Latent Class Analysis: Technical settings

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Introduction

- In this video I will discuss technical settings (in Latent GOLD) which may be relevant when running LC models

- Starting values (most important one!)
- Convergence and iteration limits of algorithms
- Bayes constants
- Missing values
- Bootstrap
- Threads

Technical tab in Latent GOLD 6.0

Starting values (local maxima)

- Problem: when running a LC model, you may obtain a local maximum solution (a lower LL value than the maximum LL value)
- Solution: use multiple random starts
- Latent GOLD default settings:
  - 16 random start sets
  - 50 iterations per start set (+ 2*50 for best 10%)

- It may be a good idea to increase this to say 160 and 250, respectively, especially if rerunning a certain model gives different results

- Seed: allows reproducing earlier results (Latent GOLD saves model with the best seed)

Other technical settings

- Convergence/Iteration limits: rather strict defaults are usually okay

- Bayes Constants: "smoothing" priors for model probabilities to prevent "boundary" estimates and convergence problems

- Missing values: "include indicators" is a good option if you have observations with missing values. Yields ML estimates under MAR missingness.

- Bootstrap: replications (determines precision) and startsets (mainly in -2LLdiff)

- Threads: multiple processing is used to speed up computations