Discriminant Analysis

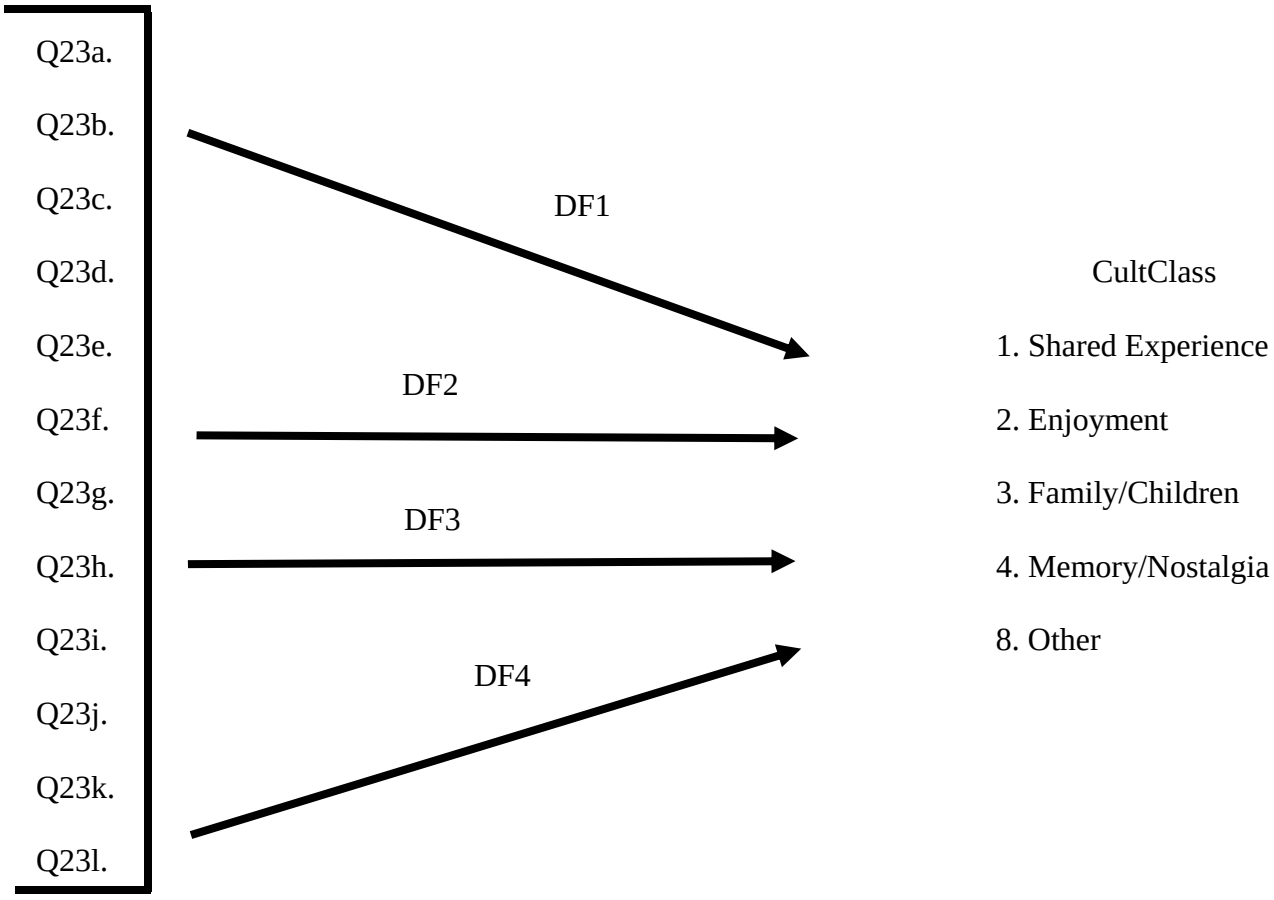
COM 631

Spring 2016

Devin Kelly

1. Model

Dataset: Film and TV Usage National Survey 2015 (Jeffres & Neuendorf)



Key:
The following variables have response options ranging from 1 (Not like me at all) to 7 (Very much like me)
Q23a. I often watch a favorite film again and again.

Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.

Q23c. When summer reruns start on TV I find myself watching programs I've seen before.

Q23d. I don't like to watch films at home that I've seen before in a theater.

Q23e. I don't like to watch TV shows I've seen before.

Q23f. I watch TV programs with my family that we've seen before, often several times.

Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.

Q23h. I've seen some films so often that I know much of the dialogue.

Q23i. I have a collection of DVDs and/or BluRays.

Q23j. Often we watch movies in the car on trips, short or long.

Q23k. I often talk about films or TV programs I've seen with friends.

Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.

The following variable was an open ended answer coded into different categories.
Q26. If YES, WHY do you watch films repeatedly with others?

CultClass was a variable created to code Q26 into categories.
1. Shared Experience

2. Enjoyment

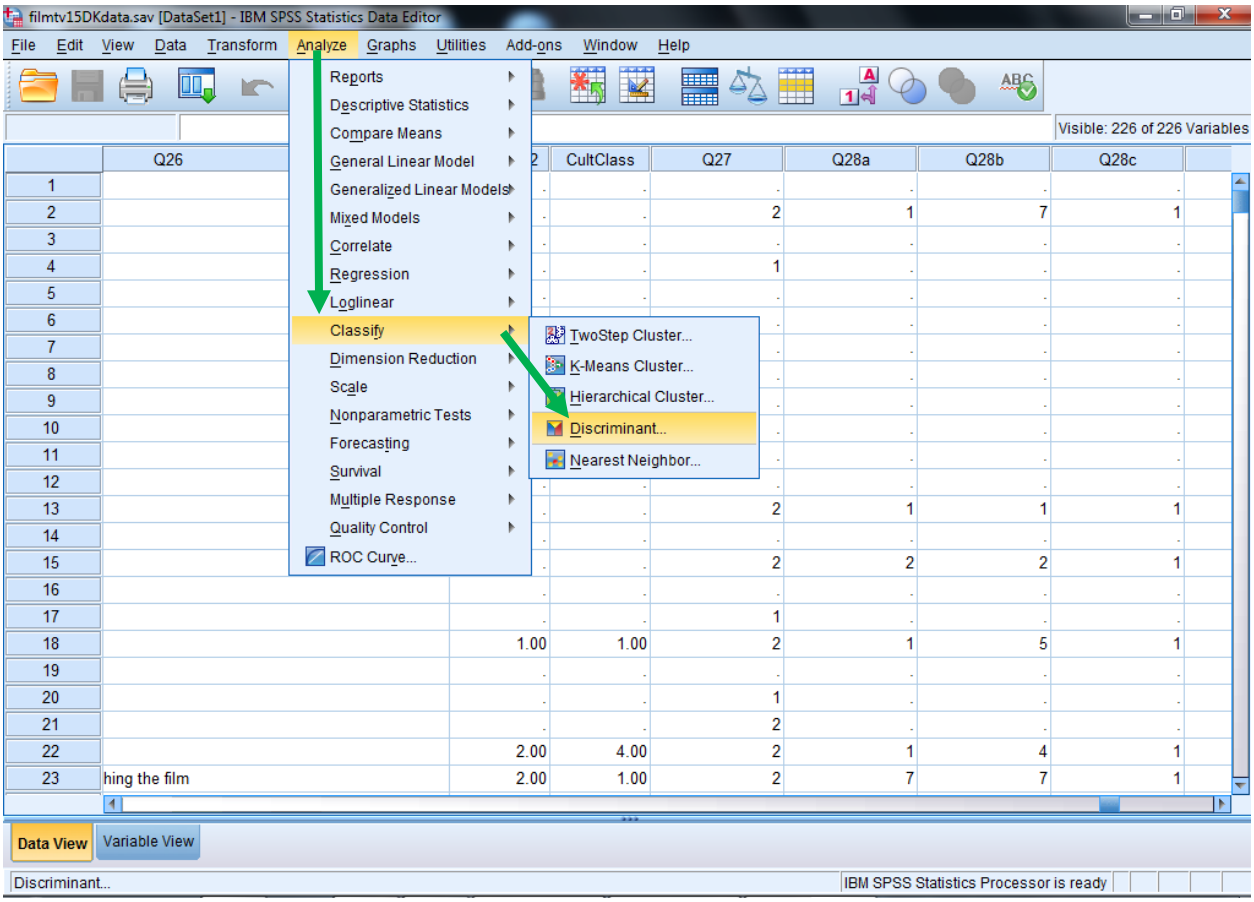
3. Family/Children

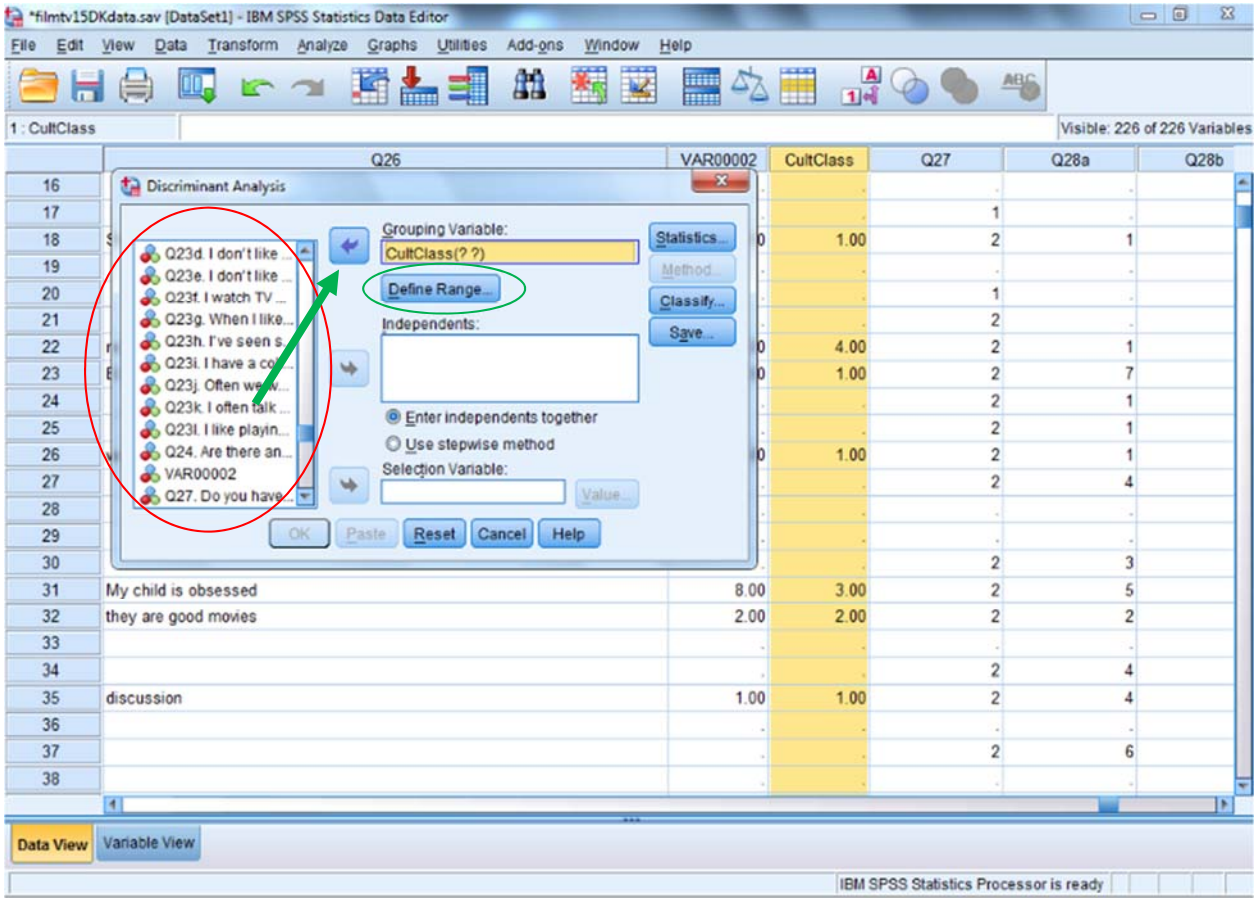
4. Memory/Nostalgia

8. Other

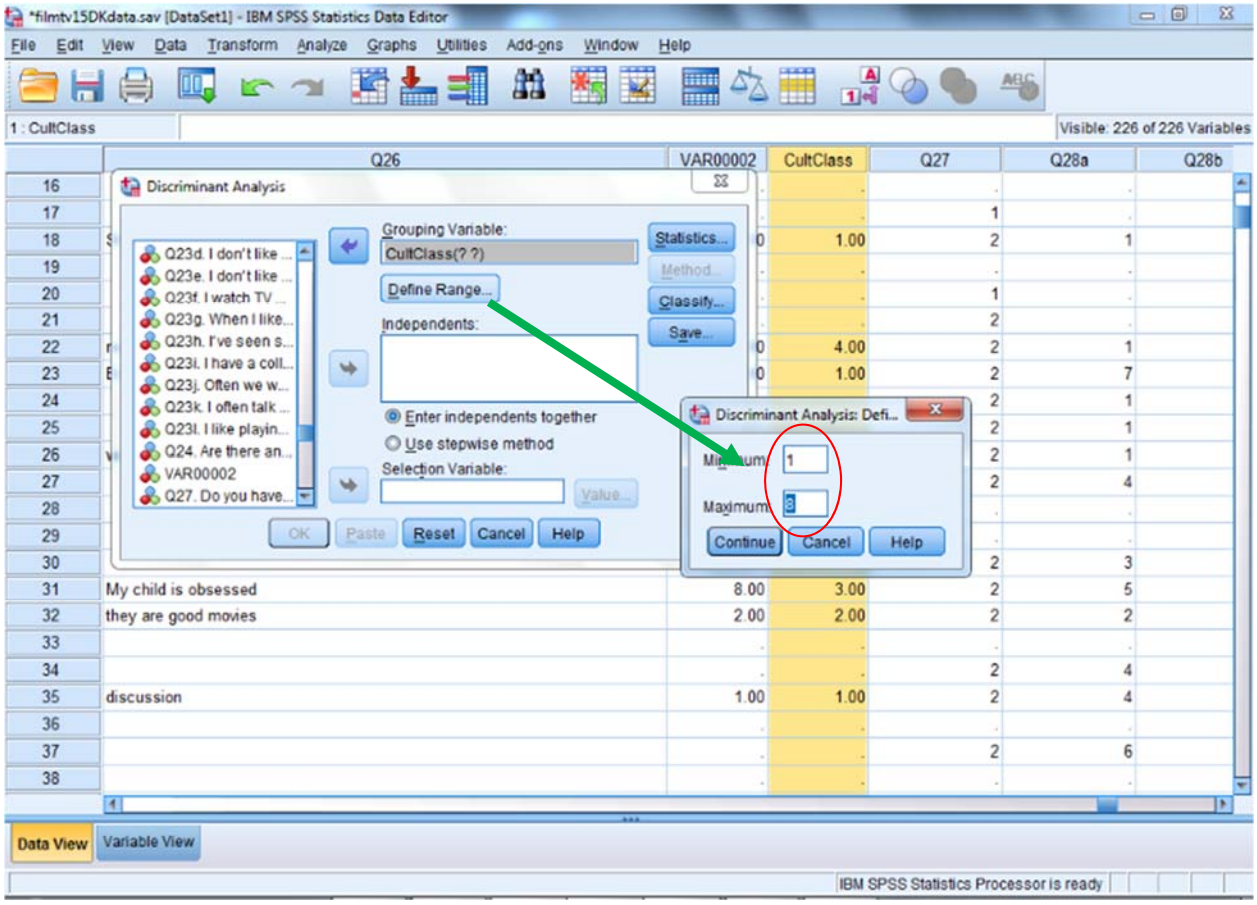
2. SPSS

Analyze => Classify => Discriminant

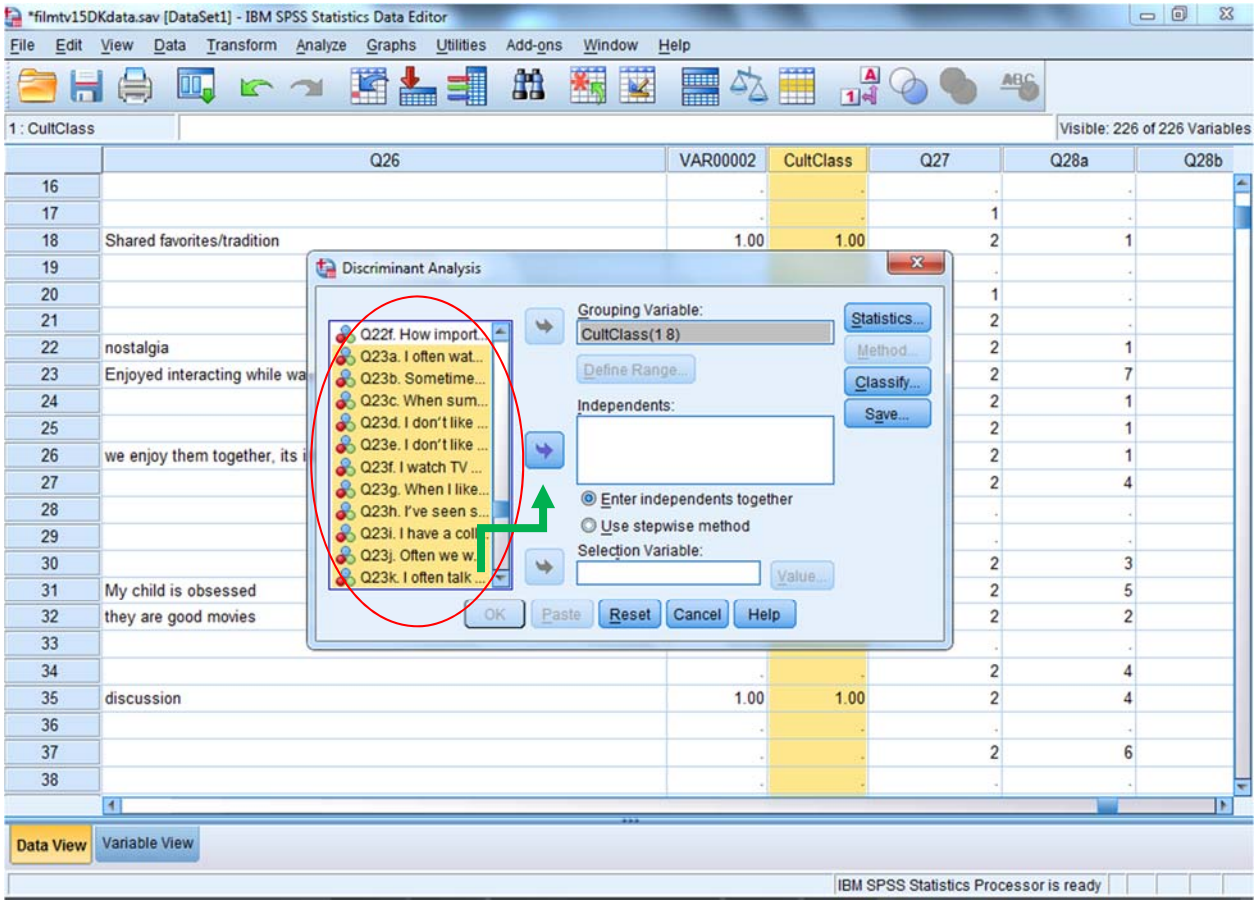




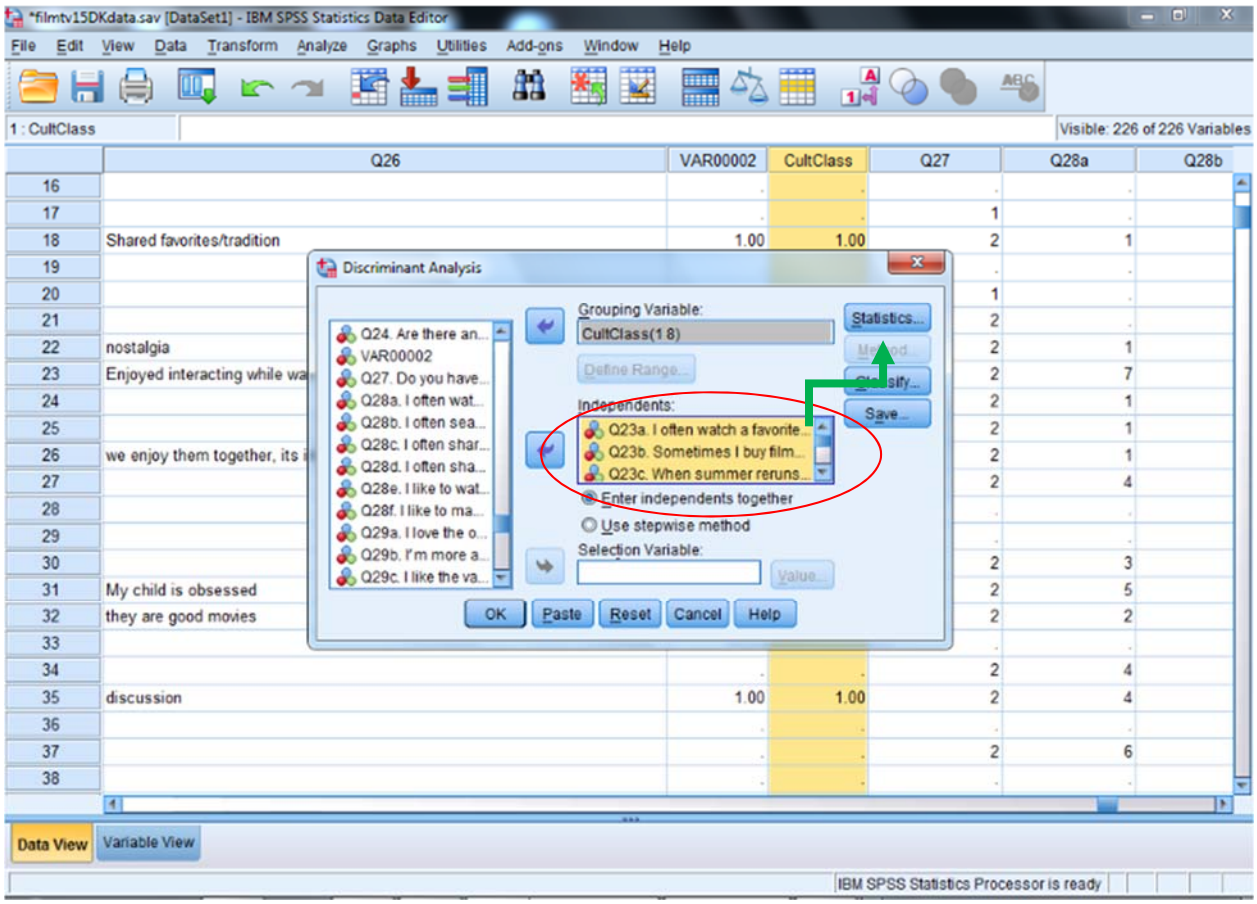
- Select the appropriate dependent variable
- Press the arrow button next to “Grouping Variables”
- Press on the Define Range button



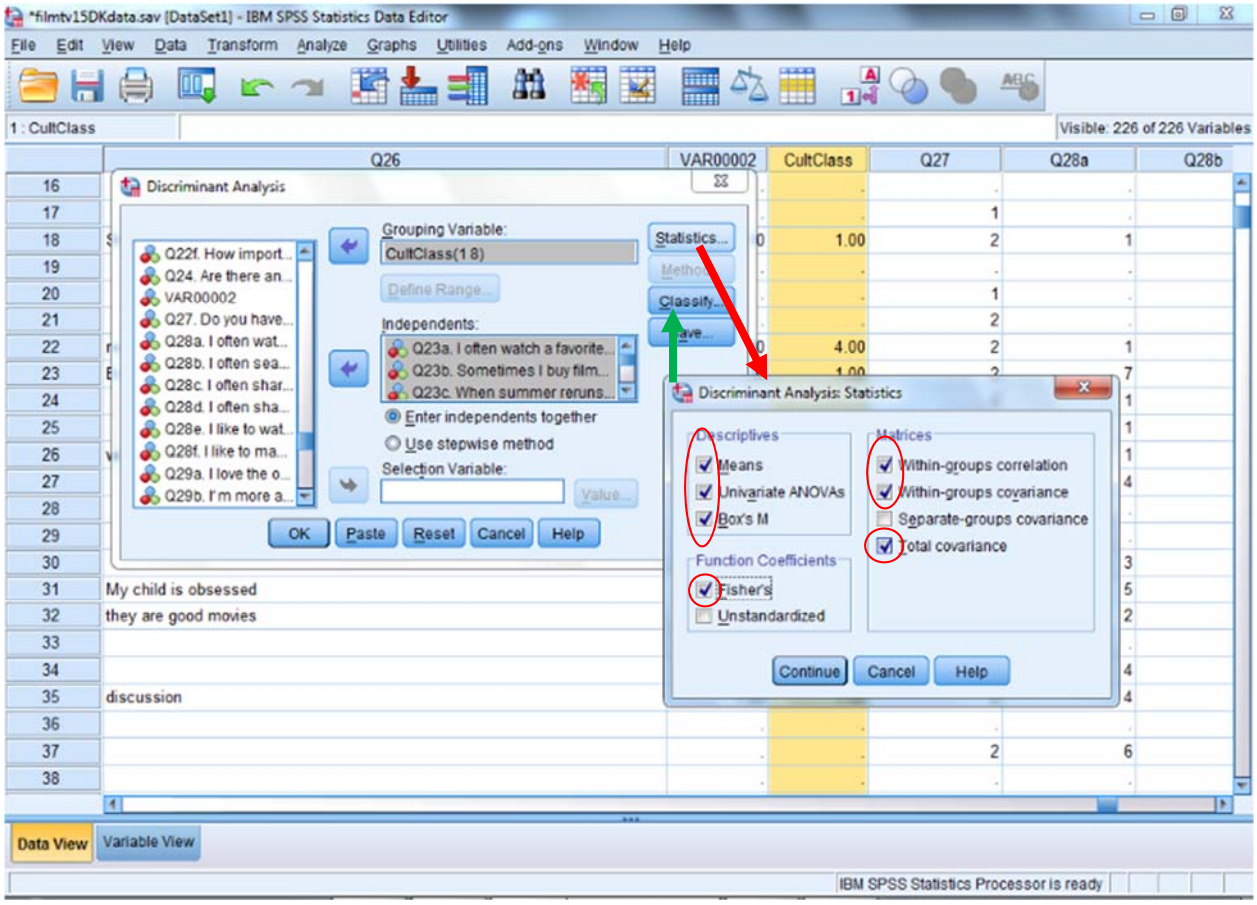
- List your range of variables that you'd like to use
- Press the Continue button



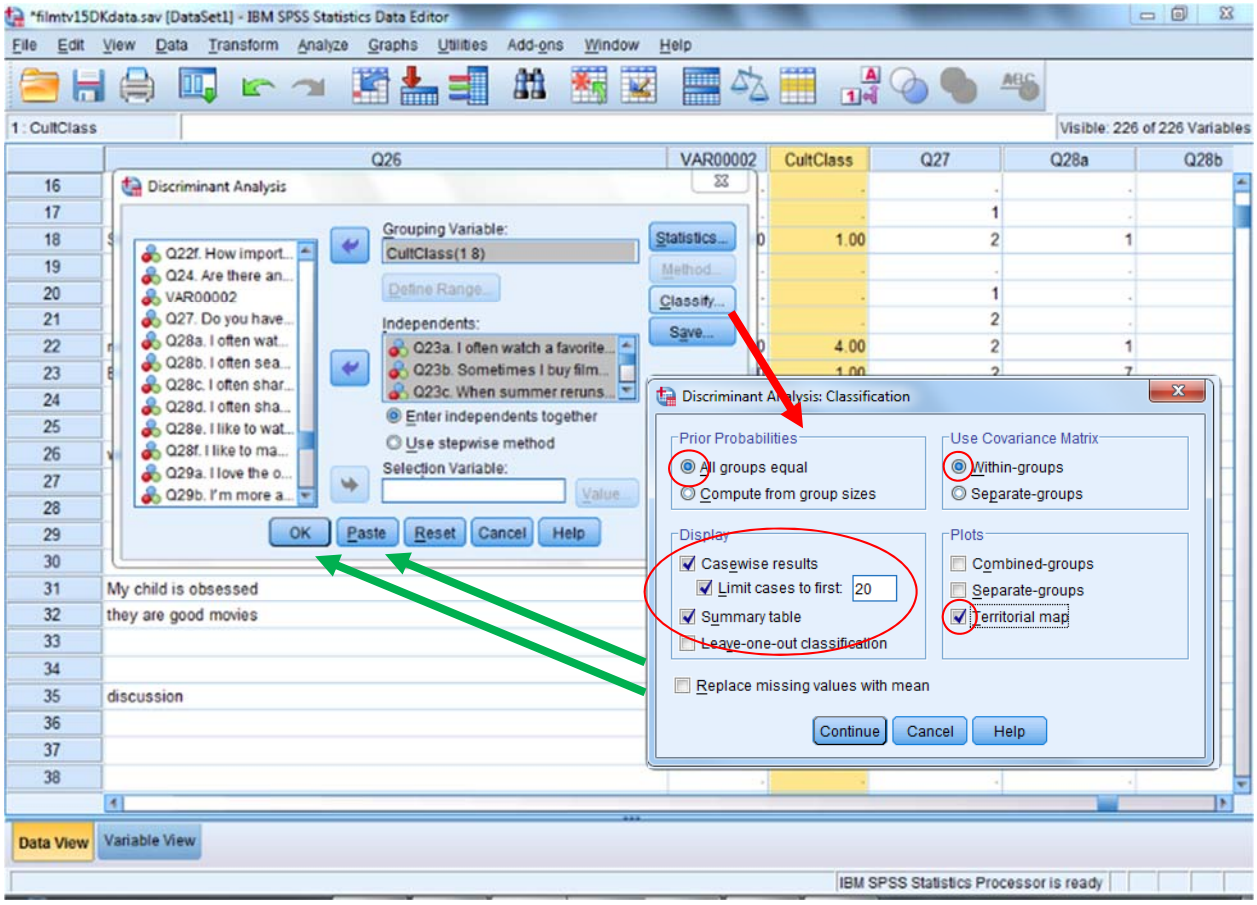
- Select the appropriate independent variables
- Press the second arrow button listed next to “Independents:”



- Make sure all of the Independent variables are in the “Independents’ block”
- Select “Enter independents together” instead of “Use stepwise method”
- Click on the “Statistics” button



- Under “Matrices” check on “Within-groups correlation,” “Within-groups covariance,” and “Total covariance”
- Under “Descriptives” check “Means,” “Univariate ANOVAs,” and “Box’s M”
- Under “Function Coefficients” check “Fisher’s”
- After all marks have been checked go ahead and press “Continue”
- In the Discriminant Analysis window click on the “Classify” button



- Under “Use Covariance Matrix” have “Within-groups” selected
- Under “Prior Probabilities” have “All groups equal” selected
- Under “Plots” have the “Territorial map” selected
- Under “Display” check “Casewise results” then check “Limit cases to first:” next to that type “20.”
- Under “Display” also check “Summary table”
- Click “Continue”
- After all that the analysis should be ready to run
- Click on “OK” to run the analysis right away or click on “Paste” to have the coding go into a syntax file to run for later

3. SPSS OUTPUT

```
DISCRIMINANT
  /GROUPS=CultClass(1 8)
  /VARIABLES=Q23a Q23b Q23c Q23d Q23e Q23f Q23g Q23h Q23i Q23j Q23k Q23l
  /ANALYSIS ALL
  /PRIORS EQUAL
  /STATISTICS=MEAN STDDEV UNIVF BOXM COEFF TABLE
  /PLOT=MAP
  /PLOT=CASES(20)
  /CLASSIFY=NONMISSING POOLED.
```

Discriminant

Analysis Case Processing Summary

Unweighted Cases		N	Percent
Valid		198	36.5
Excluded	Missing or out-of-range group codes	169	31.1
	At least one missing discriminating variable	0	.0
	Both missing or out-of-range group codes and at least one missing discriminating variable	176	32.4
	Total	345	63.5
Total		543	100.0

Group Statistics

CultClass		Mean	Std. Deviation	Valid N (listwise) Unweighted	Valid N (listwise) Weighted
1.00	Q23a. I often watch a favorite film again and again.	5.79	1.560	68	68.000
	Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	4.87	2.143	68	68.000
	Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	4.31	2.068	68	68.000
	Q23d. I don't like to watch films at home that I've seen before in a theater.	2.24	1.694	68	68.000
	Q23e. I don't like to watch TV shows I've seen before.	2.44	1.670	68	68.000
	Q23f. I watch TV programs with my family that we've seen before, often several times.	4.43	1.839	68	68.000
	Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	4.04	2.275	68	68.000
	Q23h. I've seen some films so often that I know much of the dialogue.	5.53	1.799	68	68.000
	Q23i. I have a collection of DVDs and/or BluRays.	5.10	2.008	68	68.000
	Q23j. Often we watch movies in the car on trips, short or long.	2.68	2.026	68	68.000
	Q23k. I often talk about films or TV programs I've seen with friends.	5.16	1.809	68	68.000
	Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	4.99	2.127	68	68.000
2.00	Q23a. I often watch a favorite film again and again.	5.70	1.448	69	69.000
	Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	4.77	1.949	69	69.000
	Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	4.64	1.978	69	69.000
	Q23d. I don't like to watch films at home that I've seen before in a theater.	2.23	1.564	69	69.000
	Q23e. I don't like to watch TV shows I've seen before.	2.67	1.844	69	69.000
	Q23f. I watch TV programs with my family that we've seen before, often several times.	4.84	1.820	69	69.000

	Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	4.14	2.130	69	69.000
	Q23h. I've seen some films so often that I know much of the dialogue.	5.36	1.590	69	69.000
	Q23i. I have a collection of DVDs and/or BluRays.	4.97	1.878	69	69.000
	Q23j. Often we watch movies in the car on trips, short or long.	3.12	2.069	69	69.000
	Q23k. I often talk about films or TV programs I've seen with friends.	4.87	1.830	69	69.000
	Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	4.57	1.929	69	69.000
3.00	Q23a. I often watch a favorite film again and again.	5.32	1.937	22	22.000
	Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	4.77	2.159	22	22.000
	Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	4.64	1.787	22	22.000
	Q23d. I don't like to watch films at home that I've seen before in a theater.	1.82	1.402	22	22.000
	Q23e. I don't like to watch TV shows I've seen before.	2.77	1.850	22	22.000
	Q23f. I watch TV programs with my family that we've seen before, often several times.	4.77	1.744	22	22.000
	Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	3.59	2.364	22	22.000
	Q23h. I've seen some films so often that I know much of the dialogue.	5.64	1.677	22	22.000
	Q23i. I have a collection of DVDs and/or BluRays.	4.91	2.408	22	22.000
	Q23j. Often we watch movies in the car on trips, short or long.	3.91	2.408	22	22.000
	Q23k. I often talk about films or TV programs I've seen with friends.	5.00	1.746	22	22.000
	Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	5.55	1.792	22	22.000
4.00	Q23a. I often watch a favorite film again and again.	6.41	.796	22	22.000
	Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	5.68	1.836	22	22.000
	Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	4.50	2.110	22	22.000

	Q23d. I don't like to watch films at home that I've seen before in a theater.	1.45	1.057	22	22.000
	Q23e. I don't like to watch TV shows I've seen before.	2.14	1.781	22	22.000
	Q23f. I watch TV programs with my family that we've seen before, often several times.	3.86	2.232	22	22.000
	Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	4.36	2.341	22	22.000
	Q23h. I've seen some films so often that I know much of the dialogue.	6.32	1.171	22	22.000
	Q23i. I have a collection of DVDs and/or BluRays.	5.27	1.907	22	22.000
	Q23j. Often we watch movies in the car on trips, short or long.	2.36	1.706	22	22.000
	Q23k. I often talk about films or TV programs I've seen with friends.	5.91	1.377	22	22.000
	Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	4.77	2.202	22	22.000
8.00	Q23a. I often watch a favorite film again and again.	4.65	1.693	17	17.000
	Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	3.94	2.193	17	17.000
	Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	4.12	1.616	17	17.000
	Q23d. I don't like to watch films at home that I've seen before in a theater.	3.53	2.125	17	17.000
	Q23e. I don't like to watch TV shows I've seen before.	3.76	2.016	17	17.000
	Q23f. I watch TV programs with my family that we've seen before, often several times.	3.12	1.965	17	17.000
	Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	2.94	2.164	17	17.000
	Q23h. I've seen some films so often that I know much of the dialogue.	4.18	2.099	17	17.000
	Q23i. I have a collection of DVDs and/or BluRays.	4.00	2.264	17	17.000
	Q23j. Often we watch movies in the car on trips, short or long.	2.65	2.178	17	17.000
	Q23k. I often talk about films or TV programs I've seen with friends.	3.71	1.929	17	17.000
	Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	3.59	2.373	17	17.000

Total	Q23a. I often watch a favorite film again and again.	5.68	1.557	198	198.000
	Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	4.83	2.067	198	198.000
	Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	4.46	1.966	198	198.000
	Q23d. I don't like to watch films at home that I've seen before in a theater.	2.21	1.657	198	198.000
	Q23e. I don't like to watch TV shows I've seen before.	2.64	1.819	198	198.000
	Q23f. I watch TV programs with my family that we've seen before, often several times.	4.43	1.928	198	198.000
	Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	3.97	2.242	198	198.000
	Q23h. I've seen some films so often that I know much of the dialogue.	5.45	1.735	198	198.000
	Q23i. I have a collection of DVDs and/or BluRays.	4.96	2.027	198	198.000
	Q23j. Often we watch movies in the car on trips, short or long.	2.93	2.091	198	198.000
	Q23k. I often talk about films or TV programs I've seen with friends.	5.00	1.830	198	198.000
	Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	4.76	2.087	198	198.000

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
Q23a. I often watch a favorite film again and again.	.930	3.655	4	193	.007
Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	.965	1.773	4	193	.136
Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	.992	.412	4	193	.800
Q23d. I don't like to watch films at home that I've seen before in a theater.	.916	4.441	4	193	.002
Q23e. I don't like to watch TV shows I've seen before.	.954	2.345	4	193	.056
Q23f. I watch TV programs with my family that we've seen before, often several times.	.931	3.576	4	193	.008
Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	.973	1.356	4	193	.251
Q23h. I've seen some films so often that I know much of the dialogue.	.923	4.045	4	193	.004
Q23i. I have a collection of DVDs and/or BluRays.	.976	1.177	4	193	.322
Q23j. Often we watch movies in the car on trips, short or long.	.958	2.122	4	193	.080
Q23k. I often talk about films or TV programs I've seen with friends.	.925	3.921	4	193	.004
Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	.950	2.544	4	193	.041

Analysis 1
Box's Test of Equality of Covariance Matrices

Log Determinants

CultClass	Rank	Log Determinant
1.00	12	11.119
2.00	12	9.121
3.00	12	7.162
4.00	12	3.289
8.00	12	4.545
Pooled within-groups	12	11.407

The ranks and natural logarithms of determinants printed are those of the group covariance matrices.

Test Results

Box's M		544.202
F	Approx.	1.378
	df1	312
	df2	14786.035
	Sig.	.000

Tests null hypothesis of equal population covariance matrices.

Summary of Canonical Discriminant Functions

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.218[a]	47.9	47.9	.423
2	.134[a]	29.4	77.3	.344
3	.067[a]	14.7	92.0	.250
4	.037[a]	8.0	100.0	.188

a. First 4 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 4	.654	79.959	48	.003
2 through 4	.797	42.744	33	.119
3 through 4	.904	19.001	20	.522
4	.965	6.794	9	.659

Standardized Canonical Discriminant Function Coefficients

	Function			
	1	2	3	4
Q23a. I often watch a favorite film again and again.	.087	-.220	.702	.126
Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	.199	-.289	-.300	-.033
Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	-.214	-.120	-.306	.693
Q23d. I don't like to watch films at home that I've seen before in a theater.	-.324	-.646	.366	-.539
Q23e. I don't like to watch TV shows I've seen before.	-.185	.283	-.411	.610
Q23f. I watch TV programs with my family that we've seen before, often several times.	-.284	.596	.709	.018
Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	-.038	-.099	.416	.439
Q23h. I've seen some films so often that I know much of the dialogue.	.539	.060	-.478	.139
Q23i. I have a collection of DVDs and/or BluRays.	-.256	.036	.168	-.573
Q23j. Often we watch movies in the car on trips, short or long.	-.110	.556	-.193	.179
Q23k. I often talk about films or TV programs I've seen with friends.	.616	-.178	-.156	.142
Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	.029	.384	-.193	-.806

Structure Matrix

	Function			
	1	2	3	4
Q23k. I often talk about films or TV programs I've seen with friends.	.600*	.089	.150	-.042
Q23h. I've seen some films so often that I know much of the dialogue.	.599*	.191	.074	.076
Q23d. I don't like to watch films at home that I've seen before in a theater.	-.580*	-.353	-.027	-.228
Q23a. I often watch a favorite film again and again.	.537*	-.042	.415	.162
Q23e. I don't like to watch TV shows I've seen before.	-.426*	-.093	-.328	.122
Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	.404*	.011	.061	.159
Q23i. I have a collection of DVDs and/or BluRays.	.285*	.120	.258	-.078
Q23f. I watch TV programs with my family that we've seen before, often several times.	.063	.604*	.598	.094
Q23j. Often we watch movies in the car on trips, short or long.	-.137	.526*	-.164	.158
Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	.262	.048	.419*	.173
Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	.286	.432	-.047	-.515*
Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	.039	.178	.070	.314*

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions

Variables ordered by absolute size of correlation within function.

*. Largest absolute correlation between each variable and any discriminant function

Functions at Group Centroids

	Function			
CultClass	1	2	3	4
1.00	.121	-.095	.113	-.238
2.00	-.184	.138	.214	.176
3.00	-.001	.771	-.469	-.056
4.00	.986	-.403	-.239	.216
8.00	-1.011	-.657	-.405	.030

Unstandardized canonical discriminant functions evaluated at group means

Classification Statistics

Classification Processing Summary

Processed		543
Excluded	Missing or out-of-range group codes	0
	At least one missing discriminating variable	176
Used in Output		367

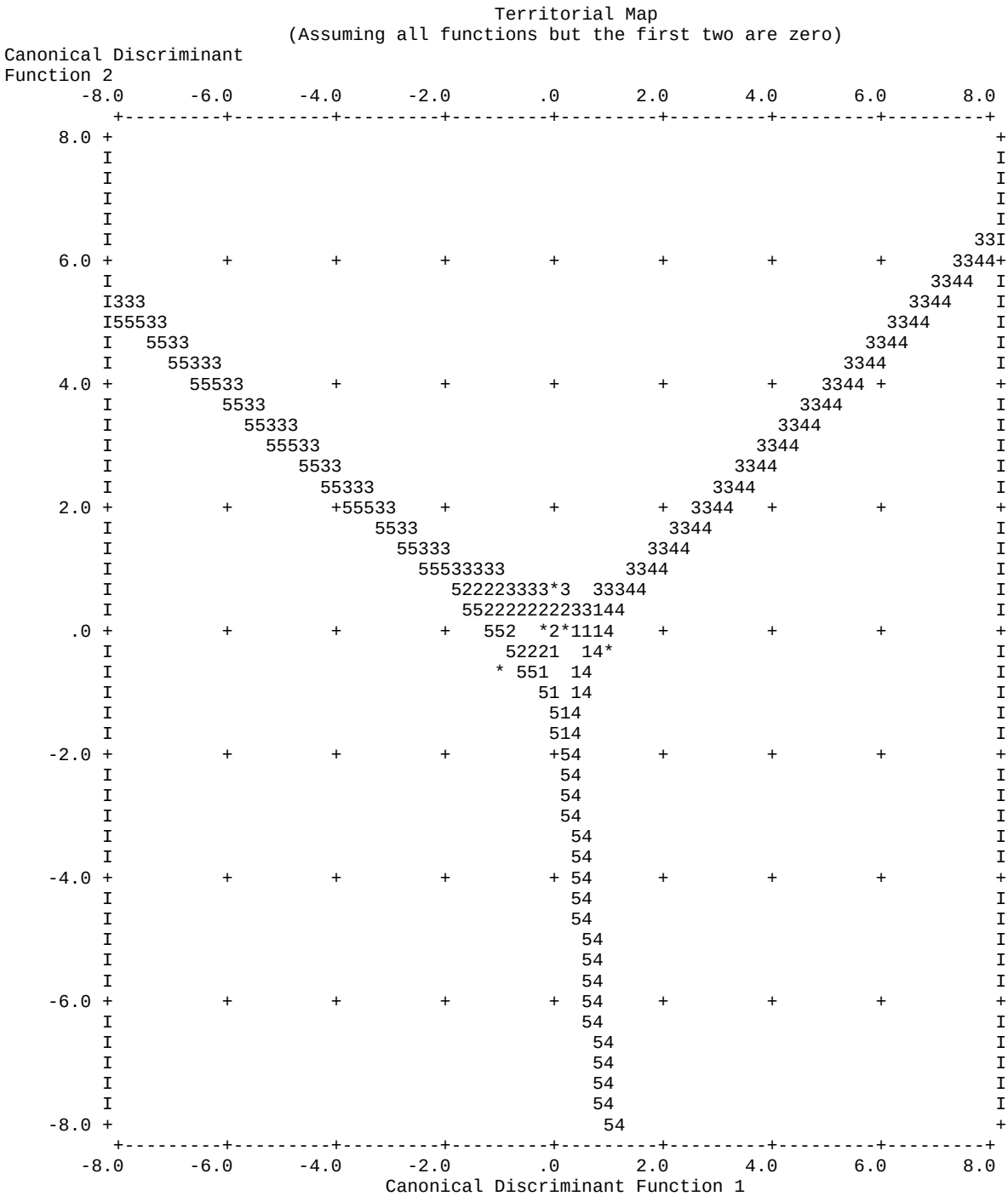
Prior Probabilities for Groups

		Cases Used in Analysis	
CultClass	Prior	Unweighted	Weighted
1.00	.200	68	68.000
2.00	.200	69	69.000
3.00	.200	22	22.000
4.00	.200	22	22.000
8.00	.200	17	17.000
Total	1.000	198	198.000

Classification Function Coefficients

	CultClass				
	1.00	2.00	3.00	4.00	8.00
Q23a. I often watch a favorite film again and again.	2.355	2.385	1.969	2.325	2.155
Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	.090	.006	.039	.262	.131
Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	.839	.987	.953	.978	1.170
Q23d. I don't like to watch films at home that I've seen before in a theater.	1.363	1.215	.845	1.079	1.610
Q23e. I don't like to watch TV shows I've seen before.	1.534	1.720	1.879	1.631	1.772
Q23f. I watch TV programs with my family that we've seen before, often several times.	.548	.710	.623	.191	.348
Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	-.402	-.307	-.511	-.379	-.402
Q23h. I've seen some films so often that I know much of the dialogue.	.638	.554	.810	1.041	.424
Q23i. I have a collection of DVDs and/or BluRays.	.101	.035	.032	-.172	.115
Q23j. Often we watch movies in the car on trips, short or long.	-.058	.047	.251	-.115	-.078
Q23k. I often talk about films or TV programs I've seen with friends.	1.300	1.196	1.237	1.698	1.032
Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	.308	.175	.451	.117	.130
(Constant)	-20.321	-20.393	-20.285	-22.067	-18.570

Fisher's linear discriminant functions



Symbols used in territorial map

Symbol	Group	Label
1	1	
2	2	
3	3	

4 4
5 8
* Indicates a group centroid

Casewise Statistics

			Highest Group					Second Highest Group			Discriminant Scores			
				P(D>d | G=g)										
	Case Number	Actual Group	Predicted Group	p	df	P(G=g | D=d)	Squared Mahalanobis Distance to Centroid	Group	P(G=g | D=d)	Squared Mahalanobis Distance to Centroid	Function 1	Function 2	Function 3	Function 4
Original	2	ungrouped	3	.450	4	.347	3.688	2	.269	4.196	-1.474	.980	-.745	1.127
	4	ungrouped	8	.898	4	.505	1.075	2	.253	2.455	-1.519	-.615	.397	.446
	13	ungrouped	8	.741	4	.343	1.970	1	.313	2.154	-.464	-1.189	.127	-1.021
	15	ungrouped	8	.551	4	.486	3.043	2	.298	4.018	-1.669	-.208	.159	1.476
	17	ungrouped	1	.956	4	.306	.658	2	.282	.822	-.454	.183	.353	-.678
	18	1	4**	.808	4	.594	1.605	1	.161	4.213	1.285	-.787	.197	1.302
	20	ungrouped	8	.898	4	.593	1.079	2	.131	4.095	-1.541	-.351	-.996	-.567
	21	ungrouped	1	.843	4	.311	1.409	2	.285	1.588	-.575	-.733	.817	-.384
	22	4	4	.005	4	.957	15.090	3	.014	23.554	2.637	-1.487	-2.621	2.565
	23	1	3**	.341	4	.471	4.512	8	.217	6.061	-.516	.456	-2.113	-1.258
	24	ungrouped	4	.827	4	.513	1.496	1	.215	3.234	1.213	-.719	-1.142	-.511
	25	ungrouped	8	.886	4	.389	1.151	1	.198	2.506	-.266	-1.118	-1.017	-.058
	26	1	1	.312	4	.379	4.765	3	.314	5.139	-.020	.557	-.185	-2.295
	27	ungrouped	8	.978	4	.415	.453	2	.237	1.577	-1.321	-.079	-.252	.037
	30	ungrouped	1	.998	4	.275	.141	2	.239	.420	.263	.172	-.101	-.171
	31	3	8**	.255	4	.466	5.335	2	.311	6.148	-2.240	-.197	1.463	-.322
	32	2	4**	.771	4	.450	1.806	1	.288	2.700	1.149	-1.021	.937	.088
	34	ungrouped	8	.312	4	.555	4.770	3	.260	6.284	-1.421	.084	-2.417	-.023
	35	1	1	.432	4	.288	3.815	4	.256	4.044	.286	-1.213	-1.129	-1.235
	37	ungrouped	8	.914	4	.278	.975	3	.257	1.134	-.716	.142	-.876	.194

**. Misclassified case

Classification Results[a]

			Predicted Group Membership					
		CultClass	1.00	2.00	3.00	4.00	8.00	Total
Original	Count	1.00	**22**	9	11	14	12	68
		2.00	9	**18**	19	8	15	69
		3.00	1	4	**10**	3	4	22
		4.00	3	4	1	**12**	2	22
		8.00	1	2	3	0	**11**	17
		Ungrouped cases	23	13	19	25	89	169
	%	1.00	32.4	13.2	16.2	20.6	17.6	100.0
		2.00	13.0	26.1	27.5	11.6	21.7	100.0
		3.00	4.5	18.2	45.5	13.6	18.2	100.0
		4.00	13.6	18.2	4.5	54.5	9.1	100.0
		8.00	5.9	11.8	17.6	.0	64.7	100.0
		Ungrouped cases	13.6	7.7	11.2	14.8	52.7	100.0

a. 36.9% of original grouped cases correctly classified.

4. Tabled Results

Table 1. Discriminant Functions

	Standardized coefficients				Loadings			
Independent Variables	DF1	DF2	DF3	DF4	DF1 Storytelling	DF2 Kid Friendly	DF3 Collecting	DF4 Classic
Q23k. I often talk about films or TV programs I've seen with friends.	.62	-.18	-.16	.14	**.60***	.09	.15	-.04
Q23h. I've seen some films so often that I know much of the dialogue.	.54	.06	-.48	.14	**.60***	.19	.07	.08
Q23d. I don't like to watch films at home that I've seen before in a theater.	-.32	-.65	.37	-.54	**-.58***	-.35	-.03	-.23
Q23a. I often watch a favorite film again and again.	.09	-.22	.70	.13	**.54***	.04	.42	.16
Q23e. I don't like to watch TV shows I've seen before.	-.19	.28	-.41	.61	**-.43***	.09	-.33	.12
Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	.20	-.29	-.30	-.03	**.40***	.01	.06	.16
Q23i. I have a collection of DVDs and/or BluRays.	-.26	.04	.17	-.57	**.29***	.12	.26	.08
Q23f. I watch TV programs with my family that we've seen before, often several times.	-.28	.60	.71	.02	.06	**.60***	.60	.09
Q23j. Often we watch movies in the car on trips, short or long.	-.11	.56	-.19	.18	-.14	**.53***	-.16	.16
Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	-.04	-.10	.42	.44	.26	.05	**.42***	.17
Q23l. I like playing/listening to a movie I'm familiar with as background while I do other things.	.03	.38	-.19	-.81	.29	.43	-.05	**-.52***
Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	-.21	-.12	-.31	.69	.04	.18	.07	**.31***

*Largest absolute correlation between each variable and any discriminant function

Table 2. Group Statistics

CultClass Groups	----------Functions---------- DF1 Storytelling Repetition	DF2 ns	DF3 ns	DF4 ns
1. Shared Experience	.121	-.095	.113	-.238
2. Enjoyment	-.184	.138	**.214**	.176
3. Family/Children	-.001	**.771**	-.469	-.056
4. Memory/Nostalgia	**.986**	-.403	-.239	**.216**
5. Other	-1.011	-.657	-.405	.030
Wilk's Lambda	.65	.80	.90	.97
Chi-square	79.96	42.74	19.00	6.79
Sig.	.003	.12	.52	.66
Eigenvalue	.22a	.13a	.07a	.04a
Canonical Correlation	.42	.34	.25	.19

a. First 4 canonical discriminant functions were used in the analysis.

Table 3. Classification Matrix Results[a]

--------Observed Group--------- CultClass Groups	Size	----------Predicted Groups---------- 1.	2.	3.	4.	8.
1. Shared Experience	68	**22**	9	11	14	12
2. Enjoyment	69	9	**18**	19	8	15
3. Family/Children	22	1	4	**10**	3	4
4. Memory/Nostalgia	22	3	4	1	**12**	2
8. Other	17	1	2	3	0	**11**
Total	198	36	37	44	37	44

a. 36.9% of original grouped cases correctly classified.

Press' Q (tests whether the classification analysis improves prediction to groups significantly):

N = 198, n = 73, k = 5

$$Q = \frac{[N-(nk)]^2}{N(k-1)}$$

$$= \frac{[198 - (73*5)]^2}{198(5-1)}$$

$$= \frac{[198 - 365]^2}{198(4)}$$

$$= \frac{[-167]^2}{990}$$

$$= \frac{27{,}889}{990}$$

$$= 28.17$$

When df = 1 on chi square table our value exceeds $p < .001$ (Critical Value: 10.83). This value indicates significance to a $p < .001$ level.

5. Write-up of Results

A discriminant function analysis was applied to assess how well an individual's reason for repeated film views could be predicted from 12 items describing cult movie habits from the Film and Television dataset. These twelve discriminating independent variables include: I often watch a favorite film again and again, Sometimes I buy films I've seen in the theater so I can watch the movie again later, When summer reruns start on TV I find myself watching programs I've seen before, I don't like to watch films at home that I've seen before in a theater, I don't like to watch TV shows I've seen before, I watch TV programs with my family that we've seen before, often several times, When I like a TV show, sometimes I buy the complete season on DVD or other media, I've seen some films so often that I know much of the dialogue, I have a collection of DVDs and/or Blu-rays, Often we watch movies in the car on trips, short or long, I often talk about films or TV programs I've seen with friends, I like playing/listening to a movie I'm familiar with as background while I do other things. The dependent variable is a human coded variable to reflect reasons why people watch movies again with others, and was coded to 5 original categories. These groups included: shared experience, enjoyment, family/children, memory/nostalgia and other.

This analysis produced four discriminant functions, but only one of the four was significant ($p = .003$). The first discriminant function was labeled "Storytelling repetition" because the variables that loaded highly on this function were thought to represent storytelling tendencies: talk with friends (.60), dialogue (.60), re-watch film (-.58), repetition (.54), re-watch TV (-.43), buy films (.40), and collect DVDs (.29). The Wilks' Lambda, which examines how much the groups differ on the set of independent variables, is .65 for the first discriminant function.

Table 2 reflects the mean scores for each of the five dependent variable groups on the four discriminant functions. The group centroids show a pattern that suggests those who repeat view for Memories and Nostalgia (Group 4) like storytelling repetition, while Other (Group 8) tend to not be related to this type of reasoning.

However, from this analysis, while we can assess that Group 4 (memory/nostalgia) has the highest mean on discriminant functions one (Storytelling repetition), we cannot say that Group 4 has a significant higher mean than other groups on DF1. To tell whether it's significant or not, we could further conduct a post-hoc test (in ANOVA).

As shown in Table 3, of all the cases in total 36.9% could be correctly classified into the 5 repeated viewing groups of the DV by our discriminant analysis. The Press' Q was calculated at 28.17, which is bigger than the critical value of 10.83 ($df = 1$, $p < .001$), indicating that using the IVs that we chose to predict reason for repeated viewing groups produces a prediction that is significantly better than by chance.