

Terms for Testing Effects in Various ANOVA designs Prof. Marelich

One-Way ANOVA

Multiple Comparison Procedures for **Main Effect**

1) a priori tests

- á priori t-tests
- orthogonal contrasts (allowed $k-1$ mean comparisons w/o adjustment for family-wise error)

2) post-hoc tests (e.g., Tukey test – Family-wise adjustment built in)

Two-Way, Three-Way, etc. ANOVA (Factorial Designs)

Multiple Comparison Procedures for **Main Effects** (each IV by itself)

1) á priori tests

2) post-hoc tests

Simple Effects tests for **Interaction Effects** (IV1*IV2)

[sometimes referred to as *simple main effects* tests]

Your class text (Howell) refers to more complex simple effects testing (say with 3-ways) as *simple interaction effects*, but I prefer just to think of any investigation of interaction effects as *simple effects*.

Repeated Measures (1 Within Subjects Effect)

Multiple Comparison Procedures for the **Within Subjects [Repeated] Effect**

1) paired t-test with Bonferroni adjustment to control for family-wise error

Repeated Measures (2 or more Within Subjects Effects)

Multiple Comparison Procedures for the **Within Subjects [Repeated] Effects** (each repeated IV by itself)

1) paired t-test with Bonferroni adjustment

Simple Effects tests for **Interaction of the Repeated Effects** (IV1*IV2)

Repeated Measures “Mixed” Designs (1 Within and 1 Between Subjects Effect)

Multiple Comparison Procedures for the **Within Subjects [Repeated] Effects** (the repeated IV by itself)

1) paired t-test with Bonferroni adjustment

Multiple Comparison Procedures for the **Between Subjects [Non-repeated] Effect** (the nonrepeated IV by itself)

1) á priori tests (special t-tests, orthogonal contrasts)

2) post-hoc tests (e.g., Tukey test)

Simple Effects tests for **Interaction Effects of Within Subject and Between Subject Effects** (IV1*IV2)