

architecture of the human cortex is too far removed from the primitive state to be used as an argument in support of the view that the contralateral connexions in vertebrates are the result of the formation of optical images in an unpaired median eye.

The above suggestion may not be new, but it is not well known, and I have never heard of it. There is no means by which it can be put to the test by experiment. Ascidians are degenerate forms, but their larvæ may not be far removed from the primitive vertebrate stem.

H. E. ROAF.

London Hospital Medical College,  
Jan. 17.

#### The Muscular Sense.

I HAVE just seen Col. Lynch's letter in NATURE of Jan. 11, in which he criticises mine, which dealt with the muscular sense. In order to experience a sensation, surely no "analysis of a searching character" is required, else the state of the child and of the savage would be peculiarly unfortunate. In my letter in NATURE of Nov. 23, I merely wished to describe a method involving no apparatus which permitted one to experience sensations produced by the activity of muscles engaged in raising or lowering the mass of the limbs. I am aware that some psychologists have discussed the question whether these sensations in or of muscles are not rather sensations of the outgoing, cerebral, efferent impulses to the muscles. I have always thought that view extremely unlikely and akin to learned trifling. If it were true, would it not be very peculiar that we should not have any awareness of any other kinds of efferent innervations such as those of heart, blood-vessels, or glands?

I did not set out to offer any "explanation" of the muscular sensation which involved or did not involve "a minute examination of a long series of neurological phenomena".

I still think the method I have described is an interesting one, because it is, to some extent, quantitative, in that the moment the limb rests on the water the sensation is minimal, and the moment it begins to be raised or lowered the sensation is increased in intensity. I hope we may still be allowed to experience and report on sensations without being compelled to give "a valid analysis" of them "with the necessary rigour".

D. F. FRASER-HARRIS.

Chiswick, W.4, Jan. 13.

#### Sterilisation as a Practical Policy.

MAY I add to the admirable review by Prof. MacBride (NATURE, Jan. 11, pp. 40-42) that there is an urgent and immediate place for voluntary sterilisation in Great Britain side by side with voluntary birth control? The medical profession at present does not meet the demand of those conscious of heritable defect and with a sufficient sense of civil responsibility voluntarily to desire sterilisation. Compulsory sterilisation of the unfit would require legalisation which we may properly hope may be passed before long, but to secure the voluntary sterilisation of those ready to ask for it requires such public propaganda as was given to constructive birth control. But while it is easy to sterilise a male effectively and harmlessly, it is neither so easy nor so successful, as Prof. MacBride's article would lead one to believe, to sterilise the female, the tying of the Fallopian tubes sometimes leading to internal pregnancies which are worse than the normal. Nevertheless, as a social step it will be valuable to facilitate voluntary sterilisation even of the defective

males who are conscious of their defect and willing to have vasectomy performed.

The Society for Constructive Birth Control has for some time past been considering the possibilities for facilitating this and will be pleased to hear from competent surgeons willing to undertake such cases in any part of the country.

MARIE C. STOPES  
(President).

Society for Constructive Birth Control  
and Racial Progress,  
108 Whitfield Street, London, W.1.

#### Botanical Nomenclature.

MAY I request the publication of a short note which I consider a point of importance in view of the forthcoming botanical conference in Britain?

Article 57 of the Vienna rules states "the original spelling of a name must be retained except in case of a typographic or orthographic error". The use of the word "spelling" along with the word "orthographic" in this sentence appears to many to override the original meaning of the latter word, namely, "correct writing"; and to restrict it to the dictionary sense of correct spelling alone. But correct writing is equally important with correct spelling. To avoid ambiguity, I suggest Article 57 be amended to read "typographic, orthographic, or syntactic error".

Is a man to be allowed to write, say, "ein schöner Buch" in German, or "une beau fille" in French, through ignorance or temperamental whimsy, without protest from lovers of good German or French? Why, then, should we allow our 'nodding Homer' of nomenclature, even, to palm off on us an orthographic blunder such as *Polygala sanguinea* instead of *P. sanguineum*; or pass by uncorrected a recent new specific blunder like *Airosperma fusca* for *A. fuscum*?

ROBERT A. INGLIS.

Central Experimental Farm,  
Ottawa, Dec. 16, 1929.

#### Spectrum of Trebly Ionised Krypton.

A SHORT note by me on the spectrum of doubly ionised krypton was published in NATURE of Feb. 16, 1929 (vol. 123, p. 244). Since then the observational data with regard to the spectrum of krypton have been extended up to  $\lambda 1930$  Å. on the ultra-violet side. In the region of about 41,000 frequency units, some very strong lines, namely, 42,475.1(10) and 40,560.3(9), have been observed. Although the lines of  $\text{Kr}^{++}$  due to the transition  $3N_2(O_2 \leftarrow O_3)$  had been located near this region, it did not seem probable that this transition would give rise to such intense lines—lines more intense than the fundamental lines due to  $3N_2(O_1 \leftarrow O_2)$ .

Further, by extrapolation by the method of horizontal comparison, it has been found that the fundamental lines of  $\text{Kr}^{+++}$  due to the transition  $2N_2(O_1 \leftarrow O_2)$  would lie in this region.

An attempt to find out these lines of  $\text{Kr}^{+++}$  has revealed a number of multiplets. The lines 42,475.1(10) and 40,560.3(9) have been found to be the  ${}^4P_3 - {}^4D_4$  and  ${}^4P_2 - {}^4D_3$  lines.

A complete analysis of this spectrum is in progress and will be published shortly.

D. P. ACHARYA.

B.N. College, Patna,  
Dec. 3, 1929.