the motion over again, since it was passed before on a similar resolution. But what is, is! And the Council would do well either at once to obtain the power of this Act themselves, or when they go before the Commissioners to let them understand they intend to seek these particular rights of examining for a degree, under their compact with the University of London and under the Act of 1898, but which lately the University of London has so carelessly and selfishly denied to them and to her partner. There is nothing to prevent this action, nor to hinder the Council from moving for a confirmatory Act.

The differences between the above views and those of the present President, Mr. Godlee, under the discarded Jenner and Westminster schemes, may certainly be judged to be reconciled. Indeed, it would be auspicious if his tenure of office coincided with his being able to pre-eminently carry out what he and other reformers, *and now the University and college reformers*, have aimed at on the common ground of a degree basis instead of the obsolete licences.

I am, Sir, yours faithfully

Dec. 7th, 1911.

H. ELLIOT-BLAKE.

* * Mr. Elliot-Blake is advocating the granting of degrees by the Colleges in conjunction with the University.—ED. L.

PRESSURE-PAIN SENSIBILITY IN FACE AND TONGUE.

To the Editor of THE LANCET.

SIR,—In connexion with your annotation on this subject in THE LANCET of Nov. 18th, may I point out that two of the statements made by Dr. Maloney and Dr. Foster Kennedy are in excess of ascertained facts? They write thus of the hypoglossal nerve: "It is probably a pure motor nerve in its peripheral course"; again, "The hypoglossal appears to be a purely motor trunk." They also write of "the purely motor function of the seventh nerve after it leaves the Fallopian canal." But all that their excellent research established on these two points was that these two nerves contain no pressure-pain sensibility fibres in those parts of their course. We are almost certain, however, that the main twelfth trunk and the six facial branches peripheral of the stylo-mastoid foramen contain postural afferent nerve fibres for the tongue muscles and the facial muscles respectively, because Professor Van Gehuchten found by experiment² that in the rabbit the peripheral seventh nerve at the stylo-mastoid foramen contains afferent fibres which rise in some of the cells of the geniculate ganglion; and also Professor Sherrington found in 1894³

¹ Brain, September, 1911, pp. 23 and 26.

² Journal de Neurologie, 1898.

³ Journal of Physiology, vol. xvii., p. 255.

that the hypoglossal was one of several nerves mentioned by him "which contain abundance of fibres from sensory ganglia."

In my opinion, the present position of our knowledge, which is, however, incomplete in several directions, justifies the following provisional conclusions: (1) all the pressure-pain sensibility fibres of the tongue enter the organ by the communicating branches between the lingual branch of the mandibular nerve and the anterior part of the hypoglossal nerve; (2) possibly a few postural afferent fibres also enter by that path; (3) most, if not all, of the postural tongue muscle afferents enter the organ by the main hypoglossal trunk, probably from the second and third cervical dorsal root ganglia; (4) all the pressure-pain sensibility fibres for the facial muscles enter by the communicating branches on the face between the fifth and the seventh nerves; (5) some of the postural afferent fibres for these muscles probably also enter by these branches, in witness whereof I may refer to Dr. Harvey Cushing's well-known findings of postural facial palsy after Gasserianectomy in some cases; (6) most of the postural afferent fibres to the facial muscles rise in cells of the geniculate ganglion, and enter the muscles by the six peripheral facial trunks.

I have in this letter touched merely the fringe of this subject. I hope to show subsequently that all these points, and many more, can be studied, and in a large measure settled, by properly planned experimentation reinforced occasionally, as opportunity occurs, by pathological study.

I am, Sir, yours faithfully,

LEONARD J. KIDD, M.D.

Haverstock Hill, N.W., Dec. 2nd, 1911.

SANITATION AND SEWAGE DISPOSAL AT LEEDS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

LEEDS holds a good position among our largest towns so far as vital statistics are concerned. Perhaps the most remarkable figures are those that relate to the mortality from scarlet fever. In the "seventies" the death-rate from this disease occurred in the proportion of 1.11 per 1000, in the "eighties" it fell to 0.68 per 1000, in the "nineties" to 0.19 per 1000, while the average from 1900 to 1909 was only 0.11 per 1000. Yet it can hardly be said that vast public works have been pressed forward so as to better the sanitary conditions of the city.

Back-to-back Houses: the Rent and the Death-rate.

The building of back-to-back houses has, unfortunately, not been radically abolished, yet Dr. L. W. Darra Mair's report to the Local Government Board (Cd. 5314, 1910) on back-to-back houses was very conclusive. This official document gives the results of investigations in Leeds and 12 other industrial towns of the West Riding of Yorkshire. Care was taken to separate houses in good condition and in healthy localities from those less favourably situated. It was found that where back-to-back houses are built in continuous rows, even though they are of a relatively good type, the death-rate from all causes is from 15 to 20 per cent. higher than in ordinary houses which have windows both in front and behind. Such is the advantage of through ventilation and the purifying effects of light on both sides of the houses.

The inhabitants of back-to-back houses suffer especially from diseases of the chest and defective growth in childhood. The aged and the young are the principal victims. But the rents of such dwellings are one-fifth cheaper than ordinary houses of equal size and affording the same accommodation. The increase in the death-rate is about in the same proportion as the decrease in the rent paid for back-to-back houses. In other words, where back-to-back houses are replaced by houses with through ventilation a death-rate of 20 per 1000 per annum would be reduced to a death-rate of 16 per 1000 per annum. Of those who die in back-to-back houses, 20 per cent.—one-fifth, or 1 out of 5—are brought prematurely to the grave to save 4s. in the £ paid for rent.

In 1893 the Leeds Corporation obtained permission to allow the building of more back-to-back houses. The injury resulting from this mode of construction was not then as fully appreciated as it is to-day, nevertheless it was well known that such houses were comparatively unhealthy. But

then there was the saving of money, so the corporation was left free to decide whether under certain conditions and restrictions builders should be allowed to construct yet more and more back-to-back houses. The chief hope now is that under the Housing and Town Planning Act of 1909 this harmful practice will be definitely stopped.

Wholesale Testing of Drains.

If the corporation is thus unprogressive in allowing such houses to be built, the sanitary authorities have displayed commendable energy in the inspection of inhabited dwellings. More than 18,000 houses are inspected in the course of the year, and this does not imply just a passing visit, but the thorough overhauling of the entire premises. Thus the air space and means of ventilation are noted, and the drains are not only outwardly examined but tested. Such methods revealed last year no less than 3955 defects or leakages in drains. This is really most important, because the fact that the closets are kept clean and that there is no noticeable odour does not prove that the drains are absolutely water- and air-tight. The scavenging department also seems to be very active, and altogether it appears likely that the low death-rate enjoyed at Leeds is due rather to careful attention to details than to any large sanitary measure or scheme.

Pollution of the River Aire.

So far as any great undertaking is concerned, Leeds is best known on account of its extensive experiments and works for the disposal of sewage. The last Census shows that Leeds has a population of 443,568 and stretches over an area of 21,572 acres. Considering that there are also many industries and no large river or sea front where the crude sewage can be discharged, it will be seen that it must be very difficult to dispose of the sewage satisfactorily. It was in 1848 that sewers were first built at Leeds, and then the crude sewage was allowed to flow into the small river Aire at Knostrop, which is about two miles south-east of the town-hall. This practice continued until 1870 when an injunction was obtained, and the corporation of Leeds was ordered to stop the nuisance. Four years were now devoted to experiments, and then settling tanks were built. By mixing chemicals with the sewage a sludge was obtained and a clearer and cleaner water thrown into the river. But if this was an improvement the results were still far from satisfactory. In 1893 the West Riding Rivers Board was constituted to act on behalf of those who were interested in the prevention of the pollution of rivers. In the course of time, certainly not with any reckless or undue haste, but in the lapse of four years, five new precipitation tanks were constructed, and now all the tanks put together could hold six and a third million gallons. Far more remarkable than this extension of an old system were the numerous and valuable experiments then made in the bacteriological treatment of sewage. The corporation has published in volume form a full account of these experiments which were conducted by Colonel T. W. Harding and Mr. W. H. Harrison, M.Sc. This appeared in 1905, and together with the Leeds experiments in general has been the subject of much discussion and comment. It would be somewhat out of date to travel over the ground again, but some of the main points ascertained may be briefly recalled.

The Aerobic Treatment of Sewage.

In contact beds effective aeration must be secured. The oxidising surface of small is greater than that of large filtering material. But, on the other hand, the smaller the filtering agent the more thoroughly does it retain all suspended matter, and thus the filter is very soon clogged. The coarser the material the longer will it remain serviceable. Now the great point ascertained at the Leeds experiments is that at least half the suspended matter in sewage cannot be dissolved by bacterial action. Further, if it is allowed to clog up the filter a fungus will grow upon it and complicate matters. A coarse filter will let mineral and inorganic matter pass through and only retain what can be digested—that is, transformed by bacteriological action. Therefore it was found that filtering for clarifying purposes should be the second and not the first operation. The experiments went on to prove that it was necessary to pass the sewage through a fine screen and then on to a coarse filter. In normal dry weather this sufficed to oxidise the sewage, and though it was still thick and contained