

Exercise 6

- A. Using the data provided (`exercise6.csv`), select and interpret a latent profile model of the “Big 5” personality traits using 5 indicators of the latent profile variable. Interpret all parameters in the model. Note that, by default in most software packages, the variances of the latent profile indicators are restricted to be equal across profiles (i.e., classes).

The variables in `exercise6.csv` are shown on the next page.

- B. Add a grouping variable or covariate for biological sex to the model fit in (A). If you add a grouping variable, be sure to impose measurement invariance across groups. What are the main group differences or covariate effects you notice? Interpret all parameters in the model.

ID	Participant ID	SEX	Biological sex 0 = male, 1 = female
AGREEABLENESS	Big 5 scale of agreeableness (mean=0)	CONSCIENTIOUSNESS	Big 5 scale of conscientiousness (mean=0)
EXTROVERSION	Big 5 scale of extroversion (mean=0)	NEUROTICISM	Big 5 scale of neuroticism (mean=0)
OPENNESS	Big 5 scale of openness (mean=0)		