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.

Q231. 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

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

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32	they are good movies	2.00	2.00	2	2	
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34	discussion	4.00	1.00	2	4	
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- List your range of variables that you'd like to use
- Press the Continue button

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- Select the appropriate independent variablesPress the second arrow button listed next to "Independents:"

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- 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

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- 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

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

#### Analysis Case Processing Summary

	Group Statistics				
				Valid N (	listwise)
			Std.	Unweight	Weighte
CultCla	55	Mean	Deviation	ed	d
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	4.87	2.143	68	68.000
	so I can watch the movie again later.				
	Q23c. When summer reruns start on TV I find myself	4.31	2.068	68	68.000
	watching programs I've seen before.				
	Q23d. I don't like to watch films at home that I've	2.24	1.694	68	68.000
	O23a L don't like to watch TV shows I've seen		4 070		00.000
	before.	2.44	1.670	68	68.000
	Q23f. I watch TV programs with my family that we've	4.43	1.839	68	68.000
	Q23g. When I like a TV show, sometimes I buy the	4.04	2.275	68	68.000
	complete season on DVD or other media.				
	Q23h. I've seen some films so often that I know	5.53	1.799	68	68.000
	much of the dialogue.				
	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,	2.68	2.026	68	68.000
	short or long.				
	Q23k. I often talk about films or TV programs I've	5.16	1.809	68	68.000
	seen with friends.				
	Q23I. I like playing/listening to a movie I'm familiar	4.99	2.127	68	68.000
	with as background while I do other things.				
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	4.77	1.949	69	69.000
	so I can watch the movie again later.				
	Q23c. When summer reruns start on TV I find myself	4.64	1.978	69	69.000
	watching programs I've seen before.				
	Q23d. I don't like to watch films at home that I've	2.23	1.564	69	69.000
	seen before in a theater.				
	Q23e. I don't like to watch TV shows I've seen		1.844	69	69.000
	before.				
	Q23f. I watch TV programs with my family that we've	4.84	1.820	69	69.000
	seen before, often several times.				

Group Statistics

	Q23g. When I like a TV show, sometimes I buy the	4.14	2.130	69	69.000
	complete season on DVD or other media.				
	Q23h. I've seen some films so often that I know	5.36	1.590	69	69.000
	much of the dialogue.				
	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,	3.12	2.069	69	69.000
	short or long.				
	Q23k. I often talk about films or TV programs I've	4.87	1.830	69	69.000
	seen with friends.				
	Q23I. I like playing/listening to a movie I'm familiar	4.57	1.929	69	69.000
	with as background while I do other things.				
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	4.77	2.159	22	22.000
	so I can watch the movie again later.				
	Q23c. When summer reruns start on TV I find myself	4.64	1.787	22	22.000
	watching programs I've seen before.				
	Q23d. I don't like to watch films at home that I've	1.82	1.402	22	22.000
	seen before in a theater.				
	Q23e. I don't like to watch TV shows I've seen	2.77	1.850	22	22.000
	before.				
	Q23f. I watch TV programs with my family that we've	4.77	1.744	22	22.000
	seen before, often several times.				
	Q23g. When I like a TV show, sometimes I buy the	3.59	2.364	22	22.000
	complete season on DVD or other media.				
	Q23h. I've seen some films so often that I know	5.64	1.677	22	22.000
	much of the dialogue.				
	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,	3.91	2.408	22	22.000
	short or long.				
	Q23k. I often talk about films or TV programs I've	5.00	1.746	22	22.000
	seen with friends.				
	Q23I. I like playing/listening to a movie I'm familiar	5.55	1.792	22	22.000
	with as background while I do other things.				
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	5.68	1.836	22	22.000
	so I can watch the movie again later.				
	Q23c. When summer reruns start on TV I find myself	4.50	2.110	22	22.000
	watching programs I've seen before.				

	Q23d. I don't like to watch films at home that I've	1.45	1.057	22	22.000
	seen before in a theater.				
	Q23e. I don't like to watch TV shows I've seen	2.14	1.781	22	22.000
	before.				
	Q23f. I watch I V programs with my family that we've	3.86	2.232	22	22.000
	seen before, often several times.	4.00	0.044	00	00.000
	Q23g. When Tlike a TV show, sometimes T buy the	4.36	2.341	22	22.000
		6 22	1 1 7 1	22	22,000
	much of the dialogue	0.32	1.171	22	22.000
	Q23i L have a collection of DV/Ds and/or BluRays	5 27	1 907	22	22 000
	023i. Often we watch movies in the car on trips	2.36	1 706	22	22.000
	short or long.	2.50	1.700	22	22.000
	Q23k. I often talk about films or TV programs I've	5.91	1.377	22	22.000
	seen with friends.				
	Q23I. I like playing/listening to a movie I'm familiar	4.77	2.202	22	22.000
	with as background while I do other things.				
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	3.94	2.193	17	17.000
	so I can watch the movie again later.				
	Q23c. When summer reruns start on TV I find myself	4.12	1.616	17	17.000
	watching programs I've seen before.				
	Q23d. I don't like to watch films at home that I've	3.53	2.125	17	17.000
	seen before in a theater.				
	Q23e. I don't like to watch TV shows I've seen	3.76	2.016	17	17.000
	before.				
	Q23f. I watch TV programs with my family that we've	3.12	1.965	17	17.000
	seen before, often several times.				
	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	4.18	2,099	17	17.000
	much of the dialogue.				
	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,	2.65	2.178	17	17.000
	short or long.				
	Q23k. I often talk about films or TV programs I've	3.71	1.929	17	17.000
	seen with friends.				
	Q23I. I like playing/listening to a movie I'm familiar	3.59	2.373	17	17.000
	with as background while I do other things.				

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	4.83	2.067	198	198.000
	so I can watch the movie again later.				
	Q23c. When summer reruns start on TV I find myself	4.46	1.966	198	198.000
	watching programs I've seen before.				
	Q23d. I don't like to watch films at home that I've	2.21	1.657	198	198.000
	seen before in a theater.				
	Q23e. I don't like to watch TV shows I've seen	2.64	1.819	198	198.000
	before.				
	Q23f. I watch TV programs with my family that we've	4.43	1.928	198	198.000
	seen before, often several times.				
	Q23g. When I like a TV show, sometimes I buy the	3.97	2.242	198	198.000
	complete season on DVD or other media.				
	Q23h. I've seen some films so often that I know	5.45	1.735	198	198.000
	much of the dialogue.				
	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,	2.93	2.091	198	198.000
	short or long.				
	Q23k. I often talk about films or TV programs I've	5.00	1.830	198	198.000
	seen with friends.				
	Q23I. I like playing/listening to a movie I'm familiar	4.76	2.087	198	198.000
	with as background while I do other things.				

	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	.965	1.773	4	193	.136
can watch the movie again later.					
Q23c. When summer reruns start on TV I find myself	.992	.412	4	193	.800
watching programs I've seen before.					
Q23d. I don't like to watch films at home that I've seen	.916	4.441	4	193	.002
before in a theater.					
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	.931	3.576	4	193	.008
before, often several times.					
Q23g. When I like a TV show, sometimes I buy the	.973	1.356	4	193	.251
complete season on DVD or other media.					
Q23h. I've seen some films so often that I know much of the	.923	4.045	4	193	.004
dialogue.					
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	.958	2.122	4	193	.080
long.					
Q23k. I often talk about films or TV programs I've seen with	.925	3.921	4	193	.004
friends.					
Q23I. I like playing/listening to a movie I'm familiar with as	.950	2.544	4	193	.041
background while I do other things.					

Tests of Equality of Group Means

### Analysis 1 Box's Test of Equality of Covariance Matrices

Log Determinants									
		Log							
CultClass	Rank	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									
	Canonical								
Function	Eigenvalue	% of Variance	Cumulative %	Correlation					
1	.218 <sup>a</sup>	47.9	47.9	.423					
2	.134ª	29.4	77.3	.344					
3	.067ª	14.7	92.0	.250					
4	.037 <sup>a</sup>	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					

#### Function 1 2 3 4 .087 -.220 .702 .126 Q23a. I often watch a favorite film again and again. Q23b. Sometimes I buy films I've seen in the theater so I can .199 -.289 -.300 -.033 watch the movie again later. Q23c. When summer reruns start on TV I find myself watching -.214 -.120 -.306 .693 programs I've seen before. Q23d. I don't like to watch films at home that I've seen before in a -.324 -.646 .366 -.539 theater. 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 -.284 .596 .709 .018 before, often several times. -.099 Q23g. When I like a TV show, sometimes I buy the complete -.038 .439 .416 season on DVD or other media. Q23h. I've seen some films so often that I know much of the .539 .060 -.478 .139 dialogue. 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 .616 -.178 -.156 .142 friends. Q23I. I like playing/listening to a movie I'm familiar with as .029 .384 -.193 -.806 background while I do other things.

#### Standardized Canonical Discriminant Function Coefficients

		Fur	nction	
	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 <sup>*</sup>	.191	.074	.076
Q23d. I don't like to watch films at home that I've seen before in a	580 <sup>*</sup>	353	027	228
theater.				
Q23a. I often watch a favorite film again and again.	.537 <sup>*</sup>	042	.415	.162
Q23e. I don't like to watch TV shows I've seen before.	426 <sup>*</sup>	093	328	.122
Q23b. Sometimes I buy films I've seen in the theater so I can watch the	.404*	.011	.061	.159
movie again later.				
Q23i. I have a collection of DVDs and/or BluRays.	.285 <sup>*</sup>	.120	.258	078
Q23f. I watch TV programs with my family that we've seen before,	.063	.604*	.598	.094
often several times.				
Q23j. Often we watch movies in the car on trips, short or long.	137	.526 <sup>*</sup>	164	.158
Q23g. When I like a TV show, sometimes I buy the complete season	.262	.048	.419 <sup>*</sup>	.173
on DVD or other media.				
Q23I. I like playing/listening to a movie I'm familiar with as background	.286	.432	047	515 <sup>*</sup>
while I do other things.				
Q23c. When summer reruns start on TV I find myself watching	.039	.178	.070	.314*
programs l've seen before.				

**Structure Matrix** 

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

	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					

#### **Functions at Group Centroids**

Unstandardized canonical discriminant functions evaluated at

group means

### **Classification Statistics**

#### Classification Processing Summary

Processed		543
Excluded	Missing or out-of-range	0
	group codes	
	176	
	discriminating variable	
Used in Ou	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				

	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	.090	.006	.039	.262	.131
can watch the movie again later.					
Q23c. When summer reruns start on TV I find myself	.839	.987	.953	.978	1.170
watching programs I've seen before.					
Q23d. I don't like to watch films at home that I've seen	1.363	1.215	.845	1.079	1.610
before in a theater.					
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	.548	.710	.623	.191	.348
seen before, often several times.					
Q23g. When I like a TV show, sometimes I buy the	402	307	511	379	402
complete season on DVD or other media.					
Q23h. I've seen some films so often that I know much of	.638	.554	.810	1.041	.424
the dialogue.					
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	058	.047	.251	115	078
long.					
Q23k. I often talk about films or TV programs I've seen	1.300	1.196	1.237	1.698	1.032
with friends.					
Q23I. I like playing/listening to a movie I'm familiar with as	.308	.175	.451	.117	.130
background while I do other things.					
(Constant)	-20.321	-20.393	-20.285	-22.067	-18.570

#### **Classification Function Coefficients**

Fisher's linear discriminant functions



Symbols used in territorial map

Symbol	Group	Label
1	1	
2	2	
3	3	

4	4				
5	8				
*		Indicates	а	group	centroid

						U d	sewise statistic	5						
				-	Highest Gr	oup	-	s	econd Highest	Group		Discrimina	int Scores	
				P(D>d	G=g)		Squared			Squared				
							Mahalanobis			Mahalanobis				
	Case	Actual	Predicted			P(G=g	Distance to		P(G=g	Distance to	Function	Function	Function	Function
	Number	Group	Group	р	df	D=d)	Centroid	Group	D=d)	Centroid	1	2	3	4
Origina	2	ungrouped	3	.450	4	.347	3.688	2	.269	4.196	-1.474	.980	745	1.127
I.	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	unarouped	8	.914	4	.278	.975	3	.257	1.134	716	.142	876	.194

Casewise Statistics

\*\*. Misclassified case

		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

**Classification Results**<sup>a</sup>

a. 36.9% of original grouped cases correctly classified.

# 4. Tabled Results

### Table 1. Discriminant Functions

	Standardized coefficients				Loadings				
	DF1	DF2	DF3	DF4	$\backslash$	DF1	DF2	DF3	DF4
Independent Variables					Ň	Storytel	Kid	Collect	Classic
					/	ling	Friendly	ing	
Q23k. I often talk about films or TV	<mark>.62</mark>	18	16	.14	<u> </u>	.60*	.09	.15	04
programs I've seen with friends.									
Q23h. I've seen some films so often that I know much of the dialogue.	<mark>.54</mark>	.06	48	.14		<mark>.60*</mark>	.19	.07	.08
Q23d. I don't like to watch films at home that I've seen before in a theater.	<mark>32</mark>	65	.37	54		<mark>58*</mark>	35	03	23
Q23a. I often watch a favorite film again and again.	<mark>.09</mark>	22	.70	.13		<mark>.54*</mark>	.04	.42	.16
Q23e. I don't like to watch TV shows I've seen before.	<mark>19</mark>	.28	41	.61		<mark>43*</mark>	.09	33	.12
Q23b. Sometimes I buy films I've seen in the theater so I can watch the movie again later.	<mark>.20</mark>	29	30	03		<mark>.40*</mark>	.01	.06	.16
Q23i. I have a collection of DVDs and/or BluRays.	<mark>26</mark>	.04	.17	57		<mark>.29*</mark>	.12	.26	.08
Q23f. I watch TV programs with my family that we've seen before, often several times.	28	<mark>.60</mark>	.71	.02		.06	<mark>.60*</mark>	.60	.09
Q23j. Often we watch movies in the car on trips, short or long.	11	<mark>.56</mark>	19	.18		14	<mark>.53*</mark>	16	.16
Q23g. When I like a TV show, sometimes I buy the complete season on DVD or other media.	04	10	<mark>.42</mark>	.44		.26	.05	<mark>.42*</mark>	.17
Q231. I like playing/listening to a movie I'm familiar with as background while I do other things.	.03	.38	19	<mark>81</mark>		.29	.43	05	<mark>52*</mark>
Q23c. When summer reruns start on TV I find myself watching programs I've seen before.	21	12	31	<mark>.69</mark>		.04	.18	.07	<mark>.31*</mark>

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

	Functions						
CultClass Groups	DF1	DF2	DF3	DF4			
	Storytelling	ns	ns	ns			
	Repetition						
1. Shared Experience	.121	095	.113	238			
2. Enjoyment	184	.138	<mark>.214</mark>	.176			
3. Family/Children	001	<mark>.771</mark>	469	056			
4. Memory/Nostalgia	<mark>.986</mark>	403	239	<mark>.216</mark>			
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			

Table 2. Group Statistics

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

Table 3. Classification Matrix Results<sup>a</sup>

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

a. 36.9% of original grouped cases correctly classified.

$$N = 198, n = 73, k = 5$$

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

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

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

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

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

$$= 28.17$$

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.