Identification, Inference, and Prediction

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Welcome

- ► Talk: Parameter identification, what it means for inference and prediction
- ► Latent Variable Models: Factorization Machines, Interactive Fixed Effects
- ► Stan code + simulations!

Who I Am

- Data Scientist
- Previously, Ph.D. in political science (at THE Ohio State University)
- Word Embeddings, Causal Inference, Bayesian Statistics

Why We Model

- Descriptive Inference: is there an association between X and y?
- Prediction: with X and y, what is y for a new X?
- Causal Inference: does changing X, change y?
- Shameless plug: Book Chapter **insert link**

Parameter Identification

- Unique solution to the model
- Necessary for causal inference
- Allows for uncertainty and interpretability

Latent Variable Models

Slide with Plot