

21st May, 1954.

Dear Dr Walsh,

Thank you for your letter giving some data, which I find exceedingly interesting, on the incidence of  $R_z$ .

I do not think one can be sure that variations in this incidence are solely due to variations in crossing-over, which, though possible would not be very easy to match in other forms of life rather than in variations in the survival of the products of crossing-over.

I do not know what sort of time scale you have in view for the evolution of different ethnic groups, but I suppose one must think of something like a thousand to two thousand generations. In such times the same actual supply of new recombinants  $R_z$  might give very different observable frequencies according to whether the selective disadvantage of  $R_z$  relative to, let us say,  $R_1$  were one per cent or one per thousand in each generation. I do not think we can exclude the possibility that in Queensland a higher proportion of the  $R_z$  recombinants of the last three thousand generations have left representatives in the present population than has happened in, let us say, Fiji.

Sincerely yours,