

Assignment 10 : Structural Equation Modeling

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- 1 Use the .R script file (first 35 lines) and data file from the first SEM seminar to test the path model that proposes: contact quality mitigates threat, and creates empathy, and these each lead to reduced prejudice – however, contact quality does not directly affect prejudice. Inspect the residuals, and add in paths you think may be important. Use the anova command to compare nested models (i.e. models that can be turned into each other by deleting or adding paths only). Construct a diagram of the final model, and annotate it appropriately. You will need to figure out how to insert that diagram into your markdown file. Interpret your model. 50

- 2 Test the measurement model that is implicit in 1 above. Note that the notation =~ indicates a loading in Lavaan (i.e. a path relating an indicator/manifest variable to a latent variable). What do you conclude? Check the residuals and see if this changes your mind. Construct a diagram that reports your measurement model, you only need to show latent and manifest variables 40

- 3 By default, Lavaan tests oblique factor structures (i.e. where factors are allowed to correlate with each other). Force Lavaan to test an orthogonal factor structure for the measurement model in 2, and compare results. 10

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