MANOVA/MANCOVA Carlina DiRusso

I. Model

From Film and TV data set (Neuendorf et al.)

X1 – FaveGenre	
	Q29a. Love options at fingertips
X2 – Gender	 Q29e. Can hardly wait for new tech
Interaction of X1 and X2	Q29h. Loves variety
	Ť
Covariates (only in MANCOVA)	 I

Independent Variables:

FaveGenre – Nominal (4 Categories) coded from Q5a (preferred film genre to see at home) 1 = Action/Scifi, 2 = Comedy, 3 = Romance/Drama, 4 = Other Gender – Nominal (2 Categories) 1 = Male, 2 = Female

Dependent Variables:

Q29a. I love the options at my fingertips today, watching videos on my phone, texting, streaming films.

Q29e. I can hardly wait to see what technology comes next.

Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.

Covariates (Only in MANCOVA):

Q290. I generally think of myself as a happy person. Q29t. I see myself as a citizen of the world.

II. Running SPSS

Analyze > General Linear Model > Multivariate

filmtv	Imtv (1).sav [DataSet1] - IBM SPSS Statistics Data Editor													
<u>File</u> <u>E</u> di	t <u>V</u> iew <u>D</u> ata	Transform	Analyze Grap	hs <u>U</u> tilities	Add- <u>o</u> r	ns <u>W</u> indow	/ <u>H</u> elp							
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			Descriptive S	Statistics	•	88						<u> </u>	11	10
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172	Q22d	Numeric	General Line	ar Model	•	🔛 Univariat	e		{1, 1-Not im	None	11	📰 Right	💑 Nominal	ゝ Input
173	Q22e	Numeric	Generali <u>z</u> ed	Linear Models	•	Multivaria	ate	f	{1, 1-Not im	None	11	🗮 Right	💑 Nominal	ゝ Input
174	Q22f	Numeric	Mi <u>×</u> ed Model:	s	•	E Reneste	d Meesuree		{1, 1-Not im	None	11	🚟 Right	\delta Nominal	ゝ Input
175	Q23a	Numeric	<u>C</u> orrelate		•	Repeater	u measures		{1, 1-Not lik	None	11	🗮 Right	\delta Nominal	ゝ Input
176	Q23b	Numeric	<u>R</u> egression		•	Variance	e Components)	{1, 1-Not lik	None	11	🗮 Right	뤚 Nominal	ゝ Input
177	Q23c	Numeric	Loglinear		•	hen summe	er reruns start	on T	{1, 1-Not lik	None	11	🗮 Right	뤚 Nominal	🦒 Input
178	Q23d	Numeric	Classi <u>f</u> y		•	on't like to	watch films a	t ho	{1, 1-Not lik	None	11	🗮 Right	뤚 Nominal	ゝ Input
179	Q23e	Numeric	Dimension Re	eduction	•	on't like to	watch TV sho	ows ľ	{1, 1-Not lik	None	11	🗮 Right	💑 Nominal	ゝ Input
180	Q23f	Numeric	Scale		•	atch TV pro	grams with m	ny fa	{1, 1-Not lik	None	11	🗮 Right	💑 Nominal	🔪 Input
181	Q23g	Numeric	<u>N</u> onparametr	ric Tests		hen I like a	TV show, so	meti	{1, 1-Not lik	None	11	🗮 Right	💑 Nominal	🔪 Input
182	Q23h	Numeric	Forecasting			e seen som	ne films so oft	en th	{1, 1-Not lik	None	11	🗮 Right	💑 Nominal	🔪 Input
183	Q23i	Numeric	Survival			ave a collec	tion of DVDs	and/	{1, 1-Not lik	None	11	🗮 Right	\delta Nominal	🔪 Input
184	Q23j	Numeric	Multiple Resp	onse	P	en we watc	h movies in th	пе са	{1, 1-Not lik	None	11	🗃 Right	\delta Nominal	🔪 Input
185	Q23k	Numeric	EF Simulation			ften talk ab	out films or T	V pro	{1, 1-Not lik	None	11	🗃 Right	\delta Nominal	🔪 Input
186	Q23I	Numeric	Quality Contr	ol	•	e playing/li	istening to a r	novie	{1, 1-Not lik	None	11	🗃 Right	\delta Nominal	🔪 Input
187	Q24	Numeric	ROC Cur <u>v</u> e			there any f	films you wate	ch re	{1, 1-No}	None	11	🗃 Right	\delta Nominal	🔪 Input
188	Q25a	String	IBM SPSS An	nos		peat film 1			None	None	29	📰 Left	\delta Nominal	🔪 Input
189	Q25b	String	126	0	Q25b. R	epeat film 2			None	None	28	📰 Left	\delta Nominal	🔪 Input
190	Q25c	String	201	0	Q25c. R	epeat film 3			None	None	50	📰 Left	\delta Nominal	🔪 Input
101	000	Obside	007	0	000 101		I	61	News	News	50	— 1 - A	Nieuwin el	

Add dependent and independent variables by clicking arrow (from left box to right boxes)

		_	Dependent Variables:	Model
RespondentID	4		💫 💫 Q29a. I love the options at my finger	Contracte
🔏 StartDate			🕹 🖓 Q29e. I can hardly wait to see what	Contrasts
🔏 EndDate			💫 Q29h. I am a person who loves vari	Plo <u>t</u> s
🛛 🚜 Q2. First, what are	some of the t			Post Hoc
🛛 💑 Q3a. Watch televis	ion [Q3a]		Fixed Factor(s):	-
🛛 💑 Q3b. Listen to the 1	radio [Q3b]		OSeR Fave genre to see at home (Fe)	Save
🚽 💑 Q3c. Read a maga:	zine [Q3c]		Conder, [Conder]	Options
🛛 💑 Q3d. Read a book	[Q3d]			
🛛 💑 Q3e. Read a news	paper [Q3e]			
🛛 💑 Q3f. Go out to see	a film in a thea			_
🛛 💑 Q3g. Watch a film I	NOT at a theat		<u>C</u> ovariate(s):	-
🛛 💑 Q3h. "Surf" the Inte	ernet "for pleas			
🚽 💑 Q3i. Check my ema	ail [Q3i]			
🚽 💑 Q3j. Go on Facebo	ok [Q3j]			
🚽 💑 Q3k. Play video ga	mes on some d			
🚽 💑 Q3I. Go to see live	musical conce		WLS Weight:	
🚽 💑 Q3m. Go to see live	e plays perfor 🛓	-		1
<u> </u>				
	OK	Paste	Reset Cancel Help	

Model > select Full Factorial > Continue



Plots > move IVs into right boxes using arrow keys Horizontal Axis and Separate Lines

	11 U Q238.10π6	en watch a tavorite tilm agai {1, 1-INOT IIK INONE 1	II 🚍 Right 💉 Nominai 🕤 Input
	Multivariate	×	Right 💑 Nominal 🕥 Input
- 1	•••		💳 🔤 Right 🛛 🕹 Nominal 🕒 Input
		Dependent Variables: Model	📃 🛛 🗮 Right 🛛 🗞 Nominal 🔉 Input
	RespondentID	and the options at my finger	🗐 🛛 🧮 Right 🛛 🔒 Nominal 🕒 Input
-	StartDate	📕 💊 Q29e. I can hardly wait to see what	Right & Nominal Numut
-	💒 EndDate	📃 🛁 💑 Q29h. I am a person who loves vari	
-	💑 Q2. First, what are some of the t	Post Hoc	🔜 🔤 Multivariate: Profile Plots 🛛 🔀
_	💑 Q3a. Watch television [Q3a]	Fixed Factor(s):	Eactors:
	💑 Q3b. Listen to the radio [Q3b]	SaR Fave genre to see at home [Fa	
	💑 Q3c. Read a magazine [Q3c]	Gender [Gender]	Cander
	🔊 Q3d. Read a book [Q3d]		Separate Lines:
	🔊 Q3e. Read a newspaper [Q3e]		FaveGenre
-	Q31. Go out to see a film in a triea	Covariate(s):	
-	Gog. Watch a him NOT at a theat		Separate Plots:
_	Qon. Surf the internet for pleas		
	A G3i, Go on Facebook [G3i]		
	Register of the construction of the constructi		Plots: Add Change Remove
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	🔏 Q3m. Go to see live plays perfor	WLS Weight:	
-	an 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		
	ОК	Paste Reset Cancel Help	Continue Cancel Help
	11 U Q28c. Fotte	en share videos via Facebook. {1, 1-Not at None 1	
	11 0 Q28d. Lofte	en share videos on Instagram. {1, 1-Not at None 1	11 🗏 Right 😞 Nominal 📏 Input
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Once IVs are in the boxes, click Add to create a graph showing the IVs interaction

Click on the interaction IVs to highlight and then click Continue

_	🚰 Multivariate: Profile Plots 🛛 🛛 🔀	🙀 Multivariate: Profile Plots 🛛 🗙
	Factors: FaveGenre Gender Separate Lines: FaveGenre Separate Lines: FaveGenre Separate Plots:	Factors: Horizontal Axis: FaveGenre FaveGenre Gender Separate Lines: Gender Gender
	Plots: Add Change Remove	Plots: Add Change Remove
		FaveGenre*Gender
_	Continue Cancel Help	Continue Cancel Help

Click Post Hoc Move IV to the right using arrow key Select Scheffe and Tukey's-b Continue



Click Options Highlight all IVs and the Interaction in the left, click arrow to move to the right box

Select Descriptive Statistics, Estimates of effect size, Observed Power, and Homogeneity tests Continue

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c 🖪	Multivaria	te	0001 0		21 11 12 2 2 1 1 10	••	XI	1	Multivariate: Options		×
	 Respond StartDate EndDate C.First, Q.3a. Wai Q.3b. List Q.3c. Res Q.3d. Res Q.3d. Res Q.3f. Go Q.3f. Go Q.36. Wai 	entID what are some tch television [G en to the radio] id a magazine [id a book [Q3D] id a newspape out to see a film NOT #	e of the t (Q3b) Q3c] r [Q3e] in a thea at a theat	•	Dependent Variables: Q29a. I love the options at my fing Q29e. I can hardly wait to see wh Q29h. I am a person who loves va Exced Factor(s): Q5aR Fave genre to see at home Gender [Gender] Covariate(s):	er at ari (Fa Post <u>Hoc.</u> <u>Save</u> (Options		AN THE THE THE THE THE THE THE THE THE	Estimated Marginal Means Factor(s) and Factor Interactions: (OVERALL) FaveGenre Gender FaveGenre*Gender	Displa Fave Fave Cenc Fave	y Means for: Genre Ier Genre*Gender ompare main effects dence interval adjustment: none)
	 Q3h. "Su Q3i. Chea Q3i. Chea Q3i. Chea Q3i. Co t Q3k. Play Q3k. Play Q3k. Co t Q3m. Go 	rf" the Internet ck my email [Q3 on Facebook [Q v video games c o see live music to see live play	"for pleas i] 3j] on some d cal conce rs perfor	Paste	WLS Weight:			A THE THE THE THE THE THE	Display Descriptive statistics Estimates of effect size Observed power Parameter estimates SSCP matrices Residual SSCP matrix	Transford Homogen Spread v Residual	nation matrix eity tests s. level plot plot t estimable function
	11		C28c Lotter) share v	ideos via Eacebook 1/1 1-Not at	None	11	-	Circlés and Isual Or Confeile		05.00
c	11	0	Q28d Lofter	i share v	ideos on Instagram (1, 1-Not at)	None	11		Significance level: .05 Confide	nce intervais are	95.0 %
c	11	0	Q28e. I like	to watch	TV shows on a la {1, 1-Not at	None	11	3	Continue	Cancel He	q
с	11	0	Q28f. I like t	o make s	short videos that I {1, 1-Not at .	None	11	E F	Right 💦 Nominal	🔪 Input	

CLICK OK TO RUN MANOVA! ©

III. SPSS Output

CORRELATIONS /VARIABLES=Q29e Q29a Q29h /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.

Correlations

	Notes	
Output Created		19-APR-2016 08:53:06
Comments		
Input	Data	C:\Users\2651491\Downloads\filmtv
		(1).sav
	Active Dataset	DataSet1
	Filter	<none></none>
	Weight	<none></none>
	Split File	<none></none>
	N of Rows in Working Data	543
	File	545
Missing Value Handling	Definition of Missing	User-defined missing values are
		treated as missing.
	Cases Used	Statistics for each pair of variables are
		based on all the cases with valid data
		for that pair.
Syntax		CORRELATIONS
		/VARIABLES=Q29e Q29a Q29h
		/PRINT=TWOTAIL NOSIG
		/MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.06
	Elapsed Time	00:00:00.08

Correlations								
				Q29h. I am a				
			Q29a. I love the	person who				
			options at my	loves variety,				
		Q29e. I can	finger tips today,	watches new				
		hardly wait to	watching videos	shows on TV				
		see what	on my phone,	and sees a lot of				
		technology	texting,	different films in				
		comes next.	streaming films.	theaters.				
Q29e. I can hardly wait to	Pearson Correlation	1	.429**	.251**				
see what technology comes	Sig. (2-tailed)		.000	.000				
next.	Ν	364	364	364				
Q29a. I love the options at	Pearson Correlation	.429**	1	.230**				
my finger tips today,	Sig. (2-tailed)	.000		.000				
watching videos on my	Ν							
phone, texting, streaming		364	364	364				
films.								
Q29h. I am a person who	Pearson Correlation	.251**	.230**	1				
loves variety, watches new	Sig. (2-tailed)	.000	.000					
shows on TV and sees a lot	Ν	204	204	204				
of different films in theaters.		364	364	364				

**. Correlation is significant at the 0.01 level (2-tailed).

```
GLM Q29a Q29e Q29h BY FaveGenre Gender
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/POSTHOC=FaveGenre(BTUKEY SCHEFFE)
/PLOT=PROFILE(Gender*FaveGenre)
/EMMEANS=TABLES(FaveGenre)
/EMMEANS=TABLES(Gender)
/EMMEANS=TABLES(FaveGenre*Gender)
/PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY
/CRITERIA=ALPHA(.05)
/DESIGN= FaveGenre Gender FaveGenre*Gender.
```

General Linear Model

	Notes	
Output Created		19-APR-2016 08:53:40
Comments		
Input	Data	C:\Users\2651491\Downloads\filmtv
		(1).sav
	Active Dataset	DataSet1
	Filter	<none></none>
	Weight	<none></none>
	Split File	<none></none>
	N of Rows in Working Data	
	File	543
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 Q29a Q29e Q29h BY FaveGenre
		Gender
		/METHOD=SSTYPE(3)
		/INTERCEPT=INCLUDE
		/POSTHOC=FaveGenre(BTUKEY
		SCHEFFE)
		/PLOT=PROFILE(Gender*FaveGenre)
		/EMMEANS=TABLES(FaveGenre)
		/EMMEANS=TABLES(Gender)
		/EMMEANS=TABLES(FaveGenre*Gen
		der)
		/PRINT=DESCRIPTIVE ETASQ
		OPOWER HOMOGENEITY
		/CRITERIA=ALPHA(.05)
		/DESIGN= FaveGenre Gender
		FaveGenre*Gender.
Resources	Processor Time	00:00:00.34

00:00:00.36

I

		Value Label	Ν
Q5aR Fave genre to see at home	1.00	Action, adventure, scifi	106
	2.00	Comedy	97
	3.00	Romance, drama	73
	4.00	Other	79
Gender	1	1-Male	135
	2	2-Female	220

Between-Subjects Factors

Descriptive Statistics

	Q5aR Fave genre to see at				
	home	Gender	Mean	Std. Deviation	N
Q29a. I love the options at	Action, adventure, scifi	1-Male	4.83	1.966	58
my finger tips today,		2-Female	5.25	1.578	48
watching videos on my		Total	5.02	1.805	106
phone, texting, streaming	Comedy	1-Male	5.24	2.010	42
films.		2-Female	5.78	1.607	55
		Total	5.55	1.803	97
	Romance, drama	1-Male	4.10	1.969	10
		2-Female	4.81	1.983	63
		Total	4.71	1.982	73
	Other	1-Male	5.24	1.985	25
		2-Female	5.44	1.839	54
		Total	5.38	1.876	79
	Total	1-Male	4.98	1.987	135
		2-Female	5.30	1.799	220
		Total	5.18	1.876	355

Q29e. I can hardly wait to	Action, adventure, scifi	1-Male	4.62	1.674	58
see what technology comes		2-Female	4.15	1.663	48
next.		Total	4.41	1.678	106
	Comedy	1-Male	4.81	1.627	42
		2-Female	4.42	1.950	55
		Total	4.59	1.819	97
	Romance, drama	1-Male	3.70	1.703	10
		2-Female	4.19	1.749	63
		Total	4.12	1.740	73
	Other	1-Male	5.12	1.740	25
		2-Female	4.31	1.979	54
		Total	4.57	1.933	79
	Total	1-Male	4.70	1.689	135
		2-Female	4.27	1.832	220
		Total	4.43	1.789	355
Q29h. I am a person who	Action, adventure, scifi	1-Male	4.74	1.607	58
loves variety, watches new		2-Female	4.17	1.767	48
shows on TV and sees a lot		Total	4.48	1.697	106
of different films in theaters.	Comedy	1-Male	3.90	1.665	42
		2-Female	4.58	1.560	55
		Total	4.29	1.633	97
	Romance, drama	1-Male	4.00	1.944	10
		2-Female	4.06	1.813	63
		Total	4.05	1.817	73
	Other	1-Male	4.20	1.756	25
		2-Female	3.52	1.950	54
		Total	3.73	1.906	79
	Total	1-Male	4.33	1.701	135
		2-Female	4.08	1.806	220
		Total	4.17	1.769	355

Box's Test of Equality

of Covariance Matrices^a

Box's M	31.007
F	.706
df1	42

df2	20006.754
Sig.	.924

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.^a a. Design: Intercept + FaveGenre + Gender +

FaveGenre * Gender

Effect		Value	F	Hypothesis df	Error df
Intercept	Pillai's Trace	.899	1023.127 ^b	3.000	345.000
	Wilks' Lambda	.101	1023.127 ^b	3.000	345.000
	Hotelling's Trace	8.897	1023.127 ^b	3.000	345.000
	Roy's Largest Root	8.897	1023.127 ^b	3.000	345.000
FaveGenre	Pillai's Trace	.051	1.998	9.000	1041.000
	Wilks' Lambda	.950	2.003	9.000	839.790
	Hotelling's Trace	.052	2.004	9.000	1031.000
	Roy's Largest Root	.037	4.334 ^c	3.000	347.000
Gender	Pillai's Trace	.028	3.337 ^b	3.000	345.000
	Wilks' Lambda	.972	3.337 ^b	3.000	345.000
	Hotelling's Trace	.029	3.337 ^b	3.000	345.000
	Roy's Largest Root	.029	3.337 ^b	3.000	345.000
FaveGenre * Gender	Pillai's Trace	.032	1.265	9.000	1041.000
	Wilks' Lambda	.968	1.266	9.000	839.790
	Hotelling's Trace	.033	1.265	9.000	1031.000
	Roy's Largest Root	.025	2.894 ^c	3.000	347.000

Multivariate Tests^a

Multivariate Tests^a

Effect		Sia.	Partial Eta Squared	Noncent. Parameter	Observed Power ^d
Intercept	Pillai's Trace	.000	.899	3069.381	1.000
	Wilks' Lambda	.000	.899	3069.381	1.000
	Hotelling's Trace	.000	.899	3069.381	1.000

	-				
	Roy's Largest Root	.000	.899	3069.381	1.000
FaveGenre	Pillai's Trace	.037	.017	17.978	.859
	Wilks' Lambda	.036	.017	14.596	.760
	Hotelling's Trace	.036	.017	18.033	.860
	Roy's Largest Root	.005	.036	13.001	.867
Gender	Pillai's Trace	.020	.028	10.011	.756
	Wilks' Lambda	.020	.028	10.011	.756
	Hotelling's Trace	.020	.028	10.011	.756
	Roy's Largest Root	.020	.028	10.011	.756
FaveGenre * Gender	Pillai's Trace	.252	.011	11.384	.628
	Wilks' Lambda	.252	.011	9.229	.518
	Hotelling's Trace	.252	.011	11.385	.628
	Roy's Largest Root	.035	.024	8.683	.688

a. Design: Intercept + FaveGenre + Gender + FaveGenre * Gender

b. Exact statistic

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

d. Computed using alpha = .05

	F	df1	df2	Sig.
Q29a. I love the options at				
my finger tips today,				
watching videos on my	1.580	7	347	.140
phone, texting, streaming				
films.				
Q29e. I can hardly wait to				
see what technology comes	1.235	7	347	.282
next.				
Q29h. I am a person who				
loves variety, watches new	072	7	247	454
shows on TV and sees a lot	.973	1	347	.451
of different films in theaters.				

Levene's Test of Equality of Error Variances^a

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.^a

a. Design: Intercept + FaveGenre + Gender + FaveGenre * Gender

		Type III					Partial	Noncent.	
	Dependent	Sum of		Mean			Eta	Paramete	Observe
Source	Variable	Squares	df	Square	F	Sig.	Squared	r	d Power ^d
Corrected Model	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	51.678ª	7	7.383	2.144	.039	.041	15.009	.812
	Q29e. I can hardly wait to see what technology comes next. Q29h. I am a	33.600 ^b	7	4.800	1.515	.161	.030	10.603	.634
	person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	55.156°	7	7.879	2.599	.013	.050	18.193	.891
Intercept	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	6507.157	1	6507.15 7	1889. 867	.000	.845	1889.867	1.000
	Q29e. I can hardly wait to see what technology comes next.	4902.461	1	4902.46 1	1547. 074	.000	.817	1547.074	1.000

Tests of Between-Subjects Effects

	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	4325.629	1	4325.62 9	1426. 778	.000	.804	1426.778	1.000
FaveGenre	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	32.398	3	10.799	3.136	.026	.026	9.409	.727
	Q29e. I can hardly wait to see what technology comes next.	16.414	3	5.471	1.727	.161	.015	5.180	.450
	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	15.861	3	5.287	1.744	.158	.015	5.232	.454
Gender	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	13.891	1	13.891	4.034	.045	.011	4.034	.517
	Q29e. I can hardly wait to see what technology comes next.	5.480	1	5.480	1.729	.189	.005	1.729	.259

	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	1.045	1	1.045	.345	.558	.001	.345	.090
FaveGenre *	Q29a. I love the								
Gender	options at my								
	finger tips today,								
	watching videos	1.838	3	.613	.178	.911	.002	.534	.083
	on my phone,								
	texting,								
	streaming films.								
	Q29e. I can								
	hardly wait to see	0 705			4			0.000	070
	what technology	9.785	3	3.262	1.029	.380	.009	3.088	.279
	comes next.								
	Q29h. I am a								
	person who loves								
	variety, watches								
	new shows on	26.225	3	8.742	2.883	.036	.024	8.650	.687
	TV and sees a lot								
	of different films								
	in theaters.								
Error	Q29a. I love the								
	options at my								
	finger tips today,								
	watching videos	1194.784	347	3.443					
	on my phone,								
	texting,								
	streaming films.								
	Q29e. I can								
	hardly wait to see	1000 505	247	2 460					
	what technology	1099.595	347	3.169					
	comes next.								

	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	1052.016	347	3.032			
Total	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	10773.00 0	355				
	Q29e. I can hardly wait to see what technology comes next. Q29h. I am a	8112.000	355				
	person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	7294.000	355				
Corrected Total	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	1246.462	354				
	Q29e. I can hardly wait to see what technology comes next.	1133.194	354				

Q29h. I am a					
person who loves					
variety, watches					
new shows on	1107.172	354			
TV and sees a lot					
of different films					
in theaters.					

- a. R Squared = .041 (Adjusted R Squared = .022)
- b. R Squared = .030 (Adjusted R Squared = .010)
- c. R Squared = .050 (Adjusted R Squared = .031)
- d. Computed using alpha = .05

Estimated Marginal Means

	Q5aR Fave genre to see at			95% Confidence Interval
Dependent Variable	home	Mean	Std. Error	Lower Bound
Q29a. I love the options at	Action, adventure, scifi	5.039	.181	4.683
my finger tips today,	Comedy	5.510	.190	5.136
watching videos on my	Romance, drama	4.455	.316	3.834
phone, texting, streaming films.	Other	5.342	.224	4.901
Q29e. I can hardly wait to	Action, adventure, scifi	4.383	.174	4.042
see what technology comes	Comedy	4.614	.182	4.255
next.	Romance, drama	3.945	.303	3.349
	Other	4.717	.215	4.294
Q29h. I am a person who	Action, adventure, scifi	4.454	.170	4.120
loves variety, watches new	Comedy	4.243	.178	3.892
shows on TV and sees a lot	Romance, drama	4.032	.296	3.449
of different films in theaters.	Other	3.859	.211	3.445

1. Q5aR Fave genre to see at home

		95% Confidence Interval
Dependent Variable	Q5aR Fave genre to see at home	Upper Bound
Q29a. I love the options at my finger tips	Action, adventure, scifi	5.395
today, watching videos on my phone, texting, streaming films.	Comedy	5.884
	Romance, drama	5.076
	Other	5.784
Q29e. I can hardly wait to see what	Action, adventure, scifi	4.725
technology comes next.	Comedy	4.973
	Romance, drama	4.541
	Other	5.141
Q29h. I am a person who loves variety,	Action, adventure, scifi	4.788
watches new shows on TV and sees a lot	Comedy	4.594
of different films in theaters.	Romance, drama	4.615
	Other	4.273

1. Q5aR Fave genre to see at home

2. Gender							
				95% Confidence Interval			
Dependent Variable	Gender	Mean	Std. Error	Lower Bound	Upper Bound		
Q29a. I love the options at	1-Male	4.851	.197	4.463	5.240		
my finger tips today,	2-Female						
watching videos on my phone, texting, streaming		5.321	.126	5.074	5.569		
films.							
Q29e. I can hardly wait to	1-Male	4.563	.189	4.190	4.935		
see what technology comes	2-Female	4.267	.121	4.030	4.504		
Q29h. I am a person who	1-Male	4.212	.185	3.847	4.576		
loves variety, watches new shows on TV and sees a lot of different films in theaters	2-Female	4.083	.118	3.851	4.315		

	Q5aR Fave genre to see at			
Dependent Variable	home	Gender	Mean	Std. Error
Q29a. I love the options at	Action, adventure, scifi	1-Male	4.828	.244
my finger tips today,		2-Female	5.250	.268
watching videos on my	Comedy	1-Male	5.238	.286
phone, texting, streaming		2-Female	5.782	.250
films.	Romance, drama	1-Male	4.100	.587
		2-Female	4.810	.234
	Other	1-Male	5.240	.371
		2-Female	5.444	.253
Q29e. I can hardly wait to	Action, adventure, scifi	1-Male	4.621	.234
see what technology comes next.		2-Female	4.146	.257
	Comedy	1-Male	4.810	.275
		2-Female	4.418	.240
	Romance, drama	1-Male	3.700	.563
		2-Female	4.190	.224
	Other	1-Male	5.120	.356
		2-Female	4.315	.242
Q29h. I am a person who	Action, adventure, scifi	1-Male	4.741	.229
loves variety, watches new		2-Female	4.167	.251
shows on TV and sees a lot	Comedy	1-Male	3.905	.269
of different films in theaters.		2-Female	4.582	.235
	Romance, drama	1-Male	4.000	.551
		2-Female	4.063	.219
	Other	1-Male	4.200	.348
		2-Female	3.519	.237

	3.	Q5aR	Fave	genre to	see at	home *	Gender
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3. Q5aR Fave genre to see at home * Gender

	Q5aR Fave genre to see at	95% Confide	ence Interval	
Dependent Variable	home	Gender	Lower Bound	Upper Bound
Q29a. I love the options at my	Action, adventure, scifi	1-Male	4.348	5.307
finger tips today, watching		2-Female	4.723	5.777
videos on my phone, texting,	Comedy	1-Male	4.675	5.801

streaming films.		2-Female	5.290	6.274
-	Romance, drama	1-Male	2.946	5.254
	·	2-Female	4.350	5.269
	Other	1-Male	4.510	5.970
		2-Female	4.948	5.941
Q29e. I can hardly wait to see	Action, adventure, scifi	1-Male	4.161	5.080
what technology comes next.		2-Female	3.640	4.651
	Comedy	1-Male	4.269	5.350
		2-Female	3.946	4.890
	Romance, drama	1-Male	2.593	4.807
		2-Female	3.749	4.632
	Other	1-Male	4.420	5.820
		2-Female	3.838	4.791
Q29h. I am a person who	Action, adventure, scifi	1-Male	4.292	5.191
loves variety, watches new		2-Female	3.672	4.661
shows on TV and sees a lot of different films in theaters.	Comedy	1-Male	3.376	4.433
		2-Female	4.120	5.044
	Romance, drama	1-Male	2.917	5.083
		2-Female	3.632	4.495
	Other	1-Male	3.515	4.885
		2-Female	3.052	3.985

Post Hoc Tests

Q5aR Fave genre to see at home

Multiple Comparisons

				Mean	
		(I) Q5aR Fave genre to	(J) Q5aR Fave genre to	Difference (I-	
Dependent Variable		see at home	see at home	J)	Std. Error
Q29a. I love the options	Scheffe	Action, adventure, scifi	Comedy	53	.261
at my finger tips today,			Romance, drama	.31	.282

watching videos on my			Other	36	.276
phone, texting,		Comedy	Action, adventure, scifi	.53	.261
streaming films.			Romance, drama	.83*	.288
			Other	.17	.281
		Romance, drama	Action, adventure, scifi	31	.282
			Comedy	83*	.288
			Other	67	.301
		Other	Action, adventure, scifi	.36	.276
			Comedy	17	.281
			Romance, drama	.67	.301
Q29e. I can hardly wait	Scheffe	Action, adventure, scifi	Comedy	18	.250
to see what technology			Romance, drama	.28	.271
comes next.			Other	16	.265
		Comedy	Action, adventure, scifi	.18	.250
			Romance, drama	.46	.276
			Other	.02	.270
		Romance, drama	Action, adventure, scifi	28	.271
			Comedy	46	.276
			Other	45	.289
		Other	Action, adventure, scifi	.16	.265
			Comedy	02	.270
		<u>.</u>	Romance, drama	.45	.289
Q29h. I am a person	Scheffe	Action, adventure, scifi	Comedy	.19	.245
who loves variety,			Romance, drama	.43	.265
watches new shows on			Other	.75*	.259
TV and sees a lot of		Comedy	Action, adventure, scifi	19	.245
different films in			Romance, drama	.23	.270
theaters.			Other	.55	.264
		Romance, drama	Action, adventure, scifi	43	.265
			Comedy	23	.270
			Other	.32	.283
		Other	Action, adventure, scifi	75 [*]	.259
			Comedy	55	.264
			Romance, drama	32	.283

	Multiple Comparisons						
		(I) Q5aR Fave genre to	(J) Q5aR Fave genre to		95% Confidence Interval		
Dependent Variable		see at home	see at home	Sig.	Lower Bound		
Q29a. I love the options	Scheffe	Action, adventure, scifi	Comedy	.253	-1.26		
at my finger tips today,			Romance, drama	.758	49		
watching videos on my phone, texting,			Other	.635	-1.14		
		Comedy	Action, adventure, scifi	.253	20		
streaming films.			Romance, drama	.040	.03		
			Other	.950	62		
		Romance, drama	Action, adventure, scifi	.758	-1.10		
			Comedy	.040	-1.64		
			Other	.181	-1.51		
		Other	Action, adventure, scifi	.635	41		
			Comedy	.950	96		
			Romance, drama	.181	18		
Q29e. I can hardly wait	Scheffe	Action, adventure, scifi	Comedy	.912	88		
to see what technology			Romance, drama	.780	48		
comes next.			Other	.943	91		
		Comedy	Action, adventure, scifi	.912	52		
			Romance, drama	.419	31		
			Other	1.000	74		
		Romance, drama	Action, adventure, scifi	.780	-1.04		
			Comedy	.419	-1.24		
			Other	.497	-1.26		
		Other	Action, adventure, scifi	.943	58		
			Comedy	1.000	78		
	-	-	Romance, drama	.497	37		
Q29h. I am a person	Scheffe	Action, adventure, scifi	Comedy	.892	49		
who loves variety,			Romance, drama	.460	32		
watches new shows on			Other	.041	.02		
i v and sees a lot of		Comedy	Action, adventure, scifi	.892	88		
theaters			Romance, drama	.861	52		
			Other	.222	19		

Romance, drama	Action, adventure, scifi	.460	-1.17
	Comedy	.861	99
	Other	.732	47
Other	Action, adventure, scifi	.041	-1.47
	Comedy	.222	-1.30
	Romance, drama	.732	-1.11

Multiple Comparisons

				95%
				Confidence
		(I) Q5aR Fave genre to see	(J) Q5aR Fave genre to	Interval
Dependent Variable		at home	see at home	Upper Bound
Q29a. I love the options at	Scheffe	Action, adventure, scifi	Comedy	.20
my finger tips today,			Romance, drama	1.10
watching videos on my			Other	.41
phone, texting, streaming		Comedy	Action, adventure, scifi	1.26
films.			Romance, drama	1.64
			Other	.96
		Romance, drama	Action, adventure, scifi	.49
			Comedy	03
			Other	.18
		Other	Action, adventure, scifi	1.14
			Comedy	.62
			Romance, drama	1.51
Q29e. I can hardly wait to	Scheffe	Action, adventure, scifi	Comedy	.52
see what technology			Romance, drama	1.04
comes next.			Other	.58
		Comedy	Action, adventure, scifi	.88
			Romance, drama	1.24
			Other	.78
		Romance, drama	Action, adventure, scifi	.48
			Comedy	.31
			Other	.37
		Other	Action, adventure, scifi	.91
			Comedy	.74
			Romance, drama	1.26
Q29h. I am a person who	Scheffe	Action, adventure, scifi	Comedy	.88

loves variety, watches new		Romance, drama	1.17
shows on TV and sees a lot		Other	1.47
of different films in theaters.	Comedy	Action, adventure, scifi	.49
		Romance, drama	.99
		Other	1.30
	Romance, drama	Action, adventure, scifi	.32
		Comedy	.52
		Other	1.11
	Other	Action, adventure, scifi	02
		Comedy	.19
		Romance, drama	.47

Based on observed means.

The error term is Mean Square(Error) = 3.032.

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

Homogeneous Subsets

texting, streaming films.				
	Q5aR Fave genre to see at		Sub	oset
	home	N	1	2
Tukey B ^{a,b,c}	Romance, drama	73	4.71	
	Action, adventure, scifi	106	5.02	5.02
	Other	79	5.38	5.38
	Comedy	97		5.55
Scheffe ^{a,b,c}	Romance, drama	73	4.71	
	Action, adventure, scifi	106	5.02	5.02
	Other	79	5.38	5.38
	Comedy	97		5.55
	Sig.		.134	.322

Q29a. I love the options at my finger tips today, watching videos on my phone,

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 3.443.

a. Uses Harmonic Mean Sample Size = 86.768.

b. The group sizes are unequal. The harmonic mean of the group sizes is used.

Type I error levels are not guaranteed.

c. Alpha = .05.

	Q5aR Fave genre to see at		Subset
	home	N	1
Tukey B ^{a,b,c}	Romance, drama	73	4.12
	Action, adventure, scifi	106	4.41
	Other	79	4.57
	Comedy	97	4.59
Scheffe ^{a,b,c}	Romance, drama	73	4.12
	Action, adventure, scifi	106	4.41
	Other	79	4.57
	Comedy	97	4.59
	Sig.		.400

Q29e. I can hardly wait to see what technology comes next.

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 3.169.

a. Uses Harmonic Mean Sample Size = 86.768.

b. The group sizes are unequal. The harmonic mean of the group sizes

is used. Type I error levels are not guaranteed.

c. Alpha = .05.

		In theaters.		
	Q5aR Fave genre to see at		Sub	oset
	home	N	1	2
Tukey B ^{a,b,c}	Other	79	3.73	
	Romance, drama	73	4.05	4.05
	Comedy	97	4.29	4.29
	Action, adventure, scifi	106		4.48
Scheffe ^{a,b,c}	Other	79	3.73	

Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.

Romance, drama	73	4.05	4.05
Comedy	97	4.29	4.29
Action, adventure, scifi	106		4.48
Sig.		.223	.458

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 3.032.

a. Uses Harmonic Mean Sample Size = 86.768.

b. The group sizes are unequal. The harmonic mean of the group sizes is used.

Type I error levels are not guaranteed.

c. Alpha = .05.

Profile Plots

Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.



Estimated Marginal Means of Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.



Estimated Marginal Means of Q29e. I can hardly wait to see what technology comes next.

Q29e. I can hardly wait to see what technology comes next.

Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.



III. (b) MANCOVA Output

GLM Q29a Q29e Q29h BY FaveGenre Gender WITH Q29o Q29t /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /PLOT=PROFILE(Gender*FaveGenre) /EMMEANS=TABLES(FaveGenre) WITH(Q29o=MEAN Q29t=MEAN) /EMMEANS=TABLES(Gender) WITH(Q29o=MEAN Q29t=MEAN) /EMMEANS=TABLES(FaveGenre*Gender) WITH(Q29o=MEAN Q29t=MEAN) /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY /CRITERIA=ALPHA(.05) /DESIGN=Q29o Q29t FaveGenre Gender FaveGenre*Gender.

General Linear Model

	Notes	
Output Created		19-APR-2016 10:33:45
Comments		
Input	Data	C:\Users\2651491\Downloads\filmtv
		(1).sav
	Active Dataset	DataSet1
	Filter	<none></none>
	Weight	<none></none>
	Split File	<none></none>
	N of Rows in Working Data	542
	File	545
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 Q29a Q29e Q29h BY FaveGenre Gender WITH Q29o Q29t /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE		
		/PLOT=PROFILE(Gender*FaveGenre) /EMMEANS=TABLES(FaveGenre) WITH(Q29o=MEAN Q29t=MEAN) /EMMEANS=TABLES(Gender) WITH(Q29o=MEAN Q29t=MEAN)		
		/EMMEANS=TABLES(FaveGenre*Gen der) WITH(Q29o=MEAN Q29t=MEAN) /PRINT=DESCRIPTIVE ETASQ OPOWER HOMOGENEITY /CRITERIA=ALPHA(.05) /DESIGN=Q29o Q29t FaveGenre		
5		Gender FaveGenre*Gender.		
Resources	Processor Lime	00:00:00.37		
	Elapsed Time	00:00:00.59		

Between-Subjects Factors					
		Value Label	N		
Q5aR Fave genre to see at	1.00	Action,	106		
home		adventure, scifi			
	2.00	Comedy	97		
	3.00	Romance,	72		
		drama	13		
	4.00	Other	79		
Gender	1	1-Male	135		
	2	2-Female	220		

Descriptive Statistics					
	Q5aR Fave genre to see at				
	home	Gender	Mean	Std. Deviation	Ν
Q29a. I love the options at	Action, adventure, scifi	1-Male	4.83	1.966	58

			-		
my finger tips today,		2-Female	5.25	1.578	48
watching videos on my		Total	5.02	1.805	106
phone, texting, streaming	Comedy	1-Male	5.24	2.010	42
films.		2-Female	5.78	1.607	55
		Total	5.55	1.803	97
	Romance, drama	1-Male	4.10	1.969	10
		2-Female	4.81	1.983	63
		Total	4.71	1.982	73
	Other	1-Male	5.24	1.985	25
		2-Female	5.44	1.839	54
		Total	5.38	1.876	79
	Total	1-Male	4.98	1.987	135
		2-Female	5.30	1.799	220
		Total	5.18	1.876	355
Q29e. I can hardly wait to	Action, adventure, scifi	1-Male	4.62	1.674	58
see what technology comes		2-Female	4.15	1.663	48
next.		Total	4.41	1.678	106
	Comedy	1-Male	4.81	1.627	42
		2-Female	4.42	1.950	55
		Total	4.59	1.819	97
	Romance, drama	1-Male	3.70	1.703	10
		2-Female	4.19	1.749	63
		Total	4.12	1.740	73
	Other	1-Male	5.12	1.740	25
		2-Female	4.31	1.979	54
		Total	4.57	1.933	79
	Total	1-Male	4.70	1.689	135
		2-Female	4.27	1.832	220
		Total	4.43	1.789	355
Q29h. I am a person who	Action, adventure, scifi	1-Male	4.74	1.607	58
loves variety, watches new		2-Female	4.17	1.767	48
shows on TV and sees a lot		Total	4.48	1.697	106
of different films in theaters.	Comedy	1-Male	3.90	1.665	42
		2-Female	4.58	1.560	55
		Total	4.29	1.633	97
	Romance, drama	1-Male	4.00	1.944	10

	2-Female	4.06	1.813	63
	Total	4.05	1.817	73
Other	1-Male	4.20	1.756	25
	2-Female	3.52	1.950	54
	Total	3.73	1.906	79
Total	1-Male	4.33	1.701	135
	2-Female	4.08	1.806	220
	Total	4.17	1.769	355

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Box's Test of Equality

of Covaria	of Covariance Matrices ^a			
Box's M	31.007			
F	.706			
df1	42			
df2	20006.754			
Sig.	.924			

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.^a a. Design: Intercept + Q290 + Q29t + FaveGenre + Gender + FaveGenre * Gender

Multivariate Tests ^a							
Effect		Value	F	Hypothesis df	Error df	Sig.	
Intercept	Pillai's Trace	.204	29.272 ^b	3.000	343.000	.000	
	Wilks' Lambda	.796	29.272 ^b	3.000	343.000	.000	
	Hotelling's Trace	.256	29.272 ^b	3.000	343.000	.000	
	Roy's Largest Root	.256	29.272 ^b	3.000	343.000	.000	
Q290	Pillai's Trace	.079	9.830 ^b	3.000	343.000	.000	
	Wilks' Lambda	.921	9.830 ^b	3.000	343.000	.000	

	Hotelling's Trace	.086	9.830 ^b	3.000	343.000	.000
	Roy's Largest Root	.086	9.830 ^b	3.000	343.000	.000
Q29t	Pillai's Trace	.084	10.544 ^b	3.000	343.000	.000
	Wilks' Lambda	.916	10.544 ^b	3.000	343.000	.000
	Hotelling's Trace	.092	10.544 ^b	3.000	343.000	.000
	Roy's Largest Root	.092	10.544 ^b	3.000	343.000	.000
FaveGenre	Pillai's Trace	.050	1.938	9.000	1035.000	.043
	Wilks' Lambda	.951	1.944	9.000	834.922	.043
	Hotelling's Trace	.051	1.945	9.000	1025.000	.043
	Roy's Largest Root	.037	4.295 ^c	3.000	345.000	.005
Gender	Pillai's Trace	.026	3.076 ^b	3.000	343.000	.028
	Wilks' Lambda	.974	3.076 ^b	3.000	343.000	.028
	Hotelling's Trace	.027	3.076 ^b	3.000	343.000	.028
	Roy's Largest Root	.027	3.076 ^b	3.000	343.000	.028
FaveGenre * Gender	Pillai's Trace	.028	1.091	9.000	1035.000	.367
	Wilks' Lambda	.972	1.089	9.000	834.922	.368
	Hotelling's Trace	.029	1.087	9.000	1025.000	.369
	Roy's Largest Root	.021	2.362 ^c	3.000	345.000	.071

Multivariate Tests^a

		Partial Eta	Noncent.	
Effect		Squared	Parameter	Observed Power ^d
Intercept	Pillai's Trace	.204	87.817	1.000
	Wilks' Lambda	.204	87.817	1.000
	Hotelling's Trace	.204	87.817	1.000
	Roy's Largest Root	.204	87.817	1.000
Q290	Pillai's Trace	.079	29.489	.998
	Wilks' Lambda	.079	29.489	.998
	Hotelling's Trace	.079	29.489	.998
	Roy's Largest Root	.079	29.489	.998
Q29t	Pillai's Trace	.084	31.631	.999
	Wilks' Lambda	.084	31.631	.999
	Hotelling's Trace	.084	31.631	.999
	Roy's Largest Root	.084	31.631	.999
FaveGenre	Pillai's Trace	.017	17.445	.846
	Wilks' Lambda	.017	14.165	.745
	Hotelling's Trace	.017	17.505	.848
	Roy's Largest Root	.036	12.885	.863

Gender	Pillai's Trace	.026	9.228	.718
	Wilks' Lambda	.026	9.228	.718
	Hotelling's Trace	.026	9.228	.718
	Roy's Largest Root	.026	9.228	.718
FaveGenre * Gender	Pillai's Trace	.009	9.815	.550
	Wilks' Lambda	.009	7.944	.447
	Hotelling's Trace	.009	9.784	.548
	Roy's Largest Root	.020	7.087	.590

- a. Design: Intercept + Q290 + Q29t + FaveGenre + Gender + FaveGenre * Gender
- b. Exact statistic
- c. The statistic is an upper bound on F that yields a lower bound on the significance level.
- d. Computed using alpha = .05

	F	df1	df2	Sig.
Q29a. I love the options at				
my finger tips today,				
watching videos on my	1.533	7	347	.155
phone, texting, streaming				
films.				
Q29e. I can hardly wait to				
see what technology comes	1.056	7	347	.392
next.				
Q29h. I am a person who				
loves variety, watches new	1 1 1 1	7	247	226
shows on TV and sees a lot	1.141	1	347	.330
of different films in theaters.				

Levene's Test of Equality of Error Variances^a

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.^a

a. Design: Intercept + Q290 + Q29t + FaveGenre + Gender + FaveGenre * Gender

		16313	OI DELW	een-Subjet		613			
		Type III					Partial	Noncent.	
	Dependent	Sum of		Mean			Eta	Paramete	Observed
Source	Variable	Squares	df	Square	F	Sig.	Squared	r	Power ^d
Corrected Model	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	148.226ª	9	16.470	5.174	.000	.119	46.564	1.000
	Q29e. I can hardly wait to see what technology comes next. Q29h. I am a	107.157 ^ь	9	11.906	4.003	.000	.095	36.031	.996
	person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	158.935°	9	17.659	6.425	.000	.144	57.826	1.000
Intercept	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	170.918	1	170.918	53.69 2	.000	.135	53.692	1.000
	Q29e. I can hardly wait to see what technology comes next.	143.032	1	143.032	48.09 4	.000	.122	48.094	1.000

Tests of Between-Subjects Effects

	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	78.656	1	78.656	28.61 8	.000	.077	28.618	1.000
Q29o	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	66.107	1	66.107	20.76 7	.000	.057	20.767	.995
	Q29e. I can hardly wait to see what technology comes next.	15.796	1	15.796	5.311	.022	.015	5.311	.632
	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	36.426	1	36.426	13.25 3	.000	.037	13.253	.953
Q29t	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	19.791	1	19.791	6.217	.013	.018	6.217	.701
	Q29e. I can hardly wait to see what technology comes next.	49.542	1	49.542	16.65 8	.000	.046	16.658	.983

	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	54.477	1	54.477	19.82 1	.000	.054	19.821	.993
FaveGenre	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films	28.411	3	9.470	2.975	.032	.025	8.925	.702
	Q29e. I can hardly wait to see what technology comes next.	12.531	3	4.177	1.405	.241	.012	4.214	.372
	person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	16.288	3	5.429	1.975	.117	.017	5.926	.508
Gender	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	8.409	1	8.409	2.642	.105	.008	2.642	.367
	Q29e. I can hardly wait to see what technology comes next.	7.575	1	7.575	2.547	.111	.007	2.547	.356

	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	2.692	1	2.692	.979	.323	.003	.979	.167
FaveGenre *	Q29a. I love the								
Gender	options at my								
	finger tips today,								
	watching videos	3.272	3	1.091	.343	.795	.003	1.028	.117
	on my phone,								
	texting,								
	streaming films.								
	Q29e. I can								
	hardly wait to see	6 200	2	2 100	706	540	006	2 1 1 0	200
	what technology	6.300	3	2.100	.706	.549	.006	2.110	.200
	comes next.								
	Q29h. I am a								
	person who loves								
	variety, watches								
	new shows on	19.272	3	6.424	2.337	.073	.020	7.012	.585
	TV and sees a lot								
	of different films								
	in theaters.								
Error	Q29a. I love the								
	options at my								
	finger tips today,								
	watching videos	1098.236	345	3.183					
	on my phone,								
	texting,								
	streaming films.								
	Q29e. I can								
	hardly wait to see	1026 029	21E	2 074					
	what technology	1020.030	343	2.974					
	comes next.								

	Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	948.237	345	2.749			
Total	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	10773.00 0	355				
	Q29e. I can hardly wait to see what technology comes next. Q29h. I am a	8112.000	355				
	person who loves variety, watches new shows on TV and sees a lot of different films in theaters.	7294.000	355				
Corrected Total	Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.	1246.462	354				
	Q29e. I can hardly wait to see what technology comes next.	1133.194	354				

Q29h. I am a					
person who loves					
variety, watches					
new shows on	1107.172	354			
TV and sees a lot					
of different films					
in theaters.					

- a. R Squared = .119 (Adjusted R Squared = .096)
- b. R Squared = .095 (Adjusted R Squared = .071)
- c. R Squared = .144 (Adjusted R Squared = .121)
- d. Computed using alpha = .05

Estimated Marginal Means

	Q5aR Fave genre to see at			95% Confidence Interval
Dependent Variable	home	Mean	Std. Error	Lower Bound
Q29a. I love the options at my finger tips today, watching videos on my	Action, adventure, scifi	5.087ª	.174	4.744
	Comedy	5.476ª	.183	5.116
	Romance, drama	4.497 ^a	.304	3.899
phone, texting, streaming films.	Other	5.413ª	.217	4.985
Q29e. I can hardly wait to	Action, adventure, scifi	4.423 ^a	.168	4.091
see what technology comes	Comedy	4.580 ^a	.177	4.232
next.	Romance, drama	4.019 ^a	.294	3.441
	Other	4.725 ^a	.210	4.312
Q29h. I am a person who	Action, adventure, scifi	4.503 ^a	.162	4.184
loves variety, watches new	Comedy	4.203 ^a	.170	3.869
shows on TV and sees a lot	Romance, drama	4.108 ^a	.283	3.552
of different films in theaters.	Other	3.889 ^a	.202	3.492

1. Q5aR Fave genre to see at home

		95% Confidence Interval
Dependent Variable	Q5aR Fave genre to see at home	Upper Bound
Q29a. I love the options at my finger tips	Action, adventure, scifi	5.430
today, watching videos on my phone,	Comedy	5.836
texting, streaming films.	Romance, drama	5.096
	Other	5.840
Q29e. I can hardly wait to see what	Action, adventure, scifi	4.754
technology comes next.	Comedy	4.928
	Romance, drama	4.598
	Other	5.138
Q29h. I am a person who loves variety,	Action, adventure, scifi	4.821
watches new shows on TV and sees a lot	Comedy	4.538
of different films in theaters.	Romance, drama	4.664
	Other	4.286

a. Covariates appearing in the model are evaluated at the following values: Q290. I generally think of myself as a happy person. = 5.27, Q29t. I see myself as a citizen of the world. = 4.69.

2. Gender								
				95% Confidence Interval				
Dependent Variable	Gender	Mean	Std. Error	Lower Bound	Upper Bound			
Q29a. I love the options at	1-Male	4.934 ^a	.191	4.560	5.309			
my finger tips today,	2-Female							
watching videos on my		5 202a	101	5.064	5 540			
phone, texting, streaming		5.302*	.121	5.064	5.540			
films.	-							
Q29e. I can hardly wait to	1-Male	4.611ª	.184	4.249	4.973			
see what technology comes	2-Female	4.262ª	.117	4.032	4,492			
next.		0_						
Q29h. I am a person who	1-Male	4.280 ^a	.177	3.932	4.628			
loves variety, watches new	2-Female							
shows on TV and sees a lot		4.072 ^a	.112	3.851	4.293			
of different films in theaters.								

1. Q5aR Fave genre to see at home

a. Covariates appearing in the model are evaluated at the following values: Q290. I generally think of myself as a happy person. = 5.27, Q29t. I see myself as a citizen of the world. = 4.69.

	Q5aR Fave genre to see at			
Dependent Variable	home	Gender	Mean	Std. Error
Q29a. I love the options at	Action, adventure, scifi	1-Male	4.791 ^a	.235
my finger tips today,		2-Female	5.382 ^a	.259
watching videos on my	Comedy	1-Male	5.294 ^a	.276
phone, texting, streaming		2-Female	5.657ª	.242
films.	Romance, drama	1-Male	4.253 ^a	.566
		2-Female	4.741 ^a	.225
	Other	1-Male	5.399 ^a	.362
		2-Female	5.426 ^a	.243
Q29e. I can hardly wait to	Action, adventure, scifi	1-Male	4.616 ^a	.227
see what technology comes		2-Female	4.229 ^a	.250
next.	Comedy	1-Male	4.820ª	.267
		2-Female	4.339 ^a	.234
	Romance, drama	1-Male	3.889ª	.547
		2-Female	4.150 ^a	.218
	Other	1-Male	5.119 ^a	.350
		2-Female	4.331ª	.235
Q29h. I am a person who	Action, adventure, scifi	1-Male	4.725ª	.218
loves variety, watches new		2-Female	4.280 ^a	.240
shows on TV and sees a lot	Comedy	1-Male	3.932 ^a	.256
of different films in theaters.		2-Female	4.474 ^a	.225
	Romance, drama	1-Male	4.209 ^a	.526
		2-Female	4.007 ^a	.209
	Other	1-Male	4.252 ^a	.336
		2-Female	3.526ª	.226

3. Q5aR Fave genre to see at home * Gender

3. Q5aR Fave genre to see at home * Gender

	Q5aR Fave genre to see at	95% Confidence Interval			
Dependent Variable	home	Lower Bound	Upper Bound		
Q29a. I love the options at my	Action, adventure, scifi	1-Male	4.330	5.253	
finger tips today, watching		2-Female	4.873	5.891	

videos on my phone, texting,	Comedy	1-Male	4.752	5.837
streaming films.		2-Female	5.182	6.133
	Romance, drama	1-Male	3.141	5.366
		2-Female	4.299	5.184
	Other	1-Male	4.687	6.111
		2-Female	4.948	5.905
Q29e. I can hardly wait to see	Action, adventure, scifi	1-Male	4.170	5.062
what technology comes next.		2-Female	3.737	4.721
	Comedy	1-Male	4.296	5.345
		2-Female	3.880	4.799
	Romance, drama	1-Male	2.813	4.965
		2-Female	3.721	4.578
	Other	1-Male	4.431	5.807
		2-Female	3.869	4.793
Q29h. I am a person who	Action, adventure, scifi	1-Male	4.297	5.154
loves variety, watches new		2-Female	3.808	4.753
shows on TV and sees a lot of	Comedy	1-Male	3.428	4.437
different films in theaters.		2-Female	4.032	4.916
	Romance, drama	1-Male	3.175	5.243
		2-Female	3.595	4.418
	Other	1-Male	3.590	4.914
		2-Female	3.082	3.971

a. Covariates appearing in the model are evaluated at the following values: Q290. I generally think of myself as a happy person. = 5.27, Q29t. I see myself as a citizen of the world. = 4.69.

Profile Plots

Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.



Estimated Marginal Means of Q29a. I love the options at my finger tips today, watching videos on my phone, texting, streaming films.

Covariates appearing in the model are evaluated at the following values: Q29o. I generally think of myself as a happy person. = 5.27, Q29t. I see myself as a citizen of the world. = 4.69





Estimated Marginal Means of Q29e. I can hardly wait to see what technology comes next.

Covariates appearing in the model are evaluated at the following values: Q29o. I generally think of myself as a happy person. = 5.27, Q29t. I see myself as a citizen of the world. = 4.69

Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.





Covariates appearing in the model are evaluated at the following values: Q29o. I generally think of myself as a happy person. = 5.27, Q29t. I see myself as a citizen of the world. = 4.69

IV. Tabling

Effect		Value	F-Value	Sig.	Observed
		1	1	1	Power
Favorite	Pillai's Trace	.05	1.10	.037	.86
Genre	Wilks' Lambda	.95	2.00	.036	.76
	Hotelling's Trace	.05	2.00	.036	.86
	Roy's Largest	.04	4.33 ^c	.005	.88
	Root				
					-
Gender	Pillai's Trace	.03	3.34 ^b	.020	.76
	Wilks' Lambda	.97	3.34 ^b	.020	.76
	Hotelling's Trace	.03	3.34 ^b	.020	.76
	Roy's Largest	.03	3.34 ^b	.020	.76
	Root				
					-
Favorite	Pillai's Trace	.03	1.27	.252	.63
Genre X	Wilks' Lambda	.97	1.27	.252	.52
Gender	Hotelling's Trace	.03	1.27	.252	.63
	Roy's Largest	.03	2.89 ^c	.035	.69
	Root				

Table 1: Multivariate Statistics for MANOVA

b. Exact statistic

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

	Mean	n	Sum of Squares	df	Mean Square	F	Sig.
FaveGenre			32.40	3	10.80	3.14	.026
1-Action, Scifi	5.04 ^{ab}	106					
2-Comedy	5.51 ^a	97					
3-Drama, Romance	4.46 ^b	73					
4-Other	5.34 ^{ab}	79					
Gender			13.89	1	13.89	4.03	.045
2-Female	3.43	220					
1-Male	3.82	135					
FaveGenre X Gender			1.84	3	.613	.178	.911
Interaction							
Action,Scifi/Female	5.25	48					
Action,Scifi/Male	4.83	58					
Comedy/Female	5.78	55					
Comedy/Male	5.24	42					
Drama,Romance/Female	4.81	63					
Drama,Romance/Male	4.10	10					
Other/Female	5.44	54					
Other/Male	5.24	25					
Error			1194.78	347	3.44		
Corrected Total			1246.46	355			

Table 2: Two-factor ANOVA Predicting Q29a-- "Loving Options at Fingertips" from Favorite Genre and Gender

Note. Means are estimated marginal means.

Note. For FaveGenre, means that do not share a superscript are significantly different according to the Scheffe post hoc test.

	Mean	n	Sum of Squares	df	Mean Square	F	Sig.
FaveGenre			16.41	3	5.47	1.73	.161
1-Action, Scifi	4.38	106					
2-Comedy	4.61	97					
3-Drama, Romance	3.95	73					
4-Other	4.72	79					
Gender			5.48	1	5.48	1.73	.189
2-Female	4.56	220					
1-Male	4.27	135					
FaveGenre X Gender			9.79	3	3.26	1.03	.380
Interaction							
Action,Scifi/Female	4.15	48					
Action,Scifi/Male	4.62	58					
Comedy/Female	4.42	55					
Comedy/Male	4.81	42					
Drama,Romance/Female	4.19	63					
Drama,Romance/Male	3.70	10					
Other/Female	4.32	54					
Other/Male	5.12	25					
Error			1194.78	347	3.44		
Corrected Total			1246.46	355			

Table 3: Two-factor ANOVA Predicting Q29e-- "Can Hardly Wait for New Tech" from Favorite Genreand Gender

Note. Means are estimated marginal means.

	Mean	n	Sum of Squares	df	Mean Square	F	Sig.
FaveGenre			15.86	3	5.39	1.74	.158
1-Action, Scifi	4.45	106					
2-Comedy	4.24	97					
3-Drama, Romance	4.03	73					
4-Other	3.86	79					
Gender			1.05	1	1.05	,35	.558
2-Female	4.08	220					
1-Male	4.21	135					
FaveGenre X Gender			26.23	3	8.74	2.88	.036
Interaction							
Action,Scifi/Female	4.17	48					
Action,Scifi/Male	4.74	58					
Comedy/Female	4.58	55					
Comedy/Male	3.90	42					
Drama,Romance/Female	4.06	63					
Drama,Romance/Male	4.00	10					
Other/Female	3.52	54					
Other/Male	4.20	25					
Error			1052.02	347	3.03		
Corrected Total			1107.17	354			

 Table 4: Two-factor ANOVA Predicting Q29h-- "Loving Variety" from Favorite Genre and Gender

 Sum of

Note. Means are estimated marginal means.

Figure 1: Significant Interaction of Favorite Genre and Gender in the Prediction of Q29h-- "Loving Variety"



Estimated Marginal Means of Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.

V. Write-ups of MANOVA and MANCOVA

Three dependent variables were chosen from Neuendorf's Film and TV dataset, all of which had significant correlations at p < .001. The variables are as follows:

Q29a. I love the options at my fingertips today, watching videos on my phone, texting, streaming films.

Q29e. I can hardly wait to see what technology comes next.

Q29h. I am a person who loves variety, watches new shows on TV and sees a lot of different films in theaters.

Independent variables chosen were FaveGenre (1 = Action, Scifi, 2 = Comedy, 3 =

Romance, Drama, 4 =Other) and Gender. Initially, "FaveGenre" was an opened ended question asking respondents what was their favorite genre of film to watch at home. It was by-hand coded in the data to the categories listed above. This resulted in a 2 x 4 factorial design.

Assumptions

Box's M tested for homoscedasticity, which in order to reject the null hypothesis, M should be non-significant. For this set of variables Box's M was not significant, p = .924.

Multivariate Tests

The multivariate tests in Table 1 indicate that the variable FaveGenre has a significant main effect on the set of dependent variables; Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root are all p < .05. Gender also has a significant main effect, with Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root all p < .05. The interaction effect has a significant result only with Roy's Largest Root at p < .05. With these results we further examined the significance of the main effects and interaction effect with a series of three ANOVAs.

Table 2 shows the ANOVA predicting Q29a, "Loving Options at Fingertips." Both FaveGenre and Gender show significant main effects at p < .05. The interaction was not significant. The main effect for FaveGenre that people who liked Comedy are higher in "Loving Options at Fingertips" than people who like Action/Scifi, Romance/Drama, and other. A posthoc Scheffe test revealed that the Comedy group was significantly different from the Romantic/Drama group (p < .05). For Gender, the significant main effect shows males are higher in "Loving Options at Fingertips" than females.

Table 3 shows the ANOVA predicting Q29e, "Can Hardly Wait for New Technology." No significant main effects or significant interaction were found.

Table 4 shows the ANOVA predicting Q29h, "Loving Variety." Neither main effects was significant, but the interaction term FaveGenre X Gender was significant at p < .05. This interaction is displayed in Figure 1. It shows that for those whose favorite genre to see at home is either action adventure or "other," males like variety more than do females, while for those whose favorite is comedy, females like variety more than do males. Among those whose favorite is romance/drama, there is no real difference between males and females liking variety.

MANCOVA

The following two covariates were added into the analysis to make the MANOVA a MANCOVA:

Q290. I generally think of myself as a happy person.

Q29t. I see myself as a citizen of the world.

These covariates will operate as a control for the analysis that was previously conducted. Both of the covariates were found to be significant predictors of the three dependent variables as a group. The Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root were all p < .001

for each of the covariates. The addition of these two covariates did not change the MANOVA results appreciably. Indeed, the only change was that the Roy's Largest Root for the interaction term FaveGenre X Gender was reduced to non-significance (p = .071). Both of the main effects remained significant.