28th December, 1942.

Dear Dr. Slater,

I have now read through the Demographic Study and it certainly is just the kind of thing which I like to have for the Annals, especially as you set out the data sufficiently fully.

As to section 2, I think the evidence you adduce as to male and female families, or inheritance of the sex ratio, is extremely interesting and well worth having. I cannot think of any treatment which would combine three virtues i.e. be comprehensive, relative to the point, and mathematically neat. What you have done with gives at least a prima facie case for taking your conclusions seriously. For combining families of different sizes, as on page 6 I tried not very hopefully comparing the numbers of brothers and sisters possessed by a) boys, and b) girls. Any association of family size with sex ratio such as you have found an indication of would tend to make girls have on the average, both more brothers and more sisters than boys. (I believe it is usually the other way about). On the other hand heterogeneity of sex ratio would make the average number of sisters minus the average number of brothers, algebraically greater for girls than for boys. Taking
families of one to three in your data I find 1734 girls have 912 sisters and 951 brothers, or 0.526 sister and 0.548 brother each; while 1842 boys have 951 sisters and 1065 brothers, or 0.516 sister and 0.580 brother each. This gives the boys 0.022 more sibs than the girls, and both sexes have more brothers than sisters; to a greater extent however with the boys than with the girls by 0.044. For families of four to eight children 1934 girls have 4378 sisters, and 4464 brothers, i.e. 2.264 sisters and 2.308 brothers each; while 1873 boys have 4464 sisters and 4242 brothers, being 2.367 sisters and 2.265 brothers each. Here again boys have more sibs than girls, this time by 0.076 as would be the case if a high sex ratio were associated with larger families. But if the numbers are right, and I have not checked them, whereas girls have more brothers than sisters, the boys have more sisters than brothers, which is the opposite of what I should expect from real heterogeneity of the sex ratio. I have not continued the process for the larger families but you might be interested to do so as to judge to what extent the indications are consistent. At least it seems a logical way of throwing together evidence from families of different sizes.

Yours sincerely,