## ALCOHOLISM AND OFFSPRING.

TO THE EDITOR OF THE TIMES.

Sir,-Mr. Crackanthorpe's letter under the

above heading casts doubt on the value of biometric conclusions because they are "based on the 'law of averages,' which again is based on the 'theory of probabilities,' which again is based on mathematical calculations of a highly abstract order." So far as I can understand this account it seems to me inaccurate, but I have no idea of what is meant by "law of averages." Allow me to give my own version of biometric methods-i.c., that they are primarily based on observations, after they have been marshalled in order of their magnitudes—the little figures, say, coming first and the larger ones last-by drawing diagrams, and by countings. This much suffices to give a correct idea of the distribution of any given set of variables; it is also sufficient to give a fair idea of the closeness of correlation, or of kinship, between any two sets of variables. [Here exact correspondence counts as 1, no correspondence at all as 0, and intermediate degrees are counted by intermediate decimal fractions.] However, in usual biometric computations, where large numbers of

figures are discussed, the greatest possible pre-cision has to be reached, and the measure of the accuracy so determined has to be ascertained; then elaborate mathematical methods must be

employed, which cannot be briefly described except in highly technical terms.

I do not at all agree that "the relation of parental alcoholism is quite beyond the ken" of

biometric methods. The memoir that is criticized discusses that relation in regard to offspring in their early life. The simple question, divested of all connotation, whether or no adult offspring suffer, and in what degree, seems to me perfectly within the ken of biometry. But the interpretation of the results so obtained is quite another consideration.

FRANCIS GALTON.