

A Framework for Hypothesis Tests in Statistical Models With Linear Predictors

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A great deal of confusion, and even prejudice, is associated with the differentiation of "types" of statistical tests in linear and similar statistical models. This paper elucidates the distinction between so-called "type-II" and "type-III" tests in linear models, explaining the nature of the hypotheses tested by each kind of test. We then show how type-II Wald tests can be extended to any statistical model with a linear predictor and asymptotically normal coefficients, providing a practical strategy for conducting such tests without having to refit restricted versions of the model. This general method is implemented in the `Anova()` function in the `car` package.