

Supplement to article “Intermittent Faking of Personality Profiles in High-Stakes Assessments: A Grade of Membership Analysis”

Example Mplus code for F-GOM analysis

TITLE: Two-level mixture syntax for F-GOM model for 10 observed responses, assuming one factor at both Retrieve (ThetaR) and Select (ThetaS) stages.

DATA:

FILE=DataLONG.dat;

VARIABLE:

!data in long format; as many records per person as there are responses
NAMES = personID scaleID x y; !y are responses and x are importance ratings
USEVARIABLES = x y1-y10;
WITHIN = x; !item importance ratings is within-level covariate
classes = c (2); !the latent class variable, with 2 levels
CLUSTER=personID;

DEFINE:

! dummy variables assuming that ScaleID starts with 0 and goes to 9,
! which is the default in DATA WIDETO LONG transformation
DO (1 10) IF (ScaleID+1 EQ #) THEN y#=y ELSE y#=_MISSING;

ANALYSIS:

TYPE=TWOLEVEL MIXTURE;
STARTS=0; !confirmatory model, user-supplied starting values
PROCESSORS=4; INTEGRATION=9; !optional, to speed up estimation

MODEL:

%WITHIN%
%OVERALL%
c ON x; !regression of decisions to edit on x as per equation (7)
[c#1*0]; !starting value for the intercept alpha from equation (7)
%c#1% !'real' class
y1-y10*4; !class-specific res. variances
%c#2% !'ideal' class
y1-y10*1; !class-specific res. variances

%BETWEEN%
%OVERALL%
!default model for Retrieve stage
ThetaR BY y1-y10*1; ThetaR@1; [ThetaR@0];
!default model for Select stage
ThetaS BY y1-y10*; ThetaS@1; [ThetaS@0];
ThetaR WITH ThetaS;

!c#1 at between level is person's propensity to respond in class #1
!which is the 'real' class; therefore c#1 is reversed ThetaE
c#1*1; !starting value for variance of propensities c#1
ThetaR ThetaS WITH c#1*0; !declare factors correlated with c#1

%c#1% !'real' class; Retrieve model applies
ThetaS BY y1-y10@0; !honest responses DO NOT indicate ThetaS
[y1-y10*0]; !class-specific intercepts with starting values

%c#2% !'ideal' class; Select model applies
ThetaR BY y1-y10@0; !faked responses DO NOT indicate ThetaR
[y1-y10*2]; !class-specific intercepts with starting values

PLOT:

TYPE=PLOT3;
SERIES=y1(1) y2-y10(*); !plotting class-specific means