We need to build our model with two repeated and one between participants factor…

```
model <- aov_4(RT ~ Word * Image * Age + (1 + Word * Image | Participant), data)
```

We are asking for the model to be built using the three factors - this will give us three possible main effects, 3 possible 2-way interactions, and a possible 3-way interaction…

The `aov_4` function knows which factors are repeated and which are between from the model structure - note that between participant factors shouldn't appear in the random effects term - if you have only between factors then the term should be something like (1 | Participant)…

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

Response: RT
                num Df den Df    MSE          F     ges    Pr(>F)
Age                 1     30 788.86 1017.8790 0.90328 < 2.2e-16 ***
Word                1     30 750.85  110.7147 0.49157 1.380e-11 ***
Age:Word            1     30 750.85   14.1946 0.11029 0.0007202 ***
Image               1     30 752.62    0.8022 0.00697 0.3775568
Age:Image           1     30 752.62    0.2152 0.00188 0.6460346
Word:Image          1     30 573.74   61.4309 0.29074 9.553e-09 ***
Age:Word:Image      1     30 573.74   73.9247 0.33033 1.363e-09 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
```

From this we can see we have main effects of Age and Word, no main effect of Image, significant 2-way interactions of Age x Word, and of Word x Image and, crucially, a 3-way interaction between all three factors - Age x Word x Image…