

```

USE ALL.
COMPUTE filter_$=(Group > 1).
VARIABLE LABEL filter_$ 'Group > 1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE .
GLM
  F1 F2 F3 F4 N1 N2 N3 N4 BY Context Order
  /WSFACTOR = Feedback 2 Polynomial Period 4 Polynomial
  /MEASURE = ARL
  /METHOD = SSTYPE(3)
  /CRITERIA = ALPHA(.05)
  /WSDESIGN = Feedback Period Feedback*Period
  /DESIGN = Context Order Context*Order .

```

General Linear Model

[DataSet1] C:\clipboard\SPSS\ARL2-wn-Ss.sav

Within-Subjects Factors

Measure: ARL

Feedback	Period	Dependent Variable
1	1	F1
	2	F2
	3	F3
	4	F4
2	1	N1
	2	N2
	3	N3
	4	N4

Between-Subjects Factors

		N
Context	2	22
	3	22
Order	1	22
	2	22

Multivariate Tests^b

Effect		Value	F	Hypothesis df	Error df	Sig.
Feedback	Pillai's Trace	.343	20.918 ^a	1.000	40.000	.000
	Wilks' Lambda	.657	20.918 ^a	1.000	40.000	.000
	Hotelling's Trace	.523	20.918 ^a	1.000	40.000	.000
	Roy's Largest Root	.523	20.918 ^a	1.000	40.000	.000
Feedback * Context	Pillai's Trace	.307	17.732 ^a	1.000	40.000	.000
	Wilks' Lambda	.693	17.732 ^a	1.000	40.000	.000
	Hotelling's Trace	.443	17.732 ^a	1.000	40.000	.000
	Roy's Largest Root	.443	17.732 ^a	1.000	40.000	.000
Feedback * Order	Pillai's Trace	.011	.459 ^a	1.000	40.000	.502
	Wilks' Lambda	.989	.459 ^a	1.000	40.000	.502
	Hotelling's Trace	.011	.459 ^a	1.000	40.000	.502
	Roy's Largest Root	.011	.459 ^a	1.000	40.000	.502
Feedback * Context * Order	Pillai's Trace	.250	13.347 ^a	1.000	40.000	.001
	Wilks' Lambda	.750	13.347 ^a	1.000	40.000	.001
	Hotelling's Trace	.334	13.347 ^a	1.000	40.000	.001
	Roy's Largest Root	.334	13.347 ^a	1.000	40.000	.001
Period	Pillai's Trace	.155	2.321 ^a	3.000	38.000	.091
	Wilks' Lambda	.845	2.321 ^a	3.000	38.000	.091
	Hotelling's Trace	.183	2.321 ^a	3.000	38.000	.091
	Roy's Largest Root	.183	2.321 ^a	3.000	38.000	.091
Period * Context	Pillai's Trace	.438	9.862 ^a	3.000	38.000	.000
	Wilks' Lambda	.562	9.862 ^a	3.000	38.000	.000
	Hotelling's Trace	.779	9.862 ^a	3.000	38.000	.000
	Roy's Largest Root	.779	9.862 ^a	3.000	38.000	.000
Period * Order	Pillai's Trace	.076	1.037 ^a	3.000	38.000	.387
	Wilks' Lambda	.924	1.037 ^a	3.000	38.000	.387
	Hotelling's Trace	.082	1.037 ^a	3.000	38.000	.387
	Roy's Largest Root	.082	1.037 ^a	3.000	38.000	.387
Period * Context * Order	Pillai's Trace	.114	1.635 ^a	3.000	38.000	.197
	Wilks' Lambda	.886	1.635 ^a	3.000	38.000	.197
	Hotelling's Trace	.129	1.635 ^a	3.000	38.000	.197
	Roy's Largest Root	.129	1.635 ^a	3.000	38.000	.197
Feedback * Period	Pillai's Trace	.206	3.296 ^a	3.000	38.000	.031
	Wilks' Lambda	.794	3.296 ^a	3.000	38.000	.031
	Hotelling's Trace	.260	3.296 ^a	3.000	38.000	.031
	Roy's Largest Root	.260	3.296 ^a	3.000	38.000	.031
Feedback * Period * Context	Pillai's Trace	.189	2.945 ^a	3.000	38.000	.045
	Wilks' Lambda	.811	2.945 ^a	3.000	38.000	.045
	Hotelling's Trace	.232	2.945 ^a	3.000	38.000	.045
	Roy's Largest Root	.232	2.945 ^a	3.000	38.000	.045
Feedback * Period * Order	Pillai's Trace	.062	.833 ^a	3.000	38.000	.484
	Wilks' Lambda	.938	.833 ^a	3.000	38.000	.484
	Hotelling's Trace	.066	.833 ^a	3.000	38.000	.484
	Roy's Largest Root	.066	.833 ^a	3.000	38.000	.484
Feedback * Period * Context * Order	Pillai's Trace	.135	1.984 ^a	3.000	38.000	.133
	Wilks' Lambda	.865	1.984 ^a	3.000	38.000	.133
	Hotelling's Trace	.157	1.984 ^a	3.000	38.000	.133
	Roy's Largest Root	.157	1.984 ^a	3.000	38.000	.133

a. Exact statistic

b.

Design: Intercept+Context+Order+Context * Order

Within Subjects Design: Feedback+Period+Feedback*Period

Mauchly's Test of Sphericity^b

Measure: ARL

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.
Feedback	1.000	.000	0	.
Period	.395	36.001	5	.000
Feedback * Period	.827	7.340	5	.197

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

Mauchly's Test of Sphericity^b

Measure: ARL

Within Subjects Effect	Epsilon ^a		
	Greenhouse -Geisser	Huynh-Feldt	Lower-bound
Feedback	1.000	1.000	1.000
Period	.622	.700	.333
Feedback * Period	.882	1.000	.333

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

b.

Design: Intercept+Context+Order+Context * Order

Within Subjects Design: Feedback+Period+Feedback*Period

Tests of Within-Subjects Effects

Measure: ARL

Source		Type III Sum of Squares	df	Mean Square
Feedback	Sphericity Assumed	3.115	1	3.115
	Greenhouse-Geisser	3.115	1.000	3.115
	Huynh-Feldt	3.115	1.000	3.115
	Lower-bound	3.115	1.000	3.115
Feedback * Context	Sphericity Assumed	2.640	1	2.640
	Greenhouse-Geisser	2.640	1.000	2.640
	Huynh-Feldt	2.640	1.000	2.640
	Lower-bound	2.640	1.000	2.640
Feedback * Order	Sphericity Assumed	.068	1	.068
	Greenhouse-Geisser	.068	1.000	.068
	Huynh-Feldt	.068	1.000	.068
	Lower-bound	.068	1.000	.068
Feedback * Context * Order	Sphericity Assumed	1.987	1	1.987
	Greenhouse-Geisser	1.987	1.000	1.987
	Huynh-Feldt	1.987	1.000	1.987
	Lower-bound	1.987	1.000	1.987
Error(Feedback)	Sphericity Assumed	5.956	40	.149
	Greenhouse-Geisser	5.956	40.000	.149
	Huynh-Feldt	5.956	40.000	.149
	Lower-bound	5.956	40.000	.149
Period	Sphericity Assumed	1.356	3	.452
	Greenhouse-Geisser	1.356	1.866	.727
	Huynh-Feldt	1.356	2.101	.646
	Lower-bound	1.356	1.000	1.356
Period * Context	Sphericity Assumed	5.403	3	1.801
	Greenhouse-Geisser	5.403	1.866	2.896
	Huynh-Feldt	5.403	2.101	2.572
	Lower-bound	5.403	1.000	5.403
Period * Order	Sphericity Assumed	.140	3	.047
	Greenhouse-Geisser	.140	1.866	.075
	Huynh-Feldt	.140	2.101	.067
	Lower-bound	.140	1.000	.140
Period * Context * Order	Sphericity Assumed	.226	3	.075
	Greenhouse-Geisser	.226	1.866	.121
	Huynh-Feldt	.226	2.101	.108
	Lower-bound	.226	1.000	.226
Error(Period)	Sphericity Assumed	12.451	120	.104
	Greenhouse-Geisser	12.451	74.637	.167
	Huynh-Feldt	12.451	84.020	.148
	Lower-bound	12.451	40.000	.311
Feedback * Period	Sphericity Assumed	.892	3	.297
	Greenhouse-Geisser	.892	2.646	.337
	Huynh-Feldt	.892	3.000	.297
	Lower-bound	.892	1.000	.892
Feedback * Period * Context	Sphericity Assumed	.944	3	.315
	Greenhouse-Geisser	.944	2.646	.357
	Huynh-Feldt	.944	3.000	.315
	Lower-bound	.944	1.000	.944

Tests of Within-Subjects Effects

Measure: ARL

Source		Type III Sum of Squares	df	Mean Square
Feedback * Period * Order	Sphericity Assumed	.205	3	.068
	Greenhouse-Geisser	.205	2.646	.078
	Huynh-Feldt	.205	3.000	.068
	Lower-bound	.205	1.000	.205
Feedback * Period * Context * Order	Sphericity Assumed	.456	3	.152
	Greenhouse-Geisser	.456	2.646	.172
	Huynh-Feldt	.456	3.000	.152
	Lower-bound	.456	1.000	.456
Error(Feedback*Period)	Sphericity Assumed	9.301	120	.078
	Greenhouse-Geisser	9.301	105.823	.088
	Huynh-Feldt	9.301	120.000	.078
	Lower-bound	9.301	40.000	.233

Tests of Within-Subjects Effects

Measure: ARL

Source		F	Sig.
Feedback	Sphericity Assumed	20.918	.000
	Greenhouse-Geisser	20.918	.000
	Huynh-Feldt	20.918	.000
	Lower-bound	20.918	.000
Feedback * Context	Sphericity Assumed	17.732	.000
	Greenhouse-Geisser	17.732	.000
	Huynh-Feldt	17.732	.000
	Lower-bound	17.732	.000
Feedback * Order	Sphericity Assumed	.459	.502
	Greenhouse-Geisser	.459	.502
	Huynh-Feldt	.459	.502
	Lower-bound	.459	.502
Feedback * Context * Order	Sphericity Assumed	13.347	.001
	Greenhouse-Geisser	13.347	.001
	Huynh-Feldt	13.347	.001
	Lower-bound	13.347	.001
Error(Feedback)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		
Period	Sphericity Assumed	4.357	.006
	Greenhouse-Geisser	4.357	.018
	Huynh-Feldt	4.357	.014
	Lower-bound	4.357	.043
Period * Context	Sphericity Assumed	17.359	.000
	Greenhouse-Geisser	17.359	.000
	Huynh-Feldt	17.359	.000
	Lower-bound	17.359	.000
Period * Order	Sphericity Assumed	.450	.718
	Greenhouse-Geisser	.450	.626
	Huynh-Feldt	.450	.649
	Lower-bound	.450	.506
Period * Context * Order	Sphericity Assumed	.728	.537
	Greenhouse-Geisser	.728	.478
	Huynh-Feldt	.728	.492
	Lower-bound	.728	.399
Error(Period)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		
Feedback * Period	Sphericity Assumed	3.838	.012
	Greenhouse-Geisser	3.838	.015
	Huynh-Feldt	3.838	.012
	Lower-bound	3.838	.057
Feedback * Period * Context	Sphericity Assumed	4.058	.009
	Greenhouse-Geisser	4.058	.012
	Huynh-Feldt	4.058	.009
	Lower-bound	4.058	.051

Tests of Within-Subjects Effects

Measure: ARL

Source		F	Sig.
Feedback * Period * Order	Sphericity Assumed	.883	.452
	Greenhouse-Geisser	.883	.442
	Huynh-Feldt	.883	.452
	Lower-bound	.883	.353
Feedback * Period * Context * Order	Sphericity Assumed	1.962	.123
	Greenhouse-Geisser	1.962	.131
	Huynh-Feldt	1.962	.123
	Lower-bound	1.962	.169
Error(Feedback*Period)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		

Tests of Within-Subjects Contrasts

Measure: ARL

Source	Feedback	Period	Type III Sum of Squares	df	Mean Square
Feedback	Linear		3.115	1	3.115
Feedback * Context	Linear		2.640	1	2.640
Feedback * Order	Linear		.068	1	.068
Feedback * Context *	Linear		1.987	1	1.987
Error(Feedback)	Linear		5.956	40	.149
Period		Linear	1.188	1	1.188
		Quadratic	.012	1	.012
		Cubic	.156	1	.156
Period * Context		Linear	5.050	1	5.050
		Quadratic	.058	1	.058
		Cubic	.295	1	.295
Period * Order		Linear	.081	1	.081
		Quadratic	.026	1	.026
		Cubic	.033	1	.033
Period * Context * Order		Linear	.037	1	.037
		Quadratic	.025	1	.025
		Cubic	.165	1	.165
Error(Period)		Linear	7.159	40	.179
		Quadratic	2.320	40	.058
		Cubic	2.971	40	.074
Feedback * Period	Linear	Linear	.516	1	.516
		Quadratic	.084	1	.084
		Cubic	.293	1	.293
Feedback * Period * Context	Linear	Linear	.639	1	.639
		Quadratic	.143	1	.143
		Cubic	.162	1	.162
Feedback * Period * Order	Linear	Linear	.149	1	.149
		Quadratic	.024	1	.024
		Cubic	.032	1	.032
Feedback * Period * Context * Order	Linear	Linear	.121	1	.121
		Quadratic	.010	1	.010
		Cubic	.325	1	.325
Error(Feedback*Period)	Linear	Linear	4.576	40	.114
		Quadratic	2.237	40	.056
		Cubic	2.487	40	.062

Tests of Within-Subjects Contrasts

Measure: ARL

Source	Feedback	Period	F	Sig.
Feedback	Linear		20.918	.000
Feedback * Context	Linear		17.732	.000
Feedback * Order	Linear		.459	.502
Feedback * Context *	Linear		13.347	.001
Error(Feedback)	Linear			
Period		Linear	6.640	.014
		Quadratic	.209	.650
		Cubic	2.097	.155
Period * Context		Linear	28.215	.000
		Quadratic	1.005	.322
		Cubic	3.971	.053
Period * Order		Linear	.450	.506
		Quadratic	.453	.505
		Cubic	.446	.508
Period * Context * Order		Linear	.207	.652
		Quadratic	.425	.518
		Cubic	2.219	.144
Error(Period)		Linear		
		Quadratic		
		Cubic		
Feedback * Period	Linear	Linear	4.507	.040
		Quadratic	1.495	.229
		Cubic	4.715	.036
Feedback * Period * Context	Linear	Linear	5.582	.023
		Quadratic	2.555	.118
		Cubic	2.604	.114
Feedback * Period * Order	Linear	Linear	1.302	.261
		Quadratic	.437	.512
		Cubic	.512	.478
Feedback * Period * Context * Order	Linear	Linear	1.060	.309
		Quadratic	.170	.682
		Cubic	5.234	.028
Error(Feedback*Period)	Linear	Linear		
		Quadratic		
		Cubic		

Tests of Between-Subjects Effects

Measure: ARL

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	6237.898	1	6237.898	12730.121	.000
Context	6.401	1	6.401	13.063	.001
Order	.308	1	.308	.628	.433
Context * Order	1.402	1	1.402	2.861	.099
Error	19.600	40	.490		