

relations which Cattell has pointed out may be artificially altered by a combination of the ordinary methods of collecting data with a differential sex incidence of the trait under investigation. Judges are prevalently men rather than women, and it is only when adequate care is taken in the method of selecting those to be investigated that one may expect the data to show an equality in the number of their brothers and sisters. The point involved may be brought out by means of a simple paradigm. Let us imagine a population with numerical equality of the sexes, and a calling in which half the men but none of the women attain a certain distinction. The tabulation, in which B stands for brother, S for sister and ' for distinction, shows the distributions for families of three. The first column indicates a random distribution in the whole population. The second column shows the families in which there is at least one mem-

1 B' B' B'	1 B' B' B'	3 B' B' B'
3 B' B' B	3 B' B' B	6 B' B' B
3 B' B B	3 B' B B	3 B' B B
1 B B B	_____	_____
6 B' B' S	6 B' B' S	12 B' B' S
12 B' B S	12 B' B S	12 B' B S
6 B B S	_____	_____
12 B' S S	12 B' S S	12 B' S S
12 B S S	_____	_____
8 S S S	_____	_____

ber of distinction. This is the material which would be utilized if the investigator could obtain all the desired data. But it generally happens that only a selected portion of it is available and, when such is the case, families with two or three distinguished individuals are two or three times as likely to be located as those with only one. The third column shows the consequent probable distribution of family records if the data are collected in the usual way. The proportion of the sexes in the three groups is interesting. In the first column the sex ratio is 100 and each boy, distinguished or otherwise, has, on an average, as many brothers as sisters. In the second column the sex ratio is 164; boys as a group have an excess of brothers, but those of distinction have only as many brothers as sisters. In the third column, which probably most nearly represents the usual character of available data, the sex ratio is 200 and boys of distinction have 7 brothers to 5 sisters. The difference would be still greater if there were a hereditary factor also involved.

Obviously, such an extreme case as this hypothetical one is not likely to be met, but similar cases of less degree do occur, as the writer can testify from his own experience. The purpose of this note is simply to call attention to the existence of certain factors which, when combined as they frequently are,

may affect the important relation pointed out by Cattell and Rietz.

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ENERGY VALUES OF FEEDS FOR CATTLE

THE net energy conception of Armsby, having been unanimously indorsed by the American Society of Animal Production, may fairly be considered a promising basis for research in nutrition. In this connection a remarkable bit of confirmatory evidence will be of general interest.

The writer and others have reported a rather extensive series of experiments with cattle at the University of Missouri. These included live weight maintenance trials and slaughter experiments. In reviewing this work in a forthcoming monograph of the American Chemical Society the writer has calculated the maintenance costs of the 27 beef cattle used from the feed consumption in the feed lot and energy values obtained in some of Dr. Armsby's calorimeter experiments. In some of these experiments a few of the Missouri cattle were fed the Missouri ration and the metabolizable and net energy in the ration were determined. Using these figures, the average maintenance cost of the 27 cattle is shown to be 6.09 therms of net energy per 1,000 pounds per day. From calorimeter experiments Armsby had derived a value of 6 therms. Such an agreement in maintenance costs, in spite of widely varying quantities of feed and relative activity of the animals, supports the validity of the net energy conception.

The writer has previously reported results with two beef steers showing that the percentage of the metabolizable energy consumed above maintenance which was recovered in the flesh and other body substance gained by beef cattle was practically identical with the percentage of net energy in the feeds. One steer showed a recovery of 53.4 per cent. of the metabolizable energy above maintenance while another recovered 52.5 per cent. According to the method of Armsby this ration contained metabolizable energy which was 55 per cent. available or net.

Taken together these two pieces of evidence are a striking confirmation of the net energy conception.

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THE TEACHING OF EVOLUTION

IN the *New York Times* of October 20, there is published a deliverance from Mr. Julian Huxley, of Oxford, in which he appears to me to have indulged in the light occupation of jumping to conclusions in a manner not characteristic of his illustrious grandfather, and to have made some rather sweeping state-