

# Appendix B: Annotated Output

Moderation with a latent class variable: A tutorial and example

2024-01-09

## Annotated Output of the Manual ML Three-Step in Mplus

This Appendix walks through the output of three different Mplus runs using the Longitudinal Study of American Life (LSAL) example: descriptive statistics, class enumeration, and moderation model. Only relevant output is shown that corresponds to what is discussed in the paper. Below is a table with variable names and their description. Note: Comments in brown are notes and not part of the syntax. Notes can be included in Mplus using exclamation points.

Table 1: Longitudinal Study of American Life

Name	Description
<b>LCA Indicator Variables</b>	
KA47A	I Enjoy Science
KA47H	Science is Useful in Everyday Problems
KA47I	Science Helps Logical Thinking
KA47K	Need Science for a Good Job
KA47L	Will Use Science Often as an Adult
<b>Predictor</b>	
ISCIIRT	Science IRT Score (11th Grade)
<b>Distal Outcome</b>	
KA9B	Space Exploration
KA9D	Science Issues
KA9G	New Technologies
KA9K	Energy Policy Issues
<b>Covariates</b>	
URM	Under-represented Minority (0 = represented, 1 = under-represented)
FEMALE	Sex (0 = male, 1 = female)
MOTHEd	Mother's Education (0 = less than high school, 1 = high school diploma, 2 = some college, 3 = 4-year college, 4 = an advanced degree)

## Descriptive Statistics

## Input Syntax

Below is input syntax to call descriptive statistics.

```
TITLE: LSAL Descriptive Statistics;

DATA:
  FILE = "LSAL_data.dat";

VARIABLE:
  NAMES = CASENUM COHORT SCHOOLID GENDER RACETH MOTHEd ISCIIRT KA47A KA47H KA47I KA47K
  KA47L KA9A KA9B KA9C KA9D KA9E KA9F KA9G KA9I KA9J KA9K KB9H FEMALE URM; !Column Names in order
  MISSING=.; ! Identify missing value
  USEVAR = URM FEMALE MOTHEd ISCIIRT KA9B KA9D KA9G KA9K
  KA47A KA47H KA47I KA47K KA47L; ! Select variables to examine
  CATEGORICAL = KA47A KA47H KA47I KA47K KA47L URM FEMALE MOTHEd; ! Identify the
  !categorical variables

ANALYSIS:
  TYPE=basic; ! Identified for basic analysis (descriptive statistics)

OUTPUT:
  sampstat; ! Provides descriptive statistics
```

## Annotated Output

### *Sample Statistics*

The last part of the output (UNIVARIATE SAMPLE STATISTICS), is what we can evaluate and use in our descriptive statistics table for the continuous variables (Table 2).

#### UNIVARIATE SAMPLE STATISTICS

##### UNIVARIATE HIGHER-ORDER MOMENT DESCRIPTIVE STATISTICS

Variable/ Sample Size	Mean/ Variance	Skewness/ Kurtosis	Minimum/ Maximum	% with Min/Max	Percentiles 20%/60%	40%/80%	Median
ISCIIRT	64.101	-0.342	24.440	0.03%	54.610	62.240	64.755
3592.000	125.578	-0.169	93.130	0.03%	67.390	73.790	
KA9B	1.855	0.186	1.000	31.32%	1.000	2.000	2.000
3487.000	0.461	-0.847	3.000	16.86%	2.000	2.000	
KA9D	1.963	0.050	1.000	25.99%	1.000	2.000	2.000
3470.000	0.481	-0.923	3.000	22.28%	2.000	3.000	
KA9G	2.026	-0.033	1.000	22.09%	1.000	2.000	2.000
3476.000	0.468	-0.862	3.000	24.74%	2.000	3.000	
KA9K	1.767	0.298	1.000	36.33%	1.000	2.000	2.000
3476.000	0.440	-0.782	3.000	13.06%	2.000	2.000	

### *Proportion and Counts*

Earlier in the output (UNIVARIATE PROPORTIONS AND COUNTS FOR CATEGORICAL VARIABLES), is what we can evaluate and use in our descriptive statistics table for the categorical variables (Table 2).

## UNIVARIATE PROPORTIONS AND COUNTS FOR CATEGORICAL VARIABLES

URM			
Category 1	0.777	4313.000	
Category 2	0.223	1241.000	
FEMALE			
Category 1	0.509	3026.000	
Category 2	0.491	2919.000	
MOTHEd			
Category 1	0.147	854.000	
Category 2	0.580	3362.000	
Category 3	0.103	597.000	
Category 4	0.118	684.000	
Category 5	0.052	300.000	
KA47A			
Category 1	0.466	1564.000	
Category 2	0.534	1793.000	
KA47H			
Category 1	0.550	1837.000	
Category 2	0.450	1502.000	
KA47I			
Category 1	0.452	1507.000	
Category 2	0.548	1825.000	
KA47K			
Category 1	0.659	2200.000	
Category 2	0.341	1139.000	
KA47L			
Category 1	0.597	2003.000	
Category 2	0.403	1352.000	

*Note.* The sample sizes presented in Table 2 are taken from later outputs to account for missingness in the analyses.

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## Moderation using the ML Three-Step Method

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### 1. Class Enumeration

In the first step of the ML three-step, we decide how many classes should represent the heterogeneity in the set of indicators. First, we start with identifying a one-class model and increasing the number of classes until a nominal increase in model fit or non-identification of the estimated model solution is found. See Nylund-Gibson & Choi (2018) for a comprehensive review on enumeration methods. Below is the syntax for the four-class model. Change the estimation of class by replacing the 4 in `CLASSES = c(4)`; and rerun the model in *Mplus*.

An important note: Under `SAVEDATA:`, the classification probabilities and modal class assignment are requested to be saved into a new dataset. This is not necessary to enter into the syntax until after the latent class model is selected.

### Input Syntax

```

TITLE: LSAL 4-Class Model;
DATA:
  FILE = "LSAL_data.dat";

VARIABLE:
  NAMES = CASENUM COHORT SCHOOLID GENDER RACETH MOTHED ISCIIRT
  KA47A KA47H KA47I KA47K KA47L KA9A KA9B KA9C KA9D KA9E KA9F
  KA9G KA9I KA9J KA9K KB9H FEMALE URM;
  MISSING=.;
  USEVAR = AKA47A KA47H KA47I KA47K KA47L;
  CATEGORICAL = KA47A KA47H KA47I KA47K KA47L; ! Identified as categorical for binary LCA
  CLASSES = c(4); ! Class 4
  AUXILIARY = URM FEMALE MOTHED ISCIIRT KA9B KA9D KA9G KA9K; ! Identifying auxiliary variables
ANALYSIS:
  ESTIMATOR = mlr;
  TYPE = mixture;
  !OPTSEED = 573096; ! set seed to replicate analyses at the same log-likelihood and initial starts
!SAVEDATA: ! Only keep this when rerunning the chosen latent class model
  !FILE = savedata.dat;
  !SAVE = cprob;

PLOT:
  TYPE = plot3;
  SERIES = KA47A KA47H KA47I KA47K KA47L(*);

```

## Annotated Output

### *Sample Size*

At the beginning of an LCA output, we can see our sample size and the number of dependent and categorical variables used. We are estimating one categorical variable (latent class variable) and five indicator variables.

#### SUMMARY OF ANALYSIS

Number of groups	1
Number of observations	3364
Number of dependent variables	5
Number of independent variables	0
Number of continuous latent variables	0
Number of categorical latent variables	1

### *Proportion and Counts*

Here, we can see the proportions and counts for each indicator variable, **Category 1** is no endorsement and, **Category 2** is the endorsement of the indicator variables.

#### UNIVARIATE PROPORTIONS AND COUNTS FOR CATEGORICAL VARIABLES

KA47A		
Category 1	0.466	1564.000
Category 2	0.534	1793.000
KA47H		
Category 1	0.550	1837.000
Category 2	0.450	1502.000

KA47I			
Category 1	0.452	1507.000	
Category 2	0.548	1825.000	
KA47K			
Category 1	0.659	2200.000	
Category 2	0.341	1139.000	
KA47L			
Category 1	0.597	2003.000	
Category 2	0.403	1352.000	

### *Class Size*

Here, we can find class sizes. For example, 10.588% of the sample are in Class 1. *Important note:* each time the model is re-run, there is a chance of the classes rearranging. Always check the class sizes and probabilities (shown next) when referring to the classes. Use **OPTSEED** (See Mplus manual) in the input syntax to set the seed for analysis and avoid class rearrangement.

### FINAL CLASS COUNTS AND PROPORTIONS FOR THE LATENT CLASSES BASED ON THE ESTIMATED MODEL

Latent Classes			
1	1007.47449	0.29949	
2	879.57820	0.26147	
3	253.01335	0.07521	
4	1223.93396	0.36383	

### Labels of Latent Class Based on *Mplus* Output

Latent Class	Label
1	Pro-Science with Elevated Utility Value
2	Ambivalent with Minimal Utility Value
3	Ambivalent with Elevated Utility Value
4	Anti-Science with Minimal Utility Value

### *Conditional Item Probabilities*

Below is the output that identifies the conditional item probabilities. The values under **Estimate** are the conditional item probabilities for each indicator variable across each latent class. Recall that **Category 1** is no endorsement and **Category 2** is the endorsement of the indicator variables. For example, the probability of those in *Class 1* endorsing item *KA47A* is 0.593. The endorsement of the conditional item probabilities should be plotted to visualize the latent class variable.

### RESULTS IN PROBABILITY SCALE

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
Latent Class 1				
KA47A				

Category 1	0.107	0.012	9.170	0.000
Category 2	0.893	0.012	76.391	0.000
KA47H				
Category 1	0.061	0.023	2.618	0.009
Category 2	0.939	0.023	40.440	0.000
KA47I				
Category 1	0.015	0.013	1.149	0.251
Category 2	0.985	0.013	74.486	0.000
KA47K				
Category 1	0.169	0.020	8.679	0.000
Category 2	0.831	0.020	42.600	0.000
KA47L				
Category 1	0.040	0.015	2.607	0.009
Category 2	0.960	0.015	63.155	0.000
Latent Class 2				
KA47A				
Category 1	0.418	0.033	12.646	0.000
Category 2	0.582	0.033	17.575	0.000
KA47H				
Category 1	0.468	0.038	12.235	0.000
Category 2	0.532	0.038	13.890	0.000
KA47I				
Category 1	0.232	0.036	6.495	0.000
Category 2	0.768	0.036	21.546	0.000
KA47K				
Category 1	0.831	0.024	34.737	0.000
Category 2	0.169	0.024	7.080	0.000
KA47L				
Category 1	0.847	0.080	10.532	0.000
Category 2	0.153	0.080	1.905	0.057
Latent Class 3				
KA47A				
Category 1	0.323	0.045	7.219	0.000
Category 2	0.677	0.045	15.104	0.000
KA47H				
Category 1	0.708	0.073	9.713	0.000
Category 2	0.292	0.073	3.998	0.000
KA47I				
Category 1	0.724	0.194	3.737	0.000
Category 2	0.276	0.194	1.425	0.154
KA47K				
Category 1	0.510	0.058	8.859	0.000
Category 2	0.490	0.058	8.517	0.000
KA47L				
Category 1	0.000	0.000	0.000	1.000
Category 2	1.000	0.000	0.000	1.000
Latent Class 4				
KA47A				

Category 1	0.825	0.015	56.366	0.000
Category 2	0.175	0.015	11.997	0.000
KA47H				
Category 1	0.980	0.013	77.136	0.000
Category 2	0.020	0.013	1.546	0.122
KA47I				
Category 1	0.915	0.023	40.150	0.000
Category 2	0.085	0.023	3.710	0.000
KA47K				
Category 1	0.970	0.006	154.358	0.000
Category 2	0.030	0.006	4.740	0.000
KA47L				
Category 1	1.000	0.000	0.000	1.000
Category 2	0.000	0.000	0.000	1.000

---

## 2. Determine Measurement Error

After the enumeration step, the logits for the classification probabilities of the modal class assignment are extracted from the output created in the enumeration step. These logits are used in the third and final step to determine the measurement error of the modal class assignment. There are no models estimated in this step, only the extraction of the logits to be used in the final step.

### Annotated Output

#### *Logits for Classification Probabilities*

Below is appended output from the enumeration step.

#### CLASSIFICATION QUALITY

Logits for the Classification Probabilities for the Most Likely Latent Class Membership (Column)  
by Latent Class (Row)

	1	2	3	4
1	8.959	6.319	5.092	0.000
2	-0.610	2.237	-0.819	0.000
3	4.497	4.353	6.199	0.000
4	-8.219	-2.150	-13.705	0.000

The logits presented are entered manually into the syntax in step three. See the next step on how these logits are included in the syntax.

---

## 3. Adding Auxiliary Variables

Finally, the new dataset created in the first step (which includes modal class assignment) and the logits extracted in the second step is ready to be used in the third and final step: specifying the moderation model with auxiliary variables. Additionally, we can test the equivalence of the regression intercepts, which in this context is the mean of the distal outcome, using the Wald chi-square test. Moderation occurs when at least

one slope is different, as evidenced by a significant Wald chi-square test. However, the omnibus Wald tests must be conducted separately.

### Input Syntax

A linear regression of the distal outcome(s) on the predictor(s) is freely estimated across each latent class to test for moderation. In *Mplus*, this is done by repeating the regression in each of the class-specific statements. See Figure 1 for the path diagram that corresponds with this syntax.

```

TITLE: LSAL Moderation;
DATA:
  FILE = "savedata.dat";

VARIABLE:
  NAMES = KA47A KA47H KA47I KA47K KA47L FEMALE MOTHED ISCIIRT KA9B KA9D KA9G KA9K URM
    CPROB1 CPROB2 CPROB3 CPROB4 N;
  MISSING=.;
  USEVAR = FEMALE MOTHED ISCIIRT URM KA9B KA9D KA9G KA9K N;
  CLASSES = c(4);
  NOMINAL = N; ! N is the modal class assignment from the dataset we created in step 1

DEFINE:
  ISCIIRT = ISCIIRT/10; ! Scale the predictor
  CENTER ISCIIRT (GRANDMEAN); ! Center the predictor

ANALYSIS:
  ESTIMATOR = mlr;
  TYPE = mixture;
  STARTS = 0;
  ITERATIONS = 1000;

MODEL:
  !Covariates: URM FEMALE MOTHED ISCIIRT
  !Distal: ISSUES
  %OVERALL%
  ISSUES by KA9B KA9D KA9G KA9K; ! Creating the factor for the distal outcome
  ISSUES on URM FEMALE MOTHED; ! Covariates -> Science Issues
  ISSUES on ISCIIRT; ! Science Scores -> Science Issues

      %C#1% ! Class 1
  [N#1@8.959]; ! The modal class assignment variable (N) and logits are entered here
  !to specify measurement error
  [N#2@6.319];
  [N#3@5.092];
  [ISSUES] (B01); ! Estimation of intercept
  ISSUES;
  ISSUES on ISCIIRT(B11); ! Estimation of slope (Science Scores -> Science Issues)

      %C#2% ! Class 2
  [N#1@-0.61];
  [N#2@2.237];
  [N#3@-0.819]
  [ISSUES@0] (B02);
  ISSUES;

```



```

ISSUES on ISCIIRT(B12);

      %C#3% ! Class 3
[N#1@4.497];
[N#2@4.353];
[N#3@6.199];
      [ISSUES] (B03); ! Here, we set a class equal to zero for measurement identification
      !of the latent factor
      ISSUES;
      ISSUES on ISCIIRT(B13);

      %C#4% ! Class 4
[N#1@-8.219];
[N#2@-2.15];
[N#3@-13.705];
      [ISSUES] (B04);
      ISSUES;
      ISSUES on ISCIIRT(B14);

MODEL TEST:
      !Omnibus test 1 !Only one omnibus test may be estimate at one time, the second one
! is commented out here. After estimating this first omnibus test of slopes, the second
! omnibus test of intercept may be estimated after removing the "!" the second test
! and commenting out the first test.
      B11=B12;
      B12=B13;
      B13=B14;
      !Omnibus test 2
      !B01=B02;
      !B02=B03;! Because we set class two equal to zero,
! we can not include its intercepts in the omnibus test
      B01=B03;
      B03=B04;

MODEL CONSTRAINT: ! Pairwise differences for slope and intercepts can be tested simultaneously
      new (slope12, slope13, slope14, slope23, slope24, slope34,
      int12, int14, int24);
      slope12=B11-B12;
      slope13=B11-B13;
      slope14=B11-B14;
      slope23=B12-B13;
      slope24=B12-B14;
      slope34=B13-B14;
      int12=B01-B03; ! Class two not included
      int14=B01-B04;
      int24=B03-B04;

```

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## Annotated Output

### *Sample Statistics*

Presented are the updated sample statistics accounting for listwise deletion in the analyses.

#### UNIVARIATE SAMPLE STATISTICS

##### UNIVARIATE HIGHER-ORDER MOMENT DESCRIPTIVE STATISTICS

Variable/ Sample Size	Mean/ Variance	Skewness/ Kurtosis	Minimum/ Maximum	% with Min/Max	20%/60%	Percentiles 40%/80%	Median
KA9B	1.875	0.153	1.000	29.68%	1.000	2.000	2.000
2571.000	0.453	-0.811	3.000	17.19%	2.000	2.000	
KA9D	1.981	0.024	1.000	24.77%	1.000	2.000	2.000
2560.000	0.476	-0.900	3.000	22.89%	2.000	3.000	
KA9G	2.037	-0.045	1.000	21.22%	1.000	2.000	2.000
2564.000	0.460	-0.828	3.000	24.92%	2.000	3.000	
KA9K	1.764	0.293	1.000	36.21%	1.000	2.000	2.000
2568.000	0.433	-0.759	3.000	12.62%	2.000	2.000	
FEMALE	0.518	-0.073	0.000	48.17%	0.000	0.000	1.000
2591.000	0.250	-1.995	1.000	51.83%	1.000	1.000	
MOTHED	2.402	1.080	1.000	11.04%	2.000	2.000	2.000
2591.000	1.042	0.466	5.000	5.44%	2.000	3.000	
ISCIIRT	0.000	-0.300	-3.409	0.04%	-0.936	-0.203	0.055
2591.000	1.195	-0.223	2.827	0.04%	0.317	0.963	
URM	0.196	1.531	0.000	80.39%	0.000	0.000	0.000
2591.000	0.158	0.344	1.000	19.61%	0.000	0.000	

##### *Slope Differences*

Below is the first omnibus Wald test result for slope differences. In this example, this is evidence of a significant moderation because of the significant Wald test. That is, there is a significant relationship between the predictor (science scores) and the distal outcome (interest in science issues) across at least one of the classes,  $\chi^2(3) = 11.003, p = .012$ .

#### MODEL FIT INFORMATION

##### Wald Test of Parameter Constraints

Value	11.003
Degrees of Freedom	3
P-Value	0.0119

##### *Intercept Differences*

Below is the second omnibus Wald test result for intercept differences. There was evidence that there are significant differences in the distal outcome means across the science attitude classes,  $\chi^2(2) = 205.616, p < .001$ .

#### MODEL FIT INFORMATION

##### Wald Test of Parameter Constraints

Value	205.616
Degrees of Freedom	2
P-Value	0.0000

### *Pairwise Slope and Intercept Differences*

To further investigate which class-specific relations differ, pairwise comparisons of the regression slopes and means of the distal outcome are shown below.

#### MODEL RESULTS

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
New/Additional Parameters				
SLOPE12	-0.003	0.028	-0.095	0.924
SLOPE13	0.032	0.037	0.864	0.388
SLOPE14	0.072	0.022	3.207	0.001
SLOPE23	0.035	0.043	0.808	0.419
SLOPE24	0.075	0.032	2.352	0.019
SLOPE34	0.040	0.037	1.068	0.285
INT13	0.187	0.051	3.667	0.000
INT14	0.383	0.027	14.237	0.000
INT34	0.196	0.048	4.057	0.000

Here, SLOPE12 is the pairwise difference between the slopes in classes 1 and 2. Class 4 (Anti-Science with Minimal Utility Value) was significantly different from Class 1 (Pro-Science with Elevated Utility Value) and Class 2 (Ambivalent with Minimal Utility Value),  $p < .05$ . Comparisons across intercepts (or the distal outcome means) are all significant.

### *Slope and Intercept Coefficients*

Additionally, each regression between the predictor and outcome can be examined across classes, as well as the intercept coefficients (*Note*: Recall that the mean of the distal outcome factor, Interest in Science Issues, was set to zero for the Ambivalent w/ Minimal Utility Value for measurement identification when adding the latent variable. This class was used as the reference class, thus the mean of the factor is set to zero, and others are compared to it.)

#### MODEL RESULTS

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
Latent Class 1				
ISSUES BY				
KA9B	1.000	0.000	999.000	999.000
KA9D	1.247	0.033	37.844	0.000
KA9G	1.169	0.034	34.802	0.000
KA9K	0.814	0.029	28.087	0.000
ISSUES ON				
FEMALE	-0.160	0.019	-8.513	0.000
MOTHEd	0.004	0.009	0.416	0.677
URM	0.043	0.024	1.798	0.072
ISCIIRT	0.149	0.015	9.829	0.000
Means				
N#1	8.959	0.000	999.000	999.000
N#2	6.319	0.000	999.000	999.000

N#3	5.092	0.000	999.000	999.000
Intercepts				
KA9B	1.896	0.035	54.251	0.000
KA9D	2.009	0.042	47.323	0.000
KA9G	2.061	0.040	51.416	0.000
KA9K	1.782	0.029	60.462	0.000
ISSUES	0.246	0.031	7.952	0.000
Residual Variances				
KA9B	0.231	0.009	24.948	0.000
KA9D	0.131	0.008	16.109	0.000
KA9G	0.156	0.008	18.445	0.000
KA9K	0.285	0.010	29.270	0.000
ISSUES	0.145	0.011	12.864	0.000
Latent Class 2				
ISSUES BY				
KA9B	1.000	0.000	999.000	999.000
KA9D	1.247	0.033	37.844	0.000
KA9G	1.169	0.034	34.802	0.000
KA9K	0.814	0.029	28.087	0.000
ISSUES ON				
FEMALE	-0.160	0.019	-8.513	0.000
MOTHED	0.004	0.009	0.416	0.677
URM	0.043	0.024	1.798	0.072
ISCIIRT	0.152	0.023	6.544	0.000
Means				
N#1	-0.610	0.000	999.000	999.000
N#2	2.237	0.000	999.000	999.000
N#3	-0.819	0.000	999.000	999.000
Intercepts				
KA9B	1.896	0.035	54.251	0.000
KA9D	2.009	0.042	47.323	0.000
KA9G	2.061	0.040	51.416	0.000
KA9K	1.782	0.029	60.462	0.000
ISSUES	0.000	0.000	999.000	999.000
Residual Variances				
KA9B	0.231	0.009	24.948	0.000
KA9D	0.131	0.008	16.109	0.000
KA9G	0.156	0.008	18.445	0.000
KA9K	0.285	0.010	29.270	0.000
ISSUES	0.141	0.011	12.633	0.000
Latent Class 3				
ISSUES BY				
KA9B	1.000	0.000	999.000	999.000
KA9D	1.247	0.033	37.844	0.000

KA9G	1.169	0.034	34.802	0.000
KA9K	0.814	0.029	28.087	0.000
ISSUES ON				
FEMALE	-0.160	0.019	-8.513	0.000
MOTHED	0.004	0.009	0.416	0.677
URM	0.043	0.024	1.798	0.072
ISCIIRT	0.117	0.033	3.503	0.000
Means				
N#1	4.497	0.000	999.000	999.000
N#2	4.353	0.000	999.000	999.000
N#3	6.199	0.000	999.000	999.000
Intercepts				
KA9B	1.896	0.035	54.251	0.000
KA9D	2.009	0.042	47.323	0.000
KA9G	2.061	0.040	51.416	0.000
KA9K	1.782	0.029	60.462	0.000
ISSUES	0.059	0.053	1.105	0.269
Residual Variances				
KA9B	0.231	0.009	24.948	0.000
KA9D	0.131	0.008	16.109	0.000
KA9G	0.156	0.008	18.445	0.000
KA9K	0.285	0.010	29.270	0.000
ISSUES	0.175	0.021	8.523	0.000
Latent Class 4				
ISSUES BY				
KA9B	1.000	0.000	999.000	999.000
KA9D	1.247	0.033	37.844	0.000
KA9G	1.169	0.034	34.802	0.000
KA9K	0.814	0.029	28.087	0.000
ISSUES ON				
FEMALE	-0.160	0.019	-8.513	0.000
MOTHED	0.004	0.009	0.416	0.677
URM	0.043	0.024	1.798	0.072
ISCIIRT	0.077	0.018	4.327	0.000
Means				
N#1	-8.219	0.000	999.000	999.000
N#2	-2.150	0.000	999.000	999.000
N#3	-13.705	0.000	999.000	999.000
Intercepts				
KA9B	1.896	0.035	54.251	0.000
KA9D	2.009	0.042	47.323	0.000
KA9G	2.061	0.040	51.416	0.000
KA9K	1.782	0.029	60.462	0.000
ISSUES	-0.137	0.032	-4.312	0.000

Residual Variances				
KA9B	0.231	0.009	24.948	0.000
KA9D	0.131	0.008	16.109	0.000
KA9G	0.156	0.008	18.445	0.000
KA9K	0.285	0.010	29.270	0.000
ISSUES	0.174	0.011	15.175	0.000

**End of Annotated Output**