

```

GLM Bar_Nom_Num_Car Bar_Nom_Num_Movie Bar_Nom_Num_Car Bar_Nom_Num_Movie Bar_Ord_Num_Car
      Bar_Ord_Num_Movie Line_Nom_Num_Car Line_Nom_Num_Movie Line_Num_Num_Car Line_Num_Num_Movie
      Line_Ord_Num_Car Line_Ord_Num_Movie Pie_Nom_Num_Car Pie_Nom_Num_Movie Pie_Num_Num_Car
      Pie_Num_Num_Movie Pie_Ord_Num_Car Pie_Ord_Num_Movie Scatter_Nom_Num_Car Scatter_Nom_Num_Movie
      Scatter_Num_Num_Car Scatter_Num_Num_Movie Scatter_Ord_Num_Car Scatter_Ord_Num_Movie
      Table_Nom_Num_Car Table_Nom_Num_Movie Table_Num_Num_Car Table_Num_Num_Movie Table_Ord_Num_Car
      Table_Ord_Num_Movie
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      /METHOD=SSTYPE(3)
      /EMMEANS=TABLES(OVERALL)
      /EMMEANS=TABLES(Visualization) COMPARE ADJ(BONFERRONI)
      /EMMEANS=TABLES(DataAttributeTypes$ COMPARE ADJ(BONFERRONI)
      /EMMEANS=TABLES(Visualization*DataAttributeTypes$
      /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
      /CRITERIA=ALPHA(.05)
      /WSDESIGN=Visualization DataAttributeTypes Datasets Visualization*DataAttributeTypes
      Visualization*Datasets DataAttributeTypes$ Datasets Visualization*DataAttributeTypes*Datasets.

```

General Linear Model

Notes

Output Created		06-SEP-2016 15:35:00
Comments		
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	N of Rows in Working Data File	18
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.

Notes

Syntax

GLM Bar_Nom_Num_Car
 Bar_Nom_Num_Movie
 Bar_Num_Num_Car
 Bar_Num_Num_Movie
 Bar_Ord_Num_Car
 Bar_Ord_Num_Movie
 Line_Nom_Num_Car
 Line_Nom_Num_Movie
 Line_Num_Num_Car
 Line_Num_Num_Movie
 Line_Ord_Num_Car
 Line_Ord_Num_Movie
 Pie_Nom_Num_Car
 Pie_Nom_Num_Movie
 Pie_Num_Num_Car
 Pie_Num_Num_Movie
 Pie_Ord_Num_Car
 Pie_Ord_Num_Movie
 Scatter_Nom_Num_Car
 Scatter_Nom_Num_Movie
 Scatter_Num_Num_Car
 Scatter_Num_Num_Movie
 Scatter_Ord_Num_Car
 Scatter_Ord_Num_Movie
 Table_Nom_Num_Car
 Table_Nom_Num_Movie
 Table_Num_Num_Car
 Table_Num_Num_Movie
 Table_Ord_Num_Car
 Table_Ord_Num_Movie

/WSFACTOR=Visualizatio
 n 5 Polynomial
 DataAttributeTypes 3
 Polynomial Datasets 2
 Polynomial
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 (OVERALL)
 /EMMEANS=TABLES
 (Visualization) COMPARE
 ADJ(BONFERRONI)
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 COMPARE ADJ
 (BONFERRONI)
 /EMMEANS=TABLES
 (Visualization*DataAttribut
 eTypes)
 /PRINT=DESCRIPTIVE
 ETASQ OPOWER
 HOMOGENEITY
 /CRITERIA=ALPHA(.05)

/WSDESIGN=Visualizatio
 n DataAttributeTypes
 Datasets
 Visualization*DataAttribute
 Types
 Visualization*Datasets
 DataAttributeTypes*Dat
 aSets

Notes

Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Warnings

The HOMOGENEITY specification in the PRINT subcommand will be ignored because there are no between-subjects factors.

Within-Subjects Factors

Measure: MEASURE_1

Visualization	DataAttributeTypes	Datasets	Dependent Variable
1	1	1	Bar_Nom_Nu m_Car
		2	Bar_Nom_Nu m_Movie
	2	1	Bar_Num_Nu m_Car
		2	Bar_Num_Nu m_Movie
	3	1	Bar_Ord_Nu m_Car
		2	Bar_Ord_Nu m_Movie
2	1	1	Line_Nom_Nu m_Car
		2	Line_Nom_Nu m_Movie
	2	1	Line_Num_Nu m_Car
		2	Line_Num_Nu m_Movie
	3	1	Line_Ord_Nu m_Car
		2	Line_Ord_Nu m_Movie
3	1	1	Pie_Nom_Nu m_Car
		2	Pie_Nom_Nu m_Movie

Within-Subjects Factors

Measure: MEASURE_1

Visualization	DataAttributeTypes	Datasets	Dependent Variable
	2	1	Pie_Num_Nu m_Car
		2	Pie_Num_Nu m_Movie
	3	1	Pie_Ord_Num _Car
		2	Pie_Ord_Num _Movie
4	1	1	Scatter_Nom_ Num_Car
		2	Scatter_Nom_ Num_Movie
	2	1	Scatter_Num_ Num_Car
		2	Scatter_Num_ Num_Movie
	3	1	Scatter_Ord_ Num_Car
		2	Scatter_Ord_ Num_Movie
5	1	1	Table_Nom_ Num_Car
		2	Table_Nom_ Num_Movie
	2	1	Table_Num_ Num_Car
		2	Table_Num_ Num_Movie
	3	1	Table_Ord_N um_Car
		2	Table_Ord_N um_Movie

Descriptive Statistics

	Mean	Std. Deviation	N
Bar_Nom_Num_Car	2.3889	1.09216	18
Bar_Nom_Num_Movie	2.4444	1.09664	18
Bar_Num_Num_Car	2.3889	.97853	18
Bar_Num_Num_Movie	2.1667	.98518	18
Bar_Ord_Num_Car	2.3333	1.23669	18
Bar_Ord_Num_Movie	2.5556	1.33823	18
Line_Nom_Num_Car	4.2222	.80845	18
Line_Nom_Num_Movie	4.0000	1.02899	18
Line_Num_Num_Car	4.1667	.61835	18
Line_Num_Num_Movie	4.1111	.47140	18
Line_Ord_Num_Car	4.0556	.87260	18
Line_Ord_Num_Movie	4.2778	.75190	18
Pie_Nom_Num_Car	3.0000	1.18818	18
Pie_Nom_Num_Movie	2.8333	1.20049	18
Pie_Num_Num_Car	2.7222	1.07406	18
Pie_Num_Num_Movie	3.0556	.93760	18
Pie_Ord_Num_Car	2.9444	1.21133	18
Pie_Ord_Num_Movie	3.1111	1.23140	18
Scatter_Nom_Num_Car	4.0556	.80237	18
Scatter_Nom_Num_Movie	4.1667	.78591	18
Scatter_Num_Num_Car	4.3889	.77754	18
Scatter_Num_Num_Movie	4.4444	.85559	18
Scatter_Ord_Num_Car	3.8889	1.02262	18
Scatter_Ord_Num_Movie	3.7222	.95828	18
Table_Nom_Num_Car	1.3333	.76696	18
Table_Nom_Num_Movie	1.5556	1.09664	18
Table_Num_Num_Car	1.3333	.76696	18
Table_Num_Num_Movie	1.2222	.42779	18
Table_Ord_Num_Car	1.7778	1.30859	18
Table_Ord_Num_Movie	1.3333	.59409	18

Multivariate Tests^a

Effect		Value	F	Hypothesis df	Error df
Visualization	Pillai's Trace	.967	103.297 ^b	4.000	14.000
	Wilks' Lambda	.033	103.297 ^b	4.000	14.000
	Hotelling's Trace	29.513	103.297 ^b	4.000	14.000
	Roy's Largest Root	29.513	103.297 ^b	4.000	14.000
DataAttributeTypes	Pillai's Trace	.	. ^b	.	.
	Wilks' Lambda	.	. ^b	.	.
	Hotelling's Trace	.	. ^b	.	.
	Roy's Largest Root	.	. ^b	.	.
Datasets	Pillai's Trace	.	. ^b	.	.
	Wilks' Lambda	.	. ^b	.	.
	Hotelling's Trace	.	. ^b	.	.
	Roy's Largest Root	.	. ^b	.	.
Visualization * DataAttributeTypes	Pillai's Trace	.604	1.906 ^b	8.000	10.000
	Wilks' Lambda	.396	1.906 ^b	8.000	10.000
	Hotelling's Trace	1.525	1.906 ^b	8.000	10.000
	Roy's Largest Root	1.525	1.906 ^b	8.000	10.000
Visualization * Datasets	Pillai's Trace	.117	.462 ^b	4.000	14.000
	Wilks' Lambda	.883	.462 ^b	4.000	14.000
	Hotelling's Trace	.132	.462 ^b	4.000	14.000
	Roy's Largest Root	.132	.462 ^b	4.000	14.000
DataAttributeTypes * Datasets	Pillai's Trace	.	. ^b	.	.
	Wilks' Lambda	.	. ^b	.	.
	Hotelling's Trace	.	. ^b	.	.
	Roy's Largest Root	.	. ^b	.	.
Visualization * DataAttributeTypes * Datasets	Pillai's Trace	.470	1.110 ^b	8.000	10.000
	Wilks' Lambda	.530	1.110 ^b	8.000	10.000
	Hotelling's Trace	.888	1.110 ^b	8.000	10.000
	Roy's Largest Root	.888	1.110 ^b	8.000	10.000

Multivariate Tests^a

Effect		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Pillai's Trace	.000	.967	413.187
	Wilks' Lambda	.000	.967	413.187
	Hotelling's Trace	.000	.967	413.187
	Roy's Largest Root	.000	.967	413.187
DataAttributeTypes	Pillai's Trace	.	.	.
	Wilks' Lambda	.	.	.
	Hotelling's Trace	.	.	.
	Roy's Largest Root	.	.	.
Datasets	Pillai's Trace	.	.	.
	Wilks' Lambda	.	.	.
	Hotelling's Trace	.	.	.
	Roy's Largest Root	.	.	.
Visualization * DataAttributeTypes	Pillai's Trace	.168	.604	15.249
	Wilks' Lambda	.168	.604	15.249
	Hotelling's Trace	.168	.604	15.249
	Roy's Largest Root	.168	.604	15.249
Visualization * Datasets	Pillai's Trace	.762	.117	1.848
	Wilks' Lambda	.762	.117	1.848
	Hotelling's Trace	.762	.117	1.848
	Roy's Largest Root	.762	.117	1.848
DataAttributeTypes * Datasets	Pillai's Trace	.	.	.
	Wilks' Lambda	.	.	.
	Hotelling's Trace	.	.	.
	Roy's Largest Root	.	.	.
Visualization * DataAttributeTypes * Datasets	Pillai's Trace	.430	.470	8.882
	Wilks' Lambda	.430	.470	8.882
	Hotelling's Trace	.430	.470	8.882
	Roy's Largest Root	.430	.470	8.882

Multivariate Tests^a

Effect		Observed Power ^c
Visualization	Pillai's Trace	1.000
	Wilks' Lambda	1.000
	Hotelling's Trace	1.000
	Roy's Largest Root	1.000
DataAttributeTypes	Pillai's Trace	.
	Wilks' Lambda	.
	Hotelling's Trace	.
	Roy's Largest Root	.
Datasets	Pillai's Trace	.
	Wilks' Lambda	.
	Hotelling's Trace	.
	Roy's Largest Root	.
Visualization * DataAttributeTypes	Pillai's Trace	.478
	Wilks' Lambda	.478
	Hotelling's Trace	.478
	Roy's Largest Root	.478
Visualization * Datasets	Pillai's Trace	.128
	Wilks' Lambda	.128
	Hotelling's Trace	.128
	Roy's Largest Root	.128
DataAttributeTypes * Datasets	Pillai's Trace	.
	Wilks' Lambda	.
	Hotelling's Trace	.
	Roy's Largest Root	.
Visualization * DataAttributeTypes * Datasets	Pillai's Trace	.282
	Wilks' Lambda	.282
	Hotelling's Trace	.282
	Roy's Largest Root	.282

a. Design: Intercept

Within Subjects Design: Visualization + DataAttributeTypes + Datasets + Visualization *

DataAttributeTypes + Visualization * Datasets + DataAttributeTypes * Datasets + Visualization * ...

b. Exact statistic

c.

c. Computed using alpha = .05

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^b Greenhouse-Geisser
Visualization	.325	17.327	9	.045	.649
DataAttributeTypes	.	.	2	.	.
Datasets	.	.	0	.	.
Visualization * DataAttributeTypes	.005	75.359	35	.000	.459
Visualization * Datasets	.557	9.013	9	.439	.738
DataAttributeTypes * Datasets	.	.	2	.	.
Visualization * DataAttributeTypes * Datasets	.035	47.545	35	.091	.579

Mauchly's Test of Sphericity^a

Measure: MEASURE_1

Within Subjects Effect	Epsilon ^b	
	Huynh-Feldt	Lower-bound
Visualization	.776	.250
DataAttributeTypes	.	.500
Datasets	.	1.000
Visualization * DataAttributeTypes	.601	.125
Visualization * Datasets	.910	.250
DataAttributeTypes * Datasets	.	.500
Visualization * DataAttributeTypes * Datasets	.823	.125

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

a. Design: Intercept

Within Subjects Design: Visualization + DataAttributeTypes + Datasets + Visualization *

DataAttributeTypes + Visualization * Datasets + DataAttributeTypes * Datasets + Visualization * ...

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
Visualization	Sphericity Assumed	582.907	4	145.727	35.337
	Greenhouse-Geisser	582.907	2.595	224.623	35.337
	Huynh-Feldt	582.907	3.104	187.801	35.337
	Lower-bound	582.907	1.000	582.907	35.337
Error(Visualization)	Sphericity Assumed	280.426	68	4.124	
	Greenhouse-Geisser	280.426	44.116	6.357	
	Huynh-Feldt	280.426	52.765	5.315	
	Lower-bound	280.426	17.000	16.496	
DataAttributeTypes	Sphericity Assumed	.000	2	.000	.
	Greenhouse-Geisser	.000	.	.	.
	Huynh-Feldt	.000	.	.	.
	Lower-bound	.000	1.000	.000	.
Error(DataAttributeTypes)	Sphericity Assumed	.000	34	.000	
	Greenhouse-Geisser	.000	.	.	
	Huynh-Feldt	.000	.	.	
	Lower-bound	.000	17.000	.000	
Datasets	Sphericity Assumed	.000	1	.000	.
	Greenhouse-Geisser	.000	.	.	.
	Huynh-Feldt	.000	.	.	.
	Lower-bound	.000	1.000	.000	.
Error(Datasets)	Sphericity Assumed	.000	17	.000	
	Greenhouse-Geisser	.000	.	.	
	Huynh-Feldt	.000	.	.	
	Lower-bound	.000	17.000	.000	
Visualization * DataAttributeTypes	Sphericity Assumed	9.148	8	1.144	1.488
	Greenhouse-Geisser	9.148	3.672	2.491	1.488

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
Visualization	Sphericity Assumed	.000	.675	141.348
	Greenhouse-Geisser	.000	.675	91.701
	Huynh-Feldt	.000	.675	109.681
	Lower-bound	.000	.675	35.337
Error(Visualization)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataAttributeTypes	Sphericity Assumed	.	.	.
	Greenhouse-Geisser	.	.	.
	Huynh-Feldt	.	.	.
	Lower-bound	.	.	.
Error(DataAttributeTypes)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Datasets	Sphericity Assumed	.	.	.
	Greenhouse-Geisser	.	.	.
	Huynh-Feldt	.	.	.
	Lower-bound	.	.	.
Error(Datasets)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * DataAttributeTypes	Sphericity Assumed	.167	.080	11.904
	Greenhouse-Geisser	.220	.080	5.464

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power ^a
Visualization	Sphericity Assumed	1.000
	Greenhouse-Geisser	1.000
	Huynh-Feldt	1.000
	Lower-bound	1.000
Error(Visualization)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataAttributeTypes	Sphericity Assumed	.
	Greenhouse-Geisser	.
	Huynh-Feldt	.
	Lower-bound	.
Error(DataAttributeTypes)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Datasets	Sphericity Assumed	.
	Greenhouse-Geisser	.
	Huynh-Feldt	.
	Lower-bound	.
Error(Datasets)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * DataAttributeTypes	Sphericity Assumed	.650
	Greenhouse-Geisser	.416

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F
	Huynh-Feldt	9.148	4.809	1.902	1.488
	Lower-bound	9.148	1.000	9.148	1.488
Error (Visualization*DataAttribute Types)	Sphericity Assumed	104.519	136	.769	
	Greenhouse-Geisser	104.519	62.425	1.674	
	Huynh-Feldt	104.519	81.758	1.278	
	Lower-bound	104.519	17.000	6.148	
Visualization * Datasets	Sphericity Assumed	.685	4	.171	.357
	Greenhouse-Geisser	.685	2.951	.232	.357
	Huynh-Feldt	.685	3.639	.188	.357
	Lower-bound	.685	1.000	.685	.357
Error (Visualization*Datasets)	Sphericity Assumed	32.648	68	.480	
	Greenhouse-Geisser	32.648	50.170	.651	
	Huynh-Feldt	32.648	61.860	.528	
	Lower-bound	32.648	17.000	1.920	
DataAttributeTypes * Datasets	Sphericity Assumed	.000	2	.000	.
	Greenhouse-Geisser	.000	.	.	.
	Huynh-Feldt	.000	.	.	.
	Lower-bound	.000	1.000	.000	.
Error (DataAttributeTypes*Datase ts)	Sphericity Assumed	.000	34	.000	
	Greenhouse-Geisser	.000	.	.	
	Huynh-Feldt	.000	.	.	
	Lower-bound	.000	17.000	.000	
Visualization * DataAttributeTypes * Datasets	Sphericity Assumed	5.370	8	.671	1.420
	Greenhouse-Geisser	5.370	4.633	1.159	1.420
	Huynh-Feldt	5.370	6.582	.816	1.420
	Lower-bound	5.370	1.000	5.370	1.420
Error (Visualization*DataAttribute Types*Datasets)	Sphericity Assumed	64.296	136	.473	
	Greenhouse-Geisser	64.296	78.763	.816	
	Huynh-Feldt	64.296	111.891	.575	
	Lower-bound	64.296	17.000	3.782	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared	Noncent. Parameter
	Huynh-Feldt	.205	.080	7.156
	Lower-bound	.239	.080	1.488
Error (Visualization*DataAttribute Types)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * Datasets	Sphericity Assumed	.838	.021	1.427
	Greenhouse-Geisser	.781	.021	1.053
	Huynh-Feldt	.821	.021	1.298
	Lower-bound	.558	.021	.357
Error (Visualization*Datasets)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
DataAttributeTypes * Datasets	Sphericity Assumed	.	.	.
	Greenhouse-Geisser	.	.	.
	Huynh-Feldt	.	.	.
	Lower-bound	.	.	.
Error (DataAttributeTypes*Datase ts)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Visualization * DataAttributeTypes * Datasets	Sphericity Assumed	.193	.077	11.359
	Greenhouse-Geisser	.230	.077	6.579
	Huynh-Feldt	.208	.077	9.346
	Lower-bound	.250	.077	1.420
Error (Visualization*DataAttribute Types*Datasets)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Observed Power ^a
	Huynh-Feldt	.488
	Lower-bound	.210
Error (Visualization*DataAttribute Types)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * Datasets	Sphericity Assumed	.126
	Greenhouse-Geisser	.115
	Huynh-Feldt	.122
	Lower-bound	.087
Error (Visualization*Datasets)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
DataAttributeTypes * Datasets	Sphericity Assumed	.
	Greenhouse-Geisser	.
	Huynh-Feldt	.
	Lower-bound	.
Error (DataAttributeTypes*Datase ts)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	
Visualization * DataAttributeTypes * Datasets	Sphericity Assumed	.625
	Greenhouse-Geisser	.457
	Huynh-Feldt	.561
	Lower-bound	.203
Error (Visualization*DataAttribute Types*Datasets)	Sphericity Assumed	
	Greenhouse-Geisser	
	Huynh-Feldt	
	Lower-bound	

a. Computed using alpha = .05

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Type III Sum of Squares	df
Visualization	Linear			40.445	1
	Quadratic			328.720	1
	Cubic			8.712	1
	Order 4			205.030	1
Error(Visualization)	Linear			78.738	17
	Quadratic			62.411	17
	Cubic			59.605	17
	Order 4			79.673	17
DataAttributeTypes		Linear		.000	1
		Quadratic		.000	1
Error(DataAttributeTypes)		Linear		.000	17
		Quadratic		.000	17
Datasets			Linear	.000	1
Error(Datasets)			Linear	7.105E-15	17
Visualization * DataAttributeTypes	Linear	Linear		.068	1
		Quadratic		.245	1
	Quadratic	Linear		.120	1
		Quadratic		1.860	1
	Cubic	Linear		1.168	1
		Quadratic		2.334	1
	Order 4	Linear		.838	1
		Quadratic		2.515	1
Error (Visualization*DataAttribute Types)	Linear	Linear		18.557	17
		Quadratic		13.097	17
	Quadratic	Linear		16.612	17
		Quadratic		5.955	17
	Cubic	Linear		8.457	17
		Quadratic		20.075	17
	Order 4	Linear		18.180	17
		Quadratic		3.586	17
Visualization * Datasets	Linear		Linear	.156	1
	Quadratic		Linear	.292	1
	Cubic		Linear	.075	1
	Order 4		Linear	.162	1

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Mean Square	F
Visualization	Linear			40.445	8.732
	Quadratic			328.720	89.540
	Cubic			8.712	2.485
	Order 4			205.030	43.748
Error(Visualization)	Linear			4.632	
	Quadratic			3.671	
	Cubic			3.506	
	Order 4			4.687	
DataAttributeTypes		Linear		.000	.
		Quadratic		.000	.
Error(DataAttributeTypes)		Linear		.000	
		Quadratic		.000	
Datasets			Linear	.000	.000
Error(Datasets)			Linear	4.180E-16	
Visualization * DataAttributeTypes	Linear	Linear		.068	.062
		Quadratic		.245	.318
	Quadratic	Linear		.120	.123
		Quadratic		1.860	5.310
	Cubic	Linear		1.168	2.348
		Quadratic		2.334	1.976
	Order 4	Linear		.838	.784
		Quadratic		2.515	11.921
Error (Visualization*DataAttribute Types)	Linear	Linear		1.092	
		Quadratic		.770	
	Quadratic	Linear		.977	
		Quadratic		.350	
	Cubic	Linear		.497	
		Quadratic		1.181	
	Order 4	Linear		1.069	
		Quadratic		.211	
Visualization * Datasets	Linear		Linear	.156	.207
	Quadratic		Linear	.292	.810
	Cubic		Linear	.075	.188
	Order 4		Linear	.162	.398

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Sig.	Partial Eta Squared
Visualization	Linear			.009	.339
	Quadratic			.000	.840
	Cubic			.133	.128
	Order 4			.000	.720
Error(Visualization)	Linear				
	Quadratic				
	Cubic				
	Order 4				
DataAttributeTypes		Linear		.	.
		Quadratic		.	.
Error(DataAttributeTypes)		Linear			
		Quadratic			
Datasets			Linear	1.000	.000
Error(Datasets)			Linear		
Visualization * DataAttributeTypes	Linear	Linear		.806	.004
		Quadratic		.580	.018
	Quadratic	Linear		.730	.007
		Quadratic		.034	.238
	Cubic	Linear		.144	.121
		Quadratic		.178	.104
	Order 4	Linear		.388	.044
		Quadratic		.003	.412
Error (Visualization*DataAttribute Types)	Linear	Linear			
		Quadratic			
	Quadratic	Linear			
		Quadratic			
	Cubic	Linear			
		Quadratic			
	Order 4	Linear			
		Quadratic			
Visualization * Datasets	Linear		Linear	.655	.012
	Quadratic		Linear	.381	.045
	Cubic		Linear	.670	.011
	Order 4		Linear	.537	.023

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Noncent. Parameter
Visualization	Linear			8.732
	Quadratic			89.540
	Cubic			2.485
	Order 4			43.748
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataAttributeTypes		Linear		.
		Quadratic		.
Error(DataAttributeTypes)		Linear		
		Quadratic		
Datasets			Linear	.000
Error(Datasets)			Linear	
Visualization * DataAttributeTypes	Linear	Linear		.062
		Quadratic		.318
	Quadratic	Linear		.123
		Quadratic		5.310
	Cubic	Linear		2.348
		Quadratic		1.976
	Order 4	Linear		.784
		Quadratic		11.921
Error (Visualization*DataAttribute Types)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Datasets	Linear		Linear	.207
	Quadratic		Linear	.810
	Cubic		Linear	.188
	Order 4		Linear	.398

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Observed Power ^a
Visualization	Linear			.795
	Quadratic			1.000
	Cubic			.319
	Order 4			1.000
Error(Visualization)	Linear			
	Quadratic			
	Cubic			
	Order 4			
DataAttributeTypes		Linear		.
		Quadratic		.
Error(DataAttributeTypes)		Linear		
		Quadratic		
Datasets			Linear	.050
Error(Datasets)			Linear	
Visualization * DataAttributeTypes	Linear	Linear		.056
		Quadratic		.083
	Quadratic	Linear		.063
		Quadratic		.584
	Cubic	Linear		.304
		Quadratic		.264
	Order 4	Linear		.133
		Quadratic		.902
Error (Visualization*DataAttribute Types)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
	Order 4	Linear		
		Quadratic		
Visualization * Datasets	Linear		Linear	.071
	Quadratic		Linear	.136
	Cubic		Linear	.069
	Order 4		Linear	.092

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Type III Sum of Squares	df
Error (Visualization*Datasets)	Linear		Linear	12.827	17
	Quadratic		Linear	6.125	17
	Cubic		Linear	6.775	17
	Order 4		Linear	6.921	17
DataAttributeTypes * Datasets		Linear	Linear	.000	1
		Quadratic	Linear	2.842E-14	1
Error (DataAttributeTypes*Data sets)		Linear	Linear	.000	17
		Quadratic	Linear	.000	17
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	2.568	1
		Quadratic	Linear	.445	1
	Quadratic	Linear	Linear	1.080	1
		Quadratic	Linear	.860	1
	Cubic	Linear	Linear	.168	1
		Quadratic	Linear	.004	1
	Order 4	Linear	Linear	.045	1
		Quadratic	Linear	.200	1
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear	12.657	17
		Quadratic	Linear	4.297	17
	Quadratic	Linear	Linear	15.223	17
		Quadratic	Linear	3.098	17
	Cubic	Linear	Linear	6.857	17
		Quadratic	Linear	4.671	17
	Order 4	Linear	Linear	10.402	17
		Quadratic	Linear	7.092	17

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Mean Square	F
Error (Visualization*Datasets)	Linear		Linear	.755	
	Quadratic		Linear	.360	
	Cubic		Linear	.399	
	Order 4		Linear	.407	
DataAttributeTypes * Datasets		Linear	Linear	.000	.
		Quadratic	Linear	2.842E-14	.
Error (DataAttributeTypes*Datase ts)		Linear	Linear	.000	
		Quadratic	Linear	.000	
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	2.568	3.449
		Quadratic	Linear	.445	1.760
	Quadratic	Linear	Linear	1.080	1.206
		Quadratic	Linear	.860	4.720
	Cubic	Linear	Linear	.168	.417
		Quadratic	Linear	.004	.015
	Order 4	Linear	Linear	.045	.073
		Quadratic	Linear	.200	.480
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear	.745	
		Quadratic	Linear	.253	
	Quadratic	Linear	Linear	.895	
		Quadratic	Linear	.182	
	Cubic	Linear	Linear	.403	
		Quadratic	Linear	.275	
	Order 4	Linear	Linear	.612	
		Quadratic	Linear	.417	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Sig.	Partial Eta Squared
Error (Visualization*Datasets)	Linear		Linear		
	Quadratic		Linear		
	Cubic		Linear		
	Order 4		Linear		
DataAttributeTypes * Datasets		Linear	Linear	.	.
		Quadratic	Linear	.	1.000
Error (DataAttributeTypes*Datase ts)		Linear	Linear		
		Quadratic	Linear		
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	.081	.169
		Quadratic	Linear	.202	.094
	Quadratic	Linear	Linear	.287	.066
		Quadratic	Linear	.044	.217
	Cubic	Linear	Linear	.527	.024
		Quadratic	Linear	.903	.001
	Order 4	Linear	Linear	.790	.004
		Quadratic	Linear	.498	.027
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear		
		Quadratic	Linear		
	Quadratic	Linear	Linear		
		Quadratic	Linear		
	Cubic	Linear	Linear		
		Quadratic	Linear		
	Order 4	Linear	Linear		
		Quadratic	Linear		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Noncent. Parameter
Error (Visualization*Datasets)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataAttributeTypes * Datasets		Linear	Linear	.
		Quadratic	Linear	.
Error (DataAttributeTypes*Dataset s)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	3.449
		Quadratic	Linear	1.760
	Quadratic	Linear	Linear	1.206
		Quadratic	Linear	4.720
	Cubic	Linear	Linear	.417
		Quadratic	Linear	.015
	Order 4	Linear	Linear	.073
		Quadratic	Linear	.480
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear	
		Quadratic	Linear	
	Quadratic	Linear	Linear	
		Quadratic	Linear	
	Cubic	Linear	Linear	
		Quadratic	Linear	
	Order 4	Linear	Linear	
		Quadratic	Linear	

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Visualization	DataAttributeTypes	Datasets	Observed Power ^a
Error (Visualization*Datasets)	Linear		Linear	
	Quadratic		Linear	
	Cubic		Linear	
	Order 4		Linear	
DataAttributeTypes * Datasets		Linear	Linear	.
		Quadratic	Linear	.
Error (DataAttributeTypes*Dataset s)		Linear	Linear	
		Quadratic	Linear	
Visualization * DataAttributeTypes * Datasets	Linear	Linear	Linear	.418
		Quadratic	Linear	.240
	Quadratic	Linear	Linear	.179
		Quadratic	Linear	.536
	Cubic	Linear	Linear	.094
		Quadratic	Linear	.052
	Order 4	Linear	Linear	.057
		Quadratic	Linear	.100
Error (Visualization*DataAttribute Types*Datasets)	Linear	Linear	Linear	
		Quadratic	Linear	
	Quadratic	Linear	Linear	
		Quadratic	Linear	
	Cubic	Linear	Linear	
		Quadratic	Linear	
	Order 4	Linear	Linear	
		Quadratic	Linear	

a. Computed using alpha = .05

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	4860.000	1	4860.000	.	.	1.000
Error	.000	17	.000			

Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

Source	Noncent. Parameter	Observed Power ^a
Intercept	.	.
Error		

a. Computed using alpha = .05

Estimated Marginal Means

1. Grand Mean

Measure: MEASURE_1

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
3.000	.000	3.000	3.000

2. Visualization

Estimates

Measure: MEASURE_1

Visualization	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	2.380	.220	1.915	2.844
2	4.139	.120	3.886	4.392
3	2.944	.221	2.477	3.412
4	4.111	.162	3.769	4.453
5	1.426	.121	1.171	1.681

Pairwise Comparisons

Measure: MEASURE_1

(I) Visualization	(J) Visualization	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence b...
					Lower Bound
1	2	-1.759 [*]	.255	.000	-2.582
	3	-.565	.397	1.000	-1.844
	4	-1.731 [*]	.276	.000	-2.620
	5	.954	.310	.068	-.045
2	1	1.759 [*]	.255	.000	.936
	3	1.194 [*]	.275	.004	.308
	4	.028	.234	1.000	-.726
	5	2.713 [*]	.170	.000	2.164
3	1	.565	.397	1.000	-.715
	2	-1.194 [*]	.275	.004	-2.081
	4	-1.167 [*]	.330	.025	-2.229
	5	1.519 [*]	.236	.000	.758
4	1	1.731 [*]	.276	.000	.843
	2	-.028	.234	1.000	-.781
	3	1.167 [*]	.330	.025	.104
	5	2.685 [*]	.212	.000	2.003
5	1	-.954	.310	.068	-1.952
	2	-2.713 [*]	.170	.000	-3.262
	3	-1.519 [*]	.236	.000	-2.279
	4	-2.685 [*]	.212	.000	-3.367

Pairwise Comparisons

Measure: MEASURE_1

		95% Confidence Interval for ... ^b
(I) Visualization	(J) Visualization	Upper Bound
1	2	-.936
	3	.715
	4	-.843
	5	1.952
2	1	2.582
	3	2.081
	4	.781
	5	3.262
3	1	1.844
	2	-.308
	4	-.104
	5	2.279
4	1	2.620
	2	.726
	3	2.229
	5	3.367
5	1	.045
	2	-2.164
	3	-.758
	4	-2.003

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.967	103.297 ^a	4.000	14.000	.000	.967
Wilks' lambda	.033	103.297 ^a	4.000	14.000	.000	.967
Hotelling's trace	29.513	103.297 ^a	4.000	14.000	.000	.967
Roy's largest root	29.513	103.297 ^a	4.000	14.000	.000	.967

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	413.187	1.000
Wilks' lambda	413.187	1.000
Hotelling's trace	413.187	1.000
Roy's largest root	413.187	1.000

Each F tests the multivariate effect of Visualization. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

b. Computed using alpha = .05

3. DataAttributeTypes

Estimates

Measure: MEASURE_1

DataAttributeTypes	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	3.000	.000	3.000	3.000
2	3.000	.000	3.000	3.000
3	3.000	.000	3.000	3.000

Pairwise Comparisons

Measure: MEASURE_1

(I) DataAttributeTypes	(J) DataAttributeTypes	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence ... Lower Bound
1	2	9.714E-17	.000	.	9.714E-17
	3	1.110E-16	.000	.	1.110E-16
2	1	-9.714E-17	.000	.	-9.714E-17
	3	-5.551E-17	.000	1.000	-4.523E-9
3	1	-1.110E-16	.000	.	-1.110E-16
	2	5.551E-17	.000	1.000	-4.523E-9

Pairwise Comparisons

Measure: MEASURE_1

(I) DataAttributeTypes	(J) DataAttributeTypes	95% Confidence Interval for ... Upper Bound
1	2	9.714E-17
	3	1.110E-16
2	1	-9.714E-17
	3	4.523E-9
3	1	-1.110E-16
	2	4.523E-9

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.000	.000 ^a	1.000	17.000	1.000	.000
Wilks' lambda	1.000	.000 ^a	1.000	17.000	1.000	.000
Hotelling's trace	.000	.000 ^a	1.000	17.000	1.000	.000
Roy's largest root	.000	.000 ^a	1.000	17.000	1.000	.000

Multivariate Tests

	Noncent. Parameter	Observed Power ^b
Pillai's trace	.000	.050
Wilks' lambda	.000	.050
Hotelling's trace	.000	.050
Roy's largest root	.000	.050

Each F tests the multivariate effect of DataAttributeTypes. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

b. Computed using alpha = .05

4. Visualization * DataAttributeTypes

Measure: MEASURE_1

Visualization	DataAttributeTypes	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	2.417	.243	1.903	2.930
	2	2.278	.222	1.809	2.747
	3	2.444	.277	1.860	3.028
2	1	4.111	.174	3.744	4.478
	2	4.139	.105	3.916	4.361
	3	4.167	.171	3.805	4.528
3	1	2.917	.260	2.369	3.464
	2	2.889	.223	2.417	3.360
	3	3.028	.263	2.472	3.584
4	1	4.111	.169	3.754	4.468
	2	4.417	.173	4.052	4.781
	3	3.806	.218	3.345	4.266
5	1	1.444	.151	1.127	1.762
	2	1.278	.123	1.019	1.537
	3	1.556	.206	1.122	1.989