# P4541/5541 Spring 2020 Final Project Paper

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1 April 2020

**Due by 23:59, Sunday, 3 May 2020**

## Final Project and Paper

There are four data sets available to work with:

- Disgust Scales Data
- Lingusitic Idiom Data
- Social Conformity Data
- Self-Transcendence Data

You can download the packet of all four from the course website.

These data have been currated to remove weirdness like missing data, wrong numbers probably due to data-entry errors and the like. The currated data are contained in comma separated value text files (csv files) and can be read into a data frame simply by using the `read.csv()` command in an r code chunk. Choose one of the sets of data and read the data into your project.

Use an appropriate subset of the techniques presented by Patrick Mair (Mair, 2018) in Chapters 2, 3, 4 and 8 (perhaps) to find structure and latent variables in the data set. Are the latent variables similar to those described in the journal articles? Can you find any relationship of the demographic variables (e.g, age, gender, etc.) to the latent variables you have discovered.

There is no single approach that is correct. The tools for dealing with these data are scattered throughout the above-cited chapters:

- Optimal Scaling
- Tetrachoric and polychoric correlations
- Exploratory Factor Analysis
- Confirmatory Factor Analysis
- Item Response Theory (IRT) Analysis

Follow some examples in the book (Mair, 2018) and adapt them to this particular set of data. Above all ask questions and seek my advice and help over the next month.

# References

Mair, P. (2018). *Modern Psychometrics with R* (R. Gentleman, K. Hornik, & G. Parmigiani, Eds.). Springer International Publishing AG.