

Cripps's Corner. Frest Row-  
Sussex. May 9. 26

My dear Fisher

I think I am becoming stupider about mathematical things as I grow older; or it may be lazier as I get older. The following was the way I regarded the twin problem.

First assume there are identical and non-identical twins, and that identicals must be all of same sex. Then, as pointed out in the Swedish book, double the number of opposite sexed twins, and we get the number of <sup>non-</sup>identical twins; and consequently can get the ~~proportion~~ ratio of identical to non-identical twins. If the ratio of <sup>same sexed</sup> ~~non-identical~~ to <sup>different sexed</sup> ~~identical~~, when one twin or both are feeble minded is found to be the same as that obtaining in the general population, it would follow, I think, that identical twins were all both feeble minded. This assumes that two f.m. sibs are seldom found in one family; and for this some correction might be necessary. If mental defect comes from prenatal conditions to a maternal extent, as MacBride seems to think, this would not hold good, for opposite sexed twins would seem as likely thus to be affected as

same source twin. It might conceivably be urged that the prenatal conditions of identical twins are identical, whilst the prenatal conditions of opposite source twins are not. This would seem to me a highly improbable supposition. Lastly would not all this hold good whatever supposition is made as to the difference between twins much like each other and twins which differ much, provided that difference is dependent on germinal differences of some sort? Possibly this is what you have been saying, somewhat differently stated; it is at best.

My niece, at the Board of Control, said she thought it would not be difficult to obtain through the Board of Control, a return of what is known about M-d. twins.

We must face the possibility that our inquiry would tell us the wrong direction !!

Yours sincerely  
L. Darwin

$$\frac{\frac{1}{2} - t}{\frac{1}{2} \sqrt{\frac{1}{2}}} = \frac{t - \frac{3}{8}}{\sqrt{15}/8} = 2\sqrt{2}$$

$$t = \left( \frac{\sqrt{15}}{16} + \frac{3}{16} \right) \div \frac{1}{2} + \frac{\sqrt{15}}{8}$$

$$= \frac{3 + \sqrt{15}}{8 + 2\sqrt{15}} = \frac{2\sqrt{15} - 6}{6} = \frac{\sqrt{15} - 3}{2} = \frac{.872983}{1} = .4364915$$

$$\frac{1}{2} - t = .0635085 \quad .1$$