

# *PSYC 5090: Topics in Mathematical Psychology*

Tarleton State University

Homework 8

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The goal of this set of exercises is to investigate the numerical distance effect using Wald modeling. The data and functions needed to perform this modeling are available in `lecture8.R`.

1. From the Schwarz (2001) data, pull the subset of RTs for which the distance is equal to 1 (i.e.,  $d=1$ ). Fit a Wald model and plot the resulting Wald curve on top of the histogram of observed RTs. Be sure to write down the parameter estimates for  $\alpha$  and  $\gamma$ .
2. Repeat Exercise 1, but this time consider the trials for which distance is equal to 4 (i.e.,  $d=4$ ).
3. What effect (if any) does manipulating numerical distance have on the Wald parameters  $\alpha$  and  $\gamma$ ? What cognitive interpretations can we make based on these effects?