of the brain." As Professor Huxley distinctly states that thought and will are products of molecular changes in the brain, and as on this view man's faculty of intelligence is bereft of the prerogative of choice, there remains for Professor Huxley the crucial question, How separate truth from falsehood and right from wrong? Having flung truth and falsehood, right and wrong, sane and insane, into the same category and bound them in the everlasting and adamant chains of dire necessity, their separation truly seems a hopeless task. "Sic transit gloria mundi."

I am, Sirs, yours truly,

J. M. MACLENNAN, M.A., M.B.

Albert-road, Widnes, Oct. 9th, 1893.

THE TOAD IN THERAPEUTICS.

To the Editors of THE LANCET.

SIRS,—Dr. Lauder Brunton, in his recent address to the Pharmaceutical Society, mentioned that phrynin has an action resembling digitalis, and he also remarked: "It is quite possible that some of these days we may have an enterprising firm advertising essence of toad as being of superlative virtue for the cure of dropsy." During the last century toads were used as local applications for the cure of cancerous breasts. In Martyn's "Natural History," published in 1785, a full account of this mode of treatment is given by Dr. J. H. Pitfield in a letter to the Bishop of Carlisle. The following are extracts from the letter: "Your lordship must have taken notice of a paragraph in the papers with regard to the application of toads to a cancered breast. A patient of mine has sent to the neighbourhood of Hungerford and brought down the very woman on whom the cure was done. I have, with all the attention I am capable of, attended the operation for eighteen to twenty days and am surprised at the phenomena. The animal is put in a linen bag, all but its head, and that is held to the part. It has generally instantly laid hold of the foulest part of the sore and sucked with greediness until it dropped off dead. It has frequently happened that the creature has swollen immensely and from its agonies appeared to be in great pain. They frequently sweat exceedingly and turn quite pale, and sometimes they disgorge, recover, and become lively again. It is only the Rubeta, or land toad, which has the property of sucking. My patient can bear to have but one applied in twenty-four hours. The woman who was cured had them on night and day for five weeks. Their time of hanging at the breast has been from one to six hours. Some die very soon after they have sucked or live about a quarter of an hour, and some much longer. During the time of sucking they were heard to smack their lips like a young child. Other authorities, equally respectable, maintain that there is no visible appearance of the toad's sucking any part of the cancerous poison, though they allow that the animals' swelling and falling off dead is a general consequence of the application." This account is a curious mixture of accurate and inaccurate observation. A toad cannot, of course, suck, and the idea that it did so was doubtless suggested by the smacking of its lips, which is merely an act of gasping. As regards the other phenomena, a toad when injured or alarmed at once blows itself up to about twice its ordinary size. Hence probably the fable of the "Frog and the Ox." Moreover, if held and constrained for any length of time in a hot hand, it sweats profusely and would probably soon die, as it did when applied to the breast in the manner described. In THE LANCET of Aug. 29th, 1891, I mentioned that the effect of the secretion upon the hand is to cause dryness, numbness, and tingling, lasting for a considerable time. Possibly a similar effect might have been produced by the secretion on a painful ulcer, whether cancerous or not, and may thus have afforded a certain amount of relief and a prospect of cure. Phrynin, on evidence derived from various sources, appears to act on the heart, skin, and kidneys. Whether it has any real therapeutic value remains to be seen.

I am, Sirs, yours faithfully,

LEONARD G. GUTHRIE.

Upper George street, Bryanston-square, W., Oct. 8th, 1893.

"THE SUBCUTANEOUS INJECTION OF PILOCARPINE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 7th I see a letter signed "Hippokratides" asking for information with regard to any bad effects after prolonged injection of pilocarpine. I do not

quite gather the full meaning of the term "prolonged." Some two years ago or more I had a case under me that may, perhaps, help "Hippokratides" if mentioned. The patient, a female aged about thirty-five, complained of great deafness, so marked that when lying on a couch in her room she was unable to hear the sound of a kitchen clock ticking on the wall a short distance from her. It was decided after examination to try subcutaneous injections of pilocarpine. I gave her three separate courses, each course consisting of forty consecutive daily injections. In the first I reached a maximum dose of a little over half a grain. After this there was an interval of about six weeks, when a second series was commenced, the maximum dose of which was between two-thirds of a grain and one grain. The third course, which was commenced after another interval of six weeks, reached a maximum dose of one grain and a quarter exactly. No bad symptoms followed; the woman's hearing was decidedly improved, and she said that she felt very much better both as regarded her general health and her hearing. I have since seen the patient on several occasions, and her hearing remained improved. I may say that the same preparation of pilocarpine was being used on other patients at the same time, and there was no doubt as to its quality.

I am, Sirs, yours faithfully,

Weymouth-street, W., Oct. 10th, 1893. G. CHARLES WILKIN.

"THE CENSUS AND THE MEDICAL PROFESSION."

To the Editors of THE LANCET.

SIRS,—Allow me to point out to you that the statement made in THE LANCET of Oct. 7th that in the recently published Census volume the medical profession is represented as consisting of 30,843 men and 54,392 women, and that no further explanation is to be found of these figures without going back to the corresponding volume for 1881, is completely erroneous. If the writer of your annotation had merely taken the trouble to refer to the place in the 1891 volume which corresponds to the place where he found the explanation in the 1881 volume, he would have found full details and have learnt that the medical suborder includes, besides 19,037 medical practitioners, 53,658 nurses and invalid attendants, as well as sundry other persons more or less directly connected with medicine.

Surely it is the duty of a writer, before he ventures to apply such terms as your annotator has done to a public report, prepared with great care and at great expenditure of time and money, to assure himself that the blunders of which he complains are really in the report, and not, as in this case, committed by himself. I trust to your fairness to give the same publicity to this contradiction as you have given to your annotator's mischievously erroneous statement.

I am, Sirs, yours faithfully,

BRYDGES P. HENNIKER, Registrar-General.

Census Office, Charles-street, Whitehall, London, S.W., Oct. 11th, 1893.

* * We find that the Registrar-General is right—i.e., that in the 1891 Returns, as in those of 1881, the explanation of the extraordinary representation of the numbers of the medical profession is given. But the gravamen of our charge remains. In the Census Returns the medical profession, which, of course, in legal language means only medical practitioners on the Register, is made to include dentists, dental apparatus makers, medical students, assistants, midwives, nurses, and invalid attendants, "as well as sundry other persons more or less directly connected with medicine." We append a table from our contemporary the Economist (Aug. 26th), one of the most careful of statistical journals. The table purports to give the growth of the professional classes, and is as follows:—

	1891.	1881.	Increase.
National Government	79,241	50,859	+ 28,382
Local Government	64,851	53,493	+ 11,358
Clerical profession	58,642	51,120	+ 7,522
Legal profession	47,518	43,641	+ 3,877
Medical profession	85,235	64,548	+ 20,687
Teachers	200,594	171,831	+ 28,763
Artists, including musicians, actors &c.	79,115	58,517	+ 20,598

ED. L.