14 January 1932.

Dr. J. Wishart, F.R.S.E.,
School of Agriculture,
CAMBRIDGE.

Dear Wishart:

(B) is a limiting form either of (A) or of (C) as $n_2 \to \infty$, consequently it is indifferent whether we define β^2 with a factor n_2 or n_1+n_2+1. If ρ^2 is finite, of course, $\beta^2 \to \infty$ with n_2, and B tends to be normally distributed according to large sample theory.

Yes, if R^2 is replaced by E^2, ρ^2 will be replaced by η^2, for the population. The use of (A) for correlation ratio in its original sense, seems, however, to me very academic owing to the improbability of normal distribution of the independent variates, though of course in the wider sense in which it is used by Tippett, it is only a synonym for the multiple correlation coefficient.

In the limiting case either for R^2 or for E^2, $\beta^2 = n_2\eta^2$, $B^2 = n_2 E^2$, or any equivalent transformation will be equally appropriate.

The general cumulant for the distribution of $\frac{1}{2}B^2$ is

interesting; I hope you will do some more in this line.

[* See CP 61, p. 671 - J.A.R.]

Yours sincerely,