‘beta ~ lwid\*Task + age + (1|Subject)’

Beta = b0 \* 1 + b1 \* age + b2 \* lwid + b3 \* Task + b4 \* lwid \* Task + error

-1 + Task:cond = 1

Dummycoding = reference

PA is a reference term

Task = 1, MA: Beta = b0 + b1 \* age + b2 \* lwid + b3 + b4 \* lwid

Beta = (b0 + b3) + b1 \* age + (b2 + b4) \* lwid

Task = 0, PA: Beta = b0 + b1 \* age + b2 \* lwid

If there is no language ability (lwid = 0), b3 will be showing how brain activation is greater in MA than PA.

While b4 means the amount of brain activation that lwid contribute more to MA than PA