Dear Fisher,

I have been reading your paper on Evolution with care. It makes me see that mutations may not need to be as frequent as I thought. Your way may of course be all right and all that is needed, in which case my become unnecessary: I desire to this fact makes me a little prejudiced. I am rather stupid in taking in Mendelian ideas, and my comments may well be futile.

First as to some minor points. I don't follow why you think that with rare traits new genes must necessarily be relatively rare. If the new genes are caused by environmental effects, I see no
learn why this should be the case.
At the end you speak of asexual organisms. I asked dunne if there were any which it was certain never conjugated and he replied 'no'.
I don't quite understand what change you assume is taking place when a new gene comes in to being. I suppose you assume a number of factors of allomorphs — A a, B b, C c, D d, etc.; and that in place say of A we get A'. But you speak of the best possible combination of factors on p 6. Are not all the factors always present? Should it be combination of all allomorphs?
You speak of structure being changed far outside the existing range of variation.
mutation. But if dealing with such a series of alleles, every possible combination might be produced, and so you would thus get any organism outside the possible range. If so, would you get them much outside the actual range? This question very likely merely shows I am not there!! You say that a single mutation may enable thousands of new genetic combinations to be tested. But if one considers any particular structure on which natural selection can concentrate its attention, I should have thought that the number was not so vast. And it is the action of selection on each separable quality that we
have to hold in view. Again I feel that may be nonsense. I feel that a system like yours leaves a good many things unexplained. There are the uniformity such as it is - in certain structures; the disappearance of intermediate varieties; and, I should be inclined to add, the scarcity of mutations in pure lines. I still think you must assume some mutations to be small and frequent, and I don't know how well that fits in with your system.

I send you here with a copy of something I have written on this point - an extract from my paper, which may or may not appear.
I should be especially thankful if you will cut out the part with a red line against it. I want to know if I quote Pearson right, and if I make a right use of the fact. Of course you would write what I suggest, because it runs on different lines of thought to yours. And you can't well judge from a mere extract.

Yours sincerely,

Lawrence Darrow