April 22, 1940

Dear Dr Walker,

Many thanks for your letter. I am having sent, under separate cover, the paper "The use of multiple measurements in taxonomic problems". I am very glad to have your news of Rider, Cochran, Eisenhart and Youden, and certainly wish I could be among them again for their discussions.

I have rather a dread of the procrustean process of forcing a problem to fit a favourite method; for, quite early in life, I was impressed by the fatal effects of this in Karl Pearson's work; but I am not sure that your problem is not one for multivariate best analysis. To begin with, unless the first multivariate discriminant is significant, I imagine no one would wish to go further, or to draw conclusions about individual traits; but, if it is significant, this means that it is significantly different from a kind of null criterion having all its coefficients zero. Now, one can equally test significance from less severely restricted criteria, e.g., from criteria having all coefficients of variables with suffix greater than \( r \), zero. An insignificant difference here would surely allow one to say that that \( x_1 \) to \( x_r \) taken jointly are needed,
and failure to obtain an insignificant difference when any of these omitted would indicate that all were necessary.

I have quite an amusing example of this sort of process in the problem of acclimatisation to high altitudes, which I sent you some while ago from the Proc. Roy. Soc., the problem being there a rather typical multiple regression, with some additional evidence as to the minimum residual error.

Yours sincerely,