Removing/adding interaction in ANOVA/ANCOVA in SPSS
ANOVA without interaction

• When running a 2-way ANOVA in SPSS, the interaction term is added automatically.
• But what if you didn’t include an interaction in your hypothesis? Or if the interaction is not significant?

→ Manually remove it from the model
ANOVA without interaction

In SPSS:

Analyze → General Linear Model → Univariate

Add your dependent variable in the ‘Dependent Variable’ box.

Add your categorical predictors in the ‘Fixed Factor(s) box.

Click on ‘Model’
ANOVA without interaction

1. Instead of ‘Full factorial’, check ‘Build terms’

2. Choose ‘Main effects’ instead of interaction

3. Select both your predictors and click on the arrow to put them in the model
ANOVA *without* interaction

This will give you an ANOVA output table without the interaction term in there:

![ANOVA Output Table](image-url)
ANOVA without interaction

• Alternatively, you could use the syntax to remove it.

→ If you do this when you want to remove the interaction because it is not significant, be sure to copy the syntax first, and remove the interaction from the copy, so that both models are still in your syntax.
ANCOVA with interaction

• When running an ANCOVA as explained in the workbook, the interaction won’t automatically be added. But what if you do want to test it?

→ Like with the ANOVA, you could alter the syntax, and add the interaction term yourself

→ If you don’t feel confident working in the syntax, you can use the Model building function again, see next slide
ANCOVA with interaction

In SPSS:
Analyze → General Linear Model → Univariate

Add your categorical predictor to ‘Fixed Factor(s)’
Add your quantitative predictor/covariate to ‘Covariates’
Click on ‘Model’
**ANCOVA with interaction**

1. Click on ‘Build terms’ instead of ‘Full Factorial’

2. First add both predictors as Main effects

Then select both of them at the same time and add the interaction term
ANCOVA with interaction

- This should provide you with a model that includes an interaction term

### Tests of Between-Subjects Effects

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<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<tr>
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</tbody>
</table>

a. R Squared = .205 (Adjusted R Squared = .154)