# RE: HAWKINS AND KLIMSTRA, "DEER TRAPPING CORRELATED WITH WEATHER FACTORS" (TRANS., 63:198-201)

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The use of factor analysis, probably always dubious, is exemplified in its uncertainties by application separately to data for two different years. After the independent variables were "loaded on 12 factors", selection of "the independent variable under each factor that contributed most" led to two sets of 12 variables having only a single variable (number 17) in common. This is significantly ($P = 0.017$) less agreement than should occur by chance (though there is at least one misprint affecting variables "deleted from 1964-65 trap period" without explanation). Can the authors still believe that the factor analysis serves "to eliminate redundant factors"? If so, must they not conclude that all factors were probably "redundant"? Furthermore, this common variable failed to exhibit a significant correlation with trap success in the first year (no similar statement was made about data for the second year).

Of the four independent variables which exhibited "significant t-test values" in the first year, it is said that only two "had significant r values". If this means partial correlation, the test of correlation coefficients should yield results identical to those from the t test; if total correlation is meant, the analysis is regressing from a more detailed and specific result to a relatively crude result.

The authors remark that, although 6 corral and 3 box traps were available, they were not always all in use and that data for nights with only one or two traps set were ignored. However wise that may be, surely the analysis should have taken account of the individuality of the traps, not to mention the possible difference between the two types. It may be that permanent differences between traps contribute so much to the variance relegated to "error" in the reported analysis as to obscure completely real effects of some of the weather variables studied.

The data should be reanalyzed taking explicit account of trap individuality, and involving data for the two years so as to test whether years are in reasonable agreement. Those of your readers who are interested in factor analysis may gain further understanding from J. Scott Armstrong, "Derivation of theory by means of factor analysis or Tom Swift and his electric factor analysis machine", American Statistician 21:17-21, 1967.

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