

```
> aov_4(RT ~ Sentence * Context + (1 + Sentence * Context | Subject),  
data = DV, na.rm = TRUE)
```

- Syntax corresponds to RT being predicted by the two factors (Sentence*Context corresponds to two main effects plus the interaction) plus the random effect by Subjects using the datafile called DV. By setting na.rm to be TRUE, we are telling the analysis to ignore individual trials where there might be missing data - effectively this calculates the condition means over the data that is present (and ignores trial where it is missing).
- aov_4 aggregates over the grouping term in the random effect. Simply change to (1 + Sentence*Context | Item) for by-item (i.e., F2) analysis. This requires the data to contain the individual observations (not aggregated as means).

By Subjects

```
> model <- aov_4(RT ~ Sentence * Context + (1 + Sentence * Context | Subject),  
  data = DV, na.rm = TRUE)
```

```
> anova (model)  
Anova Table (Type 3 tests)
```

Response: RT

	num	Df	den	Df	MSE	F	ges	Pr(>F)
Sentence		1		59	124547	0.6283	0.0016524	0.43114
Context		1		59	90195	3.1767	0.0060231	0.07984 .
Sentence:Context		1		59	93889	4.5967	0.0090449	0.03616 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

- The output contains the main effect of Sentence, the main effect of Context, and the interaction between the two. Associated with each are the dfs, the Mean Squared Error, the F ratio, the generalized eta-squared, and p-value. Note, you can ask for partial eta-squared as effect size measure too.