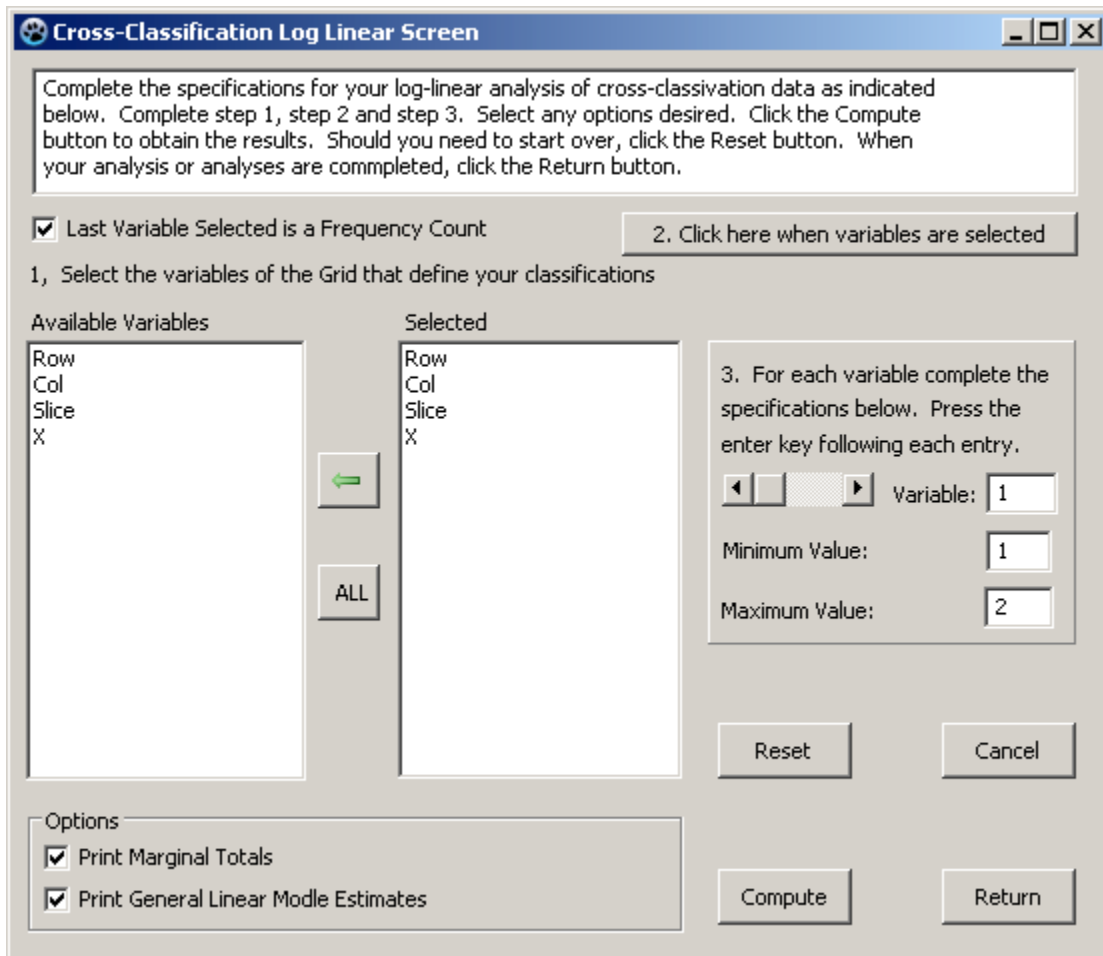


Log Linear Screen

A large number of possible parameters may be tested by the log linear procedures. It is not uncommon to complete an initial screening of the data for an analysis. In particular, an investigator may want to consider one of the variables as having "fixed" marginal values while the other margins are free to vary. These marginal associations can be tested by this procedure.



The dialog box is titled "Cross-Classification Log Linear Screen". It contains instructions at the top: "Complete the specifications for your log-linear analysis of cross-classification data as indicated below. Complete step 1, step 2 and step 3. Select any options desired. Click the Compute button to obtain the results. Should you need to start over, click the Reset button. When your analysis or analyses are completed, click the Return button."

There are three main sections:

- Step 1:** "Select the variables of the Grid that define your classifications". It features two lists: "Available Variables" (Row, Col, Slice, X) and "Selected" (Row, Col, Slice, X). A green arrow button points from Available to Selected, and an "ALL" button is below it.
- Step 2:** "Click here when variables are selected". A button with the text "2. Click here when variables are selected" is present.
- Step 3:** "For each variable complete the specifications below. Press the enter key following each entry." It includes a "Variable:" dropdown set to "1", and input fields for "Minimum Value:" (set to 1) and "Maximum Value:" (set to 2).

At the bottom, there is an "Options" section with two checked checkboxes: "Print Marginal Totals" and "Print General Linear Model Estimates". To the right of the options are buttons for "Reset", "Cancel", "Compute", and "Return".

FILE: C:\Documents and Settings\wgmilller\My Documents\LazStatsRun\ABCLogLinData.LAZ

Marginal Totals for Row

1	2
63	84

Marginal Totals for Col

1	2
54	93

Marginal Totals for Slice

1	2	3
42	54	51

Total Frequencies = 147

FILE: C:\Documents and Settings\wgmilller\My Documents\LazStatsRun\ABCLogLinData.LAZ

EXPECTED CELL VALUES FOR MODEL OF COMPLETE INDEPENDENCE

Cell	Observed	Expected	Log Expected
1 1 1	6	6.61	1.889
2 1 1	6	8.82	2.177
1 2 1	15	11.39	2.433
2 2 1	15	15.18	2.720
1 1 2	9	8.50	2.140
2 1 2	15	11.34	2.428
1 2 2	12	14.64	2.684
2 2 2	18	19.52	2.972
1 1 3	12	8.03	2.083
2 1 3	6	10.71	2.371
1 2 3	9	13.83	2.627
2 2 3	24	18.44	2.914

Chisquare = 11.310 with probability = 0.004 (DF = 2)
G squared = 11.471 with probability = 0.003 (DF = 2)

U (mu) for general loglinear model = 2.45

First Order LogLinear Model Factors and N of Cells in Each

CELL	U1	N Cells	U2	N Cells	U3	N Cells
1 1 1	-0.144	6	-0.272	6	-0.148	4
2 1 1	0.144	6	-0.272	6	-0.148	4
1 2 1	-0.144	6	0.272	6	-0.148	4
2 2 1	0.144	6	0.272	6	-0.148	4
1 1 2	-0.144	6	-0.272	6	0.103	4
2 1 2	0.144	6	-0.272	6	0.103	4
1 2 2	-0.144	6	0.272	6	0.103	4
2 2 2	0.144	6	0.272	6	0.103	4
1 1 3	-0.144	6	-0.272	6	0.046	4
2 1 3	0.144	6	-0.272	6	0.046	4
1 2 3	-0.144	6	0.272	6	0.046	4
2 2 3	0.144	6	0.272	6	0.046	4

Second Order Loglinear Model Terms and N of Cells in Each

CELL	U12	N Cells	U13	N Cells	U23	N Cells
1 1 1	-0.416	3	-0.292	2	-0.420	2
2 1 1	-0.128	3	-0.005	2	-0.420	2
1 2 1	0.128	3	-0.292	2	0.123	2
2 2 1	0.416	3	-0.005	2	0.123	2
1 1 2	-0.416	3	-0.041	2	-0.169	2
2 1 2	-0.128	3	0.247	2	-0.169	2
1 2 2	0.128	3	-0.041	2	0.375	2
2 2 2	0.416	3	0.247	2	0.375	2
1 1 3	-0.416	3	-0.098	2	-0.226	2
2 1 3	-0.128	3	0.190	2	-0.226	2
1 2 3	0.128	3	-0.098	2	0.317	2
2 2 3	0.416	3	0.190	2	0.317	2

SCREEN FOR INTERACTIONS AMONG THE VARIABLES

Adapted from the Fortran program by Lustbader and Stodola printed in
Applied Statistics, Volume 30, Issue 1, 1981, pages 97-105 as Algorithm
AS 160 Partial and Marginal Association in Multidimensional Contingency Tables

Statistics for tests that the interactions of a given order are zero

ORDER	STATISTIC	D.F.	PROB.
1	15.108	4	0.004
2	6.143	5	0.293
3	5.328	2	0.070

Statistics for Marginal Association Tests

VARIABLE	ASSOC.	PART ASSOC.	MARGINAL ASSOC.	D.F.	PROB
1	1	3.010	3.010	1	0.083

1	2	10.472	10.472	1	0.001
1	3	1.626	1.626	2	0.444
2	1	2.224	1.773	1	0.183
2	2	1.726	1.275	2	0.529
2	3	3.095	2.644	2	0.267