General Linear Model

Notes

Output Created		30-JAN-2023 12:49:34
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	88
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		GLM b0 b10 b20 b30 b40 b50 b60 b70 b80 b90 b100 f0 f10 f20 f30 f40 f50 f60 f70 f80 f90 f100 s0 s10 s20 s30 s40 s50 s60 s70 s80 s90 s100 u0 u10 u20 u30 u40 u50 u60 u70 u80 u90 u100 BY Encoding /WSFACTOR=Direction 4 Polynomial Bin 11 Polynomial /METHOD=SSTYPE(3) /PRINT=ETASQ /CRITERIA=ALPHA(.05) /WSDESIGN=Direction Bin Direction*Bin /DESIGN=Encoding.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Within-Subjects Factors

Measure: MEASURE_1

Direction	Bin	Dependent Variable
1	1	b0
	2	b10
	3	b20
	4	b30
	5	b40
	6	b50
	7	b60
	8	b70
	9	b80
	10	b90
	11	b100
2	1	f0
	2	f10
	3	f20
	4	f30
	5	f40
	6	f50
	7	f60
	8	f70
	9	f80
	10	f90
	11	f100
3	1	s0
	2	s10
	3	s20
	4	s30
	5	s40
	6	s50
	7	s60
	8	s70
	9	s80
	10	s90
	11	s100

Within-Subjects Factors

Measure: MEASURE_1

Direction	Bin	Dependent Variable
4	1	u0
	2	u10
	3	u20
	4	u30
	5	u40
	6	u50
	7	u60
	8	u70
	9	u80
	10	u90
	11	u100

Between-Subjects Factors

		N
Encoding	IS	28
	READ	28
	RL	31

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df
Direction	Pillai's Trace	.755	84.058[b]	3.000	82.000
	Wilks' Lambda	.245	84.058[b]	3.000	82.000
	Hotelling's Trace	3.075	84.058[b]	3.000	82.000
	Roy's Largest Root	3.075	84.058[b]	3.000	82.000
Direction * Encoding	Pillai's Trace	.275	4.403	6.000	166.000
	Wilks' Lambda	.726	4.751[b]	6.000	164.000
	Hotelling's Trace	.377	5.095	6.000	162.000
	Roy's Largest Root	.376	10.408[c]	3.000	83.000
Bin	Pillai's Trace	.713	18.652[b]	10.000	75.000
	Wilks' Lambda	.287	18.652[b]	10.000	75.000
	Hotelling's Trace	2.487	18.652[b]	10.000	75.000
	Roy's Largest Root	2.487	18.652[b]	10.000	75.000
Bin * Encoding	Pillai's Trace	.238	1.026	20.000	152.000
	Wilks' Lambda	.775	1.020[b]	20.000	150.000
	Hotelling's Trace	.274	1.014	20.000	148.000
	Roy's Largest Root	.185	1.408[c]	10.000	76.000
Direction * Bin	Pillai's Trace	.724	4.801[b]	30.000	55.000
	Wilks' Lambda	.276	4.801[b]	30.000	55.000
	Hotelling's Trace	2.619	4.801[b]	30.000	55.000
	Roy's Largest Root	2.619	4.801[b]	30.000	55.000
Direction * Bin * Encoding	Pillai's Trace	.654	.906	60.000	112.000
	Wilks' Lambda	.451	.896[b]	60.000	110.000
	Hotelling's Trace	.984	.886	60.000	108.000
	Roy's Largest Root	.591	1.104[c]	30.000	56.000

Multivariate Tests[a]

Effect		Sig.	Partial Eta Squared
Direction	Pillai's Trace	<.001	.755
	Wilks' Lambda	<.001	.755
	Hotelling's Trace	<.001	.755
	Roy's Largest Root	<.001	.755
Direction * Encoding	Pillai's Trace	<.001	.137
	Wilks' Lambda	<.001	.148
	Hotelling's Trace	<.001	.159
	Roy's Largest Root	<.001	.273
Bin	Pillai's Trace	<.001	.713
	Wilks' Lambda	<.001	.713
	Hotelling's Trace	<.001	.713
	Roy's Largest Root	<.001	.713
Bin * Encoding	Pillai's Trace	.436	.119
	Wilks' Lambda	.443	.120
	Hotelling's Trace	.450	.120
	Roy's Largest Root	.193	.156
Direction * Bin	Pillai's Trace	<.001	.724
	Wilks' Lambda	<.001	.724
	Hotelling's Trace	<.001	.724
	Roy's Largest Root	<.001	.724
Direction * Bin * Encoding	Pillai's Trace	.659	.327
	Wilks' Lambda	.676	.328
	Hotelling's Trace	.694	.330
	Roy's Largest Root	.367	.372

a. Design: Intercept + Encoding
Within Subjects Design: Direction + Bin + Direction * Bin

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser
Direction	.849	13.549	5	.019	.894
Bin	.076	207.771	54	<.001	.637
Direction * Bin	.002	455.774	464	.653	.726

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Epsilon[b] Huynh-Feldt	Lower-bound
Direction	.948	.333
Bin	.711	.100
Direction * Bin	1.000	.033

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

a. Design: Intercept + Encoding
Within Subjects Design: Direction + Bin + Direction * Bin

b. 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.

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square
Direction	Sphericity Assumed	532820.515	3	177606.838
	Greenhouse-Geisser	532820.515	2.681	198712.479
	Huynh-Feldt	532820.515	2.844	187342.117
	Lower-bound	532820.515	1.000	532820.515
Direction * Encoding	Sphericity Assumed	49166.189	6	8194.365
	Greenhouse-Geisser	49166.189	5.363	9168.130
	Huynh-Feldt	49166.189	5.688	8643.528
	Lower-bound	49166.189	2.000	24583.094
Error(Direction)	Sphericity Assumed	381210.226	252	1512.739
	Greenhouse-Geisser	381210.226	225.235	1692.503
	Huynh-Feldt	381210.226	238.905	1595.658
	Lower-bound	381210.226	84.000	4538.217
Bin	Sphericity Assumed	476217.396	10	47621.740
	Greenhouse-Geisser	476217.396	6.367	74791.057
	Huynh-Feldt	476217.396	7.110	66980.117
	Lower-bound	476217.396	1.000	476217.396
Bin * Encoding	Sphericity Assumed	47855.764	20	2392.788
	Greenhouse-Geisser	47855.764	12.735	3757.930
	Huynh-Feldt	47855.764	14.220	3365.464
	Lower-bound	47855.764	2.000	23927.882
Error(Bin)	Sphericity Assumed	1393924.092	840	1659.433
	Greenhouse-Geisser	1393924.092	534.854	2606.179
	Huynh-Feldt	1393924.092	597.226	2333.998
	Lower-bound	1393924.092	84.000	16594.334
Direction * Bin	Sphericity Assumed	194238.298	30	6474.610
	Greenhouse-Geisser	194238.298	21.777	8919.537
	Huynh-Feldt	194238.298	30.000	6474.610
	Lower-bound	194238.298	1.000	194238.298
Direction * Bin * Encoding	Sphericity Assumed	55167.084	60	919.451
	Greenhouse-Geisser	55167.084	43.553	1266.652
	Huynh-Feldt	55167.084	60.000	919.451
	Lower-bound	55167.084	2.000	27583.542
Error(Direction*Bin)	Sphericity Assumed	2394491.200	2520	950.195
	Greenhouse-Geisser	2394491.200	1829.245	1309.005

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		F	Sig.	Partial Eta Squared
Direction	Sphericity Assumed	117.407	<.001	.583
	Greenhouse-Geisser	117.407	<.001	.583
	Huynh-Feldt	117.407	<.001	.583
	Lower-bound	117.407	<.001	.583
Direction * Encoding	Sphericity Assumed	5.417	<.001	.114
	Greenhouse-Geisser	5.417	<.001	.114
	Huynh-Feldt	5.417	<.001	.114
	Lower-bound	5.417	.006	.114
Error(Direction)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Bin	Sphericity Assumed	28.698	<.001	.255
	Greenhouse-Geisser	28.698	<.001	.255
	Huynh-Feldt	28.698	<.001	.255
	Lower-bound	28.698	<.001	.255
Bin * Encoding	Sphericity Assumed	1.442	.095	.033
	Greenhouse-Geisser	1.442	.137	.033
	Huynh-Feldt	1.442	.127	.033
	Lower-bound	1.442	.242	.033
Error(Bin)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Direction * Bin	Sphericity Assumed	6.814	<.001	.075
	Greenhouse-Geisser	6.814	<.001	.075
	Huynh-Feldt	6.814	<.001	.075
	Lower-bound	6.814	.011	.075
Direction * Bin * Encoding	Sphericity Assumed	.968	.547	.023
	Greenhouse-Geisser	.968	.533	.023
	Huynh-Feldt	.968	.547	.023
	Lower-bound	.968	.384	.023
Error(Direction*Bin)	Sphericity Assumed			
	Greenhouse-Geisser			

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square
	Huynh-Feldt	2394491.200	2520.000	950.195
	Lower-bound	2394491.200	84.000	28505.848

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		F	Sig.	Partial Eta Squared
	Huynh-Feldt			
	Lower-bound			

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square
Direction	Linear		87731.184	1	87731.184
	Quadratic		443436.123	1	443436.123
	Cubic		1653.207	1	1653.207
Direction * Encoding	Linear		28157.522	2	14078.761
	Quadratic		3782.451	2	1891.225
	Cubic		17226.216	2	8613.108
Error(Direction)	Linear		116240.225	84	1383.812
	Quadratic		157890.522	84	1879.649
	Cubic		107079.478	84	1274.756
Bin		Linear	394609.253	1	394609.253
		Quadratic	39043.912	1	39043.912
		Cubic	31688.239	1	31688.239
		Order 4	84.960	1	84.960
		Order 5	35.079	1	35.079
		Order 6	1045.131	1	1045.131
		Order 7	1348.756	1	1348.756
		Order 8	6208.825	1	6208.825
		Order 9	931.365	1	931.365
		Order 10	1221.876	1	1221.876
Bin * Encoding		Linear	1662.114	2	831.057
		Quadratic	24268.367	2	12134.183

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	F	Sig.	Partial Eta Squared
Direction	Linear		63.398	<.001	.430
	Quadratic		235.914	<.001	.737
	Cubic		1.297	.258	.015
Direction * Encoding	Linear		10.174	<.001	.195
	Quadratic		1.006	.370	.023
	Cubic		6.757	.002	.139
Error(Direction)	Linear				
	Quadratic				
	Cubic				
Bin		Linear	132.619	<.001	.612
		Quadratic	9.890	.002	.105
		Cubic	15.611	<.001	.157
		Order 4	.044	.834	.001
		Order 5	.040	.843	.000
		Order 6	1.055	.307	.012
		Order 7	1.635	.205	.019
		Order 8	6.572	.012	.073
		Order 9	.943	.334	.011
		Order 10	1.133	.290	.013
Bin * Encoding		Linear	.279	.757	.007
		Quadratic	3.074	.051	.068

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square
		Cubic	8030.239	2	4015.120
		Order 4	708.862	2	354.431
		Order 5	668.925	2	334.463
		Order 6	858.513	2	429.256
		Order 7	745.888	2	372.944
		Order 8	5010.184	2	2505.092
		Order 9	4942.678	2	2471.339
		Order 10	959.994	2	479.997
Error(Bin)		Linear	249942.550	84	2975.507
		Quadratic	331618.246	84	3947.836
		Cubic	170509.120	84	2029.870
		Order 4	162052.775	84	1929.200
		Order 5	74334.309	84	884.932
		Order 6	83203.498	84	990.518
		Order 7	69294.494	84	824.934
		Order 8	79354.425	84	944.696
		Order 9	82998.200	84	988.074
		Order 10	90616.476	84	1078.768
Direction * Bin	Linear	Linear	52198.054	1	52198.054
		Quadratic	222.018	1	222.018
		Cubic	1873.688	1	1873.688
		Order 4	1162.227	1	1162.227
		Order 5	218.446	1	218.446
		Order 6	1176.859	1	1176.859
		Order 7	224.233	1	224.233
		Order 8	2150.558	1	2150.558
		Order 9	120.029	1	120.029
		Order 10	914.026	1	914.026
	Quadratic	Linear	103858.725	1	103858.725
		Quadratic	467.261	1	467.261
		Cubic	6758.323	1	6758.323
		Order 4	1137.646	1	1137.646
		Order 5	2.530	1	2.530
		Order 6	2945.926	1	2945.926

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	F	Sig.	Partial Eta Squared
		Cubic	1.978	.145	.045
		Order 4	.184	.833	.004
		Order 5	.378	.686	.009
		Order 6	.433	.650	.010
		Order 7	.452	.638	.011
		Order 8	2.652	.076	.059
		Order 9	2.501	.088	.056
		Order 10	.445	.642	.010
Error(Bin)		Linear			
		Quadratic			
		Cubic			
		Order 4			
		Order 5			
		Order 6			
		Order 7			
		Order 8			
		Order 9			
		Order 10			
Direction * Bin	Linear	Linear	54.678	<.001	.394
		Quadratic	.203	.654	.002
		Cubic	2.362	.128	.027
		Order 4	1.276	.262	.015
		Order 5	.266	.608	.003
		Order 6	1.228	.271	.014
		Order 7	.340	.562	.004
		Order 8	3.385	.069	.039
		Order 9	.160	.690	.002
		Order 10	1.079	.302	.013
	Quadratic	Linear	75.111	<.001	.472
		Quadratic	.396	.531	.005
		Cubic	6.764	.011	.075
		Order 4	1.395	.241	.016
		Order 5	.003	.960	.000
		Order 6	2.611	.110	.030

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square
		Order 7	376.510	1	376.510
		Order 8	1072.489	1	1072.489
		Order 9	514.956	1	514.956
		Order 10	1.786	1	1.786
	Cubic	Linear	1722.467	1	1722.467
		Quadratic	11687.941	1	11687.941
		Cubic	80.502	1	80.502
		Order 4	21.847	1	21.847
		Order 5	226.064	1	226.064
		Order 6	919.163	1	919.163
		Order 7	676.363	1	676.363
		Order 8	350.808	1	350.808
		Order 9	1151.480	1	1151.480
		Order 10	5.373	1	5.373
Direction * Bin * Encoding	Linear	Linear	491.250	2	245.625
		Quadratic	1288.320	2	644.160
		Cubic	5854.409	2	2927.204
		Order 4	3557.258	2	1778.629
		Order 5	4435.870	2	2217.935
		Order 6	2691.183	2	1345.592
		Order 7	379.266	2	189.633
		Order 8	2151.278	2	1075.639
		Order 9	452.101	2	226.051
		Order 10	1124.904	2	562.452
	Quadratic	Linear	103.744	2	51.872
		Quadratic	3369.744	2	1684.872
		Cubic	1950.102	2	975.051
		Order 4	1126.133	2	563.066
		Order 5	1325.429	2	662.714
		Order 6	1707.882	2	853.941
		Order 7	6081.101	2	3040.550
		Order 8	194.164	2	97.082
		Order 9	636.000	2	318.000
		Order 10	685.817	2	342.909

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	F	Sig.	Partial Eta Squared
		Order 7	.420	.519	.005
		Order 8	1.235	.270	.014
		Order 9	.542	.464	.006
		Order 10	.002	.965	.000
	Cubic	Linear	1.515	.222	.018
		Quadratic	12.307	<.001	.128
		Cubic	.081	.776	.001
		Order 4	.023	.881	.000
		Order 5	.194	.661	.002
		Order 6	1.214	.274	.014
		Order 7	.566	.454	.007
		Order 8	.395	.531	.005
		Order 9	1.548	.217	.018
		Order 10	.005	.945	.000
Direction * Bin * Encoding	Linear	Linear	.257	.774	.006
		Quadratic	.588	.558	.014
		Cubic	3.690	.029	.081
		Order 4	1.953	.148	.044
		Order 5	2.699	.073	.060
		Order 6	1.404	.251	.032
		Order 7	.287	.751	.007
		Order 8	1.693	.190	.039
		Order 9	.302	.740	.007
		Order 10	.664	.518	.016
	Quadratic	Linear	.038	.963	.001
		Quadratic	1.428	.246	.033
		Cubic	.976	.381	.023
		Order 4	.690	.504	.016
		Order 5	.659	.520	.015
		Order 6	.757	.472	.018
		Order 7	3.393	.038	.075
		Order 8	.112	.894	.003
		Order 9	.335	.717	.008
		Order 10	.373	.690	.009

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square
	Cubic	Linear	100.801	2	50.401
		Quadratic	1197.517	2	598.758
		Cubic	4865.271	2	2432.635
		Order 4	2190.836	2	1095.418
		Order 5	880.403	2	440.202
		Order 6	962.631	2	481.316
		Order 7	4377.080	2	2188.540
		Order 8	645.685	2	322.842
		Order 9	78.190	2	39.095
		Order 10	262.715	2	131.357
Error(Direction*Bin)	Linear	Linear	80190.401	84	954.648
		Quadratic	92042.750	84	1095.747
		Cubic	66637.332	84	793.302
		Order 4	76505.252	84	910.777
		Order 5	69033.129	84	821.823
		Order 6	80494.616	84	958.269
		Order 7	55476.543	84	660.435
		Order 8	53369.761	84	635.354
		Order 9	62956.246	84	749.479
		Order 10	71169.980	84	847.262
	Quadratic	Linear	116149.856	84	1382.736
		Quadratic	99113.850	84	1179.927
		Cubic	83932.444	84	999.196
		Order 4	68521.587	84	815.733
		Order 5	84519.408	84	1006.183
		Order 6	94787.269	84	1128.420
		Order 7	75267.617	84	896.043
		Order 8	72945.102	84	868.394
		Order 9	79814.958	84	950.178
		Order 10	77137.403	84	918.302
	Cubic	Linear	95532.747	84	1137.295
		Quadratic	79773.260	84	949.682
		Cubic	83299.666	84	991.663
		Order 4	81261.168	84	967.395

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	F	Sig.	Partial Eta Squared
	Cubic	Linear	.044	.957	.001
		Quadratic	.630	.535	.015
		Cubic	2.453	.092	.055
		Order 4	1.132	.327	.026
		Order 5	.378	.686	.009
		Order 6	.636	.532	.015
		Order 7	1.832	.166	.042
		Order 8	.364	.696	.009
		Order 9	.053	.949	.001
		Order 10	.115	.891	.003
Error(Direction*Bin)	Linear	Linear			
		Quadratic			
		Cubic			
		Order 4			
		Order 5			
		Order 6			
		Order 7			
		Order 8			
		Order 9			
		Order 10			
	Quadratic	Linear			
		Quadratic			
		Cubic			
		Order 4			
		Order 5			
		Order 6			
		Order 7			
		Order 8			
		Order 9			
		Order 10			
	Cubic	Linear			
		Quadratic			
		Cubic			
		Order 4			

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square
		Order 5	97790.395	84	1164.171
		Order 6	63595.986	84	757.095
		Order 7	100368.525	84	1194.863
		Order 8	74579.275	84	887.849
		Order 9	62490.350	84	743.933
		Order 10	95734.323	84	1139.694

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	F	Sig.	Partial Eta Squared
		Order 5			
		Order 6			
		Order 7			
		Order 8			
		Order 9			
		Order 10			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	4618252.655	1	4618252.655	637.468	<.001	.884
Encoding	50067.548	2	25033.774	3.455	.036	.076
Error	608553.439	84	7244.684			

General Linear Model

Notes

Output Created		30-JAN-2023 12:49:52
Comments		
Input	Data	C:\Users\nicholas.maxwell\Documents\GitHub\ISREL_JOLs\1 Analyses\Combined\Calibration\Ex2 Calibration.csv
	Active Dataset	DataSet3
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	102
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		GLM B0 B10 B20 B30 B40 B50 B60 B70 B80 B90 B100 F0 F10 F20 F30 F40 F50 F60 F70 F80 F90 F100 S0 S10 S20 S30 S40 S50 S60 S70 S80 S90 S100 U0 U10 U20 U30 U40 U50 U60 U70 U80 U90 U100 BY Group /WSFACTOR=Direction 4 Polynomial Bin 11 Polynomial /METHOD=SSTYPE(3) /PRINT=ETASQ /CRITERIA=ALPHA(.05) /WSDESIGN=Direction Bin Direction*Bin /DESIGN=Group.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

[DataSet3]

Within-Subjects Factors

Measure: MEASURE_1

Direction	Bin	Dependent Variable
1	1	B0
	2	B10
	3	B20
	4	B30
	5	B40
	6	B50
	7	B60
	8	B70
	9	B80
	10	B90
	11	B100
2	1	F0
	2	F10
	3	F20
	4	F30
	5	F40
	6	F50
	7	F60
	8	F70
	9	F80
	10	F90
	11	F100
3	1	S0
	2	S10
	3	S20
	4	S30
	5	S40
	6	S50
	7	S60
	8	S70
	9	S80
	10	S90
	11	S100

Within-Subjects Factors

Measure: MEASURE_1

Direction	Bin	Dependent Variable
4	1	U0
	2	U10
	3	U20
	4	U30
	5	U40
	6	U50
	7	U60
	8	U70
	9	U80
	10	U90
	11	U100

Between-Subjects Factors

		N
Group	IS	34
	READ	35
	RL	32

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df
Direction	Pillai's Trace	.603	48.519[b]	3.000	96.000
	Wilks' Lambda	.397	48.519[b]	3.000	96.000
	Hotelling's Trace	1.516	48.519[b]	3.000	96.000
	Roy's Largest Root	1.516	48.519[b]	3.000	96.000
Direction * Group	Pillai's Trace	.341	6.642	6.000	194.000
	Wilks' Lambda	.660	7.383[b]	6.000	192.000
	Hotelling's Trace	.513	8.124	6.000	190.000
	Roy's Largest Root	.510	16.489[c]	3.000	97.000
Bin	Pillai's Trace	.752	27.059[b]	10.000	89.000
	Wilks' Lambda	.248	27.059[b]	10.000	89.000
	Hotelling's Trace	3.040	27.059[b]	10.000	89.000
	Roy's Largest Root	3.040	27.059[b]	10.000	89.000
Bin * Group	Pillai's Trace	.188	.936	20.000	180.000
	Wilks' Lambda	.818	.943[b]	20.000	178.000
	Hotelling's Trace	.216	.950	20.000	176.000
	Roy's Largest Root	.175	1.571[c]	10.000	90.000
Direction * Bin	Pillai's Trace	.721	5.931[b]	30.000	69.000
	Wilks' Lambda	.279	5.931[b]	30.000	69.000
	Hotelling's Trace	2.579	5.931[b]	30.000	69.000
	Roy's Largest Root	2.579	5.931[b]	30.000	69.000
Direction * Bin * Group	Pillai's Trace	.676	1.191	60.000	140.000
	Wilks' Lambda	.436	1.183[b]	60.000	138.000
	Hotelling's Trace	1.036	1.174	60.000	136.000
	Roy's Largest Root	.627	1.462[c]	30.000	70.000

Multivariate Tests[a]

Effect		Sig.	Partial Eta Squared
Direction	Pillai's Trace	<.001	.603
	Wilks' Lambda	<.001	.603
	Hotelling's Trace	<.001	.603
	Roy's Largest Root	<.001	.603
Direction * Group	Pillai's Trace	<.001	.170
	Wilks' Lambda	<.001	.187
	Hotelling's Trace	<.001	.204
	Roy's Largest Root	<.001	.338
Bin	Pillai's Trace	<.001	.752
	Wilks' Lambda	<.001	.752
	Hotelling's Trace	<.001	.752
	Roy's Largest Root	<.001	.752
Bin * Group	Pillai's Trace	.543	.094
	Wilks' Lambda	.533	.096
	Hotelling's Trace	.525	.097
	Roy's Largest Root	.128	.149
Direction * Bin	Pillai's Trace	<.001	.721
	Wilks' Lambda	<.001	.721
	Hotelling's Trace	<.001	.721
	Roy's Largest Root	<.001	.721
Direction * Bin * Group	Pillai's Trace	.202	.338
	Wilks' Lambda	.211	.340
	Hotelling's Trace	.222	.341
	Roy's Largest Root	.098	.385

a. Design: Intercept + Group
Within Subjects Design: Direction + Bin + Direction * Bin

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser
Direction	.838	17.072	5	.004	.887
Bin	.042	298.891	54	<.001	.548
Direction * Bin	.001	610.309	464	<.001	.703

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Epsilon[b] Huynh-Feldt	Lower-bound
Direction	.933	.333
Bin	.596	.100
Direction * Bin	.923	.033

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

a. Design: Intercept + Group
Within Subjects Design: Direction + Bin + Direction * Bin

b. 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.

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
Direction	Sphericity Assumed	353450.153	3	117816.718	67.333
	Greenhouse-Geisser	353450.153	2.662	132765.937	67.333
	Huynh-Feldt	353450.153	2.799	126262.049	67.333
	Lower-bound	353450.153	1.000	353450.153	67.333
Direction * Group	Sphericity Assumed	87697.371	6	14616.229	8.353
	Greenhouse-Geisser	87697.371	5.324	16470.814	8.353
	Huynh-Feldt	87697.371	5.599	15663.948	8.353
	Lower-bound	87697.371	2.000	43848.686	8.353
Error(Direction)	Sphericity Assumed	514429.524	294	1749.760	
	Greenhouse-Geisser	514429.524	260.896	1971.779	
	Huynh-Feldt	514429.524	274.335	1875.186	
	Lower-bound	514429.524	98.000	5249.281	
Bin	Sphericity Assumed	723492.728	10	72349.273	33.016
	Greenhouse-Geisser	723492.728	5.478	132062.049	33.016
	Huynh-Feldt	723492.728	5.959	121414.978	33.016
	Lower-bound	723492.728	1.000	723492.728	33.016
Bin * Group	Sphericity Assumed	67167.404	20	3358.370	1.533
	Greenhouse-Geisser	67167.404	10.957	6130.169	1.533
	Huynh-Feldt	67167.404	11.918	5635.944	1.533
	Lower-bound	67167.404	2.000	33583.702	1.533
Error(Bin)	Sphericity Assumed	2147486.862	980	2191.313	
	Greenhouse-Geisser	2147486.862	536.886	3999.892	
	Huynh-Feldt	2147486.862	583.967	3677.414	
	Lower-bound	2147486.862	98.000	21913.131	
Direction * Bin	Sphericity Assumed	260011.676	30	8667.056	8.598
	Greenhouse-Geisser	260011.676	21.100	12322.566	8.598
	Huynh-Feldt	260011.676	27.687	9390.990	8.598
	Lower-bound	260011.676	1.000	260011.676	8.598
Direction * Bin * Group	Sphericity Assumed	67176.091	60	1119.602	1.111
	Greenhouse-Geisser	67176.091	42.201	1591.817	1.111
	Huynh-Feldt	67176.091	55.375	1213.119	1.111
	Lower-bound	67176.091	2.000	33588.046	1.111
Error(Direction*Bin)	Sphericity Assumed	2963682.074	2940	1008.055	
	Greenhouse-Geisser	2963682.074	2067.844	1433.223	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared
Direction	Sphericity Assumed	<.001	.407
	Greenhouse-Geisser	<.001	.407
	Huynh-Feldt	<.001	.407
	Lower-bound	<.001	.407
Direction * Group	Sphericity Assumed	<.001	.146
	Greenhouse-Geisser	<.001	.146
	Huynh-Feldt	<.001	.146
	Lower-bound	<.001	.146
Error(Direction)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		
Bin	Sphericity Assumed	<.001	.252
	Greenhouse-Geisser	<.001	.252
	Huynh-Feldt	<.001	.252
	Lower-bound	<.001	.252
Bin * Group	Sphericity Assumed	.063	.030
	Greenhouse-Geisser	.116	.030
	Huynh-Feldt	.109	.030
	Lower-bound	.221	.030
Error(Bin)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		
Direction * Bin	Sphericity Assumed	<.001	.081
	Greenhouse-Geisser	<.001	.081
	Huynh-Feldt	<.001	.081
	Lower-bound	.004	.081
Direction * Bin * Group	Sphericity Assumed	.262	.022
	Greenhouse-Geisser	.289	.022
	Huynh-Feldt	.269	.022
	Lower-bound	.333	.022
Error(Direction*Bin)	Sphericity Assumed		
	Greenhouse-Geisser		

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
	Huynh-Feldt	2963682.074	2713.361	1092.255	
	Lower-bound	2963682.074	98.000	30241.654	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared
	Huynh-Feldt		
	Lower-bound		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square	F
Direction	Linear		103383.405	1	103383.405	78.866
	Quadratic		249985.424	1	249985.424	99.420
	Cubic		81.325	1	81.325	.057
Direction * Group	Linear		54457.421	2	27228.711	20.771
	Quadratic		27175.402	2	13587.701	5.404
	Cubic		6064.549	2	3032.274	2.129
Error(Direction)	Linear		128465.228	98	1310.870	
	Quadratic		246414.532	98	2514.434	
	Cubic		139549.765	98	1423.977	
Bin		Linear	507519.067	1	507519.067	117.300
		Quadratic	160497.182	1	160497.182	28.250
		Cubic	36975.822	1	36975.822	12.191
		Order 4	4993.126	1	4993.126	2.543
		Order 5	781.743	1	781.743	.741
		Order 6	305.032	1	305.032	.289
		Order 7	504.568	1	504.568	.463
		Order 8	101.531	1	101.531	.095
		Order 9	830.301	1	830.301	.726
		Order 10	10984.358	1	10984.358	7.376
Bin * Group		Linear	35049.622	2	17524.811	4.050
		Quadratic	14983.500	2	7491.750	1.319

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Sig.	Partial Eta Squared
Direction	Linear		<.001	.446
	Quadratic		<.001	.504
	Cubic		.812	.001
Direction * Group	Linear		<.001	.298
	Quadratic		.006	.099
	Cubic		.124	.042
Error(Direction)	Linear			
	Quadratic			
	Cubic			
Bin		Linear	<.001	.545
		Quadratic	<.001	.224
		Cubic	<.001	.111
		Order 4	.114	.025
		Order 5	.391	.008
		Order 6	.592	.003
		Order 7	.498	.005
		Order 8	.759	.001
		Order 9	.396	.007
		Order 10	.008	.070
Bin * Group		Linear	.020	.076
		Quadratic	.272	.026

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square	F
		Cubic	9529.080	2	4764.540	1.571
		Order 4	1487.849	2	743.925	.379
		Order 5	23.420	2	11.710	.011
		Order 6	1528.940	2	764.470	.723
		Order 7	1756.529	2	878.265	.806
		Order 8	764.141	2	382.070	.356
		Order 9	1790.247	2	895.124	.783
		Order 10	254.074	2	127.037	.085
Error(Bin)		Linear	424013.312	98	4326.666	
		Quadratic	556775.944	98	5681.387	
		Cubic	297229.209	98	3032.951	
		Order 4	192419.953	98	1963.469	
		Order 5	103339.201	98	1054.482	
		Order 6	103611.238	98	1057.258	
		Order 7	106838.472	98	1090.188	
		Order 8	105231.139	98	1073.787	
		Order 9	112087.531	98	1143.750	
		Order 10	145940.863	98	1489.192	
Direction * Bin	Linear	Linear	50194.614	1	50194.614	31.451
		Quadratic	705.122	1	705.122	.508
		Cubic	4713.625	1	4713.625	4.447
		Order 4	421.157	1	421.157	.379
		Order 5	932.765	1	932.765	1.384
		Order 6	312.712	1	312.712	.393
		Order 7	449.928	1	449.928	.542
		Order 8	679.657	1	679.657	.944
		Order 9	227.181	1	227.181	.212
		Order 10	814.551	1	814.551	.766
	Quadratic	Linear	149489.128	1	149489.128	131.852
		Quadratic	1299.023	1	1299.023	.820
		Cubic	5360.314	1	5360.314	5.212
		Order 4	917.925	1	917.925	1.101
		Order 5	814.580	1	814.580	1.003
		Order 6	4410.647	1	4410.647	5.170

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Sig.	Partial Eta Squared
		Cubic	.213	.031
		Order 4	.686	.008
		Order 5	.989	.000
		Order 6	.488	.015
		Order 7	.450	.016
		Order 8	.702	.007
		Order 9	.460	.016
		Order 10	.918	.002
Error(Bin)		Linear		
		Quadratic		
		Cubic		
		Order 4		
		Order 5		
		Order 6		
		Order 7		
		Order 8		
		Order 9		
		Order 10		
Direction * Bin	Linear	Linear	<.001	.243
		Quadratic	.478	.005
		Cubic	.038	.043
		Order 4	.540	.004
		Order 5	.242	.014
		Order 6	.532	.004
		Order 7	.463	.005
		Order 8	.334	.010
		Order 9	.646	.002
		Order 10	.384	.008
	Quadratic	Linear	<.001	.574
		Quadratic	.367	.008
		Cubic	.025	.051
		Order 4	.297	.011
		Order 5	.319	.010
		Order 6	.025	.050

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square	F
		Order 7	46.544	1	46.544	.061
		Order 8	139.350	1	139.350	.151
		Order 9	923.043	1	923.043	1.167
		Order 10	920.280	1	920.280	.755
	Cubic	Linear	19099.788	1	19099.788	19.400
		Quadratic	4299.185	1	4299.185	4.599
		Cubic	2158.769	1	2158.769	2.714
		Order 4	1586.405	1	1586.405	1.577
		Order 5	5025.148	1	5025.148	4.966
		Order 6	8.164	1	8.164	.010
		Order 7	1473.316	1	1473.316	1.170
		Order 8	127.137	1	127.137	.113
		Order 9	2415.911	1	2415.911	2.043
		Order 10	45.707	1	45.707	.051
Direction * Bin * Group	Linear	Linear	4422.593	2	2211.296	1.386
		Quadratic	4694.953	2	2347.477	1.692
		Cubic	5833.793	2	2916.897	2.752
		Order 4	462.016	2	231.008	.208
		Order 5	3734.318	2	1867.159	2.771
		Order 6	1487.858	2	743.929	.936
		Order 7	121.227	2	60.613	.073
		Order 8	1265.216	2	632.608	.878
		Order 9	62.315	2	31.157	.029
		Order 10	1977.836	2	988.918	.930
	Quadratic	Linear	2112.242	2	1056.121	.932
		Quadratic	3514.165	2	1757.082	1.109
		Cubic	2455.345	2	1227.673	1.194
		Order 4	1439.921	2	719.961	.864
		Order 5	392.918	2	196.459	.242
		Order 6	134.473	2	67.236	.079
		Order 7	268.192	2	134.096	.176
		Order 8	129.081	2	64.540	.070
		Order 9	763.119	2	381.559	.483
		Order 10	823.595	2	411.798	.338

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Sig.	Partial Eta Squared
		Order 7	.805	.001
		Order 8	.698	.002
		Order 9	.283	.012
		Order 10	.387	.008
	Cubic	Linear	<.001	.165
		Quadratic	.034	.045
		Cubic	.103	.027
		Order 4	.212	.016
		Order 5	.028	.048
		Order 6	.919	.000
		Order 7	.282	.012
		Order 8	.737	.001
		Order 9	.156	.020
		Order 10	.822	.001
Direction * Bin * Group	Linear	Linear	.255	.027
		Quadratic	.189	.033
		Cubic	.069	.053
		Order 4	.813	.004
		Order 5	.068	.054
		Order 6	.396	.019
		Order 7	.930	.001
		Order 8	.419	.018
		Order 9	.971	.001
		Order 10	.398	.019
	Quadratic	Linear	.397	.019
		Quadratic	.334	.022
		Cubic	.307	.024
		Order 4	.425	.017
		Order 5	.786	.005
		Order 6	.924	.002
		Order 7	.839	.004
		Order 8	.932	.001
		Order 9	.619	.010
		Order 10	.714	.007

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square	F
	Cubic	Linear	2188.878	2	1094.439	1.112
		Quadratic	3263.664	2	1631.832	1.746
		Cubic	761.230	2	380.615	.478
		Order 4	1033.459	2	516.730	.514
		Order 5	2248.526	2	1124.263	1.111
		Order 6	2951.050	2	1475.525	1.863
		Order 7	1078.465	2	539.233	.428
		Order 8	3001.421	2	1500.711	1.336
		Order 9	4796.296	2	2398.148	2.028
		Order 10	9757.926	2	4878.963	5.403
Error(Direction*Bin)	Linear	Linear	156403.771	98	1595.957	
		Quadratic	135927.220	98	1387.012	
		Cubic	103883.293	98	1060.034	
		Order 4	109035.110	98	1112.603	
		Order 5	66032.418	98	673.800	
		Order 6	77884.114	98	794.736	
		Order 7	81399.174	98	830.604	
		Order 8	70576.251	98	720.166	
		Order 9	105180.400	98	1073.269	
		Order 10	104259.761	98	1063.875	
	Quadratic	Linear	111109.277	98	1133.768	
		Quadratic	155216.511	98	1583.842	
		Cubic	100782.544	98	1028.393	
		Order 4	81674.438	98	833.413	
		Order 5	79582.131	98	812.063	
		Order 6	83609.658	98	853.160	
		Order 7	74537.203	98	760.584	
		Order 8	90340.149	98	921.838	
		Order 9	77489.615	98	790.710	
		Order 10	119421.124	98	1218.583	
	Cubic	Linear	96484.908	98	984.540	
		Quadratic	91610.655	98	934.803	
		Cubic	77958.870	98	795.499	
		Order 4	98595.647	98	1006.078	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Sig.	Partial Eta Squared
	Cubic	Linear	.333	.022
		Quadratic	.180	.034
		Cubic	.621	.010
		Order 4	.600	.010
		Order 5	.333	.022
		Order 6	.161	.037
		Order 7	.653	.009
		Order 8	.268	.027
		Order 9	.137	.040
		Order 10	.006	.099
Error(Direction*Bin)	Linear	Linear		
		Quadratic		
		Cubic		
		Order 4		
		Order 5		
		Order 6		
		Order 7		
		Order 8		
		Order 9		
		Order 10		
	Quadratic	Linear		
		Quadratic		
		Cubic		
		Order 4		
		Order 5		
		Order 6		
		Order 7		
		Order 8		
		Order 9		
		Order 10		
	Cubic	Linear		
		Quadratic		
		Cubic		
		Order 4		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Type III Sum of Squares	df	Mean Square	F
		Order 5	99158.648	98	1011.823	
		Order 6	77622.104	98	792.062	
		Order 7	123444.671	98	1259.639	
		Order 8	110106.219	98	1123.533	
		Order 9	115864.480	98	1182.291	
		Order 10	88491.712	98	902.977	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Direction	Bin	Sig.	Partial Eta Squared
		Order 5		
		Order 6		
		Order 7		
		Order 8		
		Order 9		
		Order 10		

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	4552029.950	1	4552029.950	710.805	<.001	.879
Group	77728.932	2	38864.466	6.069	.003	.110
Error	627597.057	98	6404.052			