

to the practical importance of the question in connection with man and domesticated animals. The number of speculations on this matter and on the general nature of sex has been well-nigh doubled since Drelincourt, in the last century, brought together two hundred and sixty-two "groundless hypotheses", and since Blumenbach quaintly remarked that nothing was more certain than that Drelincourt's own theory formed the two hundred and sixty-third. Subsequent investigators have, of course, long ago added Blumenbach's to the list, which is still mounting up.

It must not be supposed that all the many theories as to the determination of sex have been merely arm-chair musings, for numerous experiments and observations have been made by breeders and physicians. What vitiates almost all, however, is the fatal defect, that, while attending to one factor, *e.g.* the relative age of the parents, the relative vigour of the parents, the nutrition of the embryo, no sufficient care has been taken, and in most cases no attempt has been made, to eliminate other probably operative factors, either experimentally or by statistical devices. There is at least a strong probability, that every ovum of an organism with separate sexes has from the first a predisposition towards becoming a male or towards becoming a female, but that this predisposition may be altered by the nutrition of the ovum, by changes in the period before fertilization, by fertilization itself, and by environmental influences (of nutrition, temperature, &c.) during embryonic or even larval life, until the period is reached when the sex of the offspring is fixed. We cannot, and need not, discuss the problem here (see revised edition of *The Evolution of Sex*, 1899); we wish simply to point out the probability that many factors determine the result, and that insistence upon one alone (*e.g.* Prof. Schenk's insistence upon the diet of the mother) is almost certain to be fallacious.

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