Approach

* people are routinely misunderstanding these
* we know people talk about them but nothing’s changing
* heuristics for model evaluation
* not just saying there’s a problem, but how to identify it and why a particular problem shows up
  + e.g., all of one row is underestimated
  + heuristic: maybe something fits only because one path is massive

Power of visualization

* make it easier to interpret
* diagnostic of model misfit
* we know that models are approximations, yet rely on exact statistics
* EDA paradigm
  + no EDA approach
  + McArdle random forest paper

Consequences of misfit

* invariance may be masked by nonlinearity
* causal explanations will be wrong

Local fit

* no consensus about how to evaluate fit, either locally or globally
* fit indices are poor measures of model fit
* studying residuals
  + but even they assume linearity/model appropriateness

Factor score estimation

* Bayesian SEM
* advantages of Bayesian

Visualizations in SEM

* Dan bauer paper
* Asparhouhov and Muthen paper
* Hallgren et al

Software

* lavaan and blavaan
* one limitation of previous visualizations is they’re not terribly accessible

Accessibility

* standard linear model approaches don’t work
* purpose: to truly evaluate the evidence of the model
* or just modeling in general
* you can’t rely on tradition (or rules of thumb)
* where can the model be wrong and where do I find it
* away from dichotomous decision-making
* SEM is a barrier to other fields (e.g. epidemiology)

Method

* simulate situations where model “fits” and the visuals say there’s massive problems

Venue?

Timing?