Factor Analysis

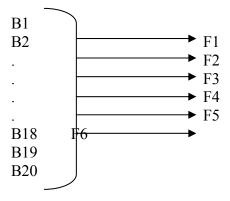
COM 631/731, Spring 2017

K. Neuendorf

I. MODEL:

From the Humor and Public Opinion Study 2010

Public Opinion measures:



For items B1-B12, 0=strongly disagree, 10=strongly agree:

- B1. Barack Obama is doing a good job as president.
- B2. I believe that O.J. Simpson is innocent of murder.
- B3. Affirmative action is still necessary to help minorities and other groups.
- B4. The Internet provides me with lots of information I need.
- B5. I like finding unexpected linkages on the Internet.
- B6. Abortion should remain legal.
- B7. All human cloning should be banned.
- B8. I favor the death penalty for a person convicted of murder.
- B9. Marriages between same-sex couples should be recognized by the law as valid, with the same rights as traditional marriages.
- B10. The laws covering the sale of firearms should be made more strict.
- B11. The problem of drugs in the United States is extremely serious.
- B12. The U.S. healthcare system today is in a state of crisis.

For items B13-B18, 0=very dissatisfied, 10=very satisfied:

- B13. How satisfied are you with the way women are treated [in society]?
- B14. How about Blacks?
- B15. Asians?
- B16. How satisfied are you with the way Arabs are treated?
- B17. How about immigrants?
- B18. Hispanics?

For item B19, 0=not worried at all, 10=very worried:

B19. How worried are you that you or someone in your family will become a victim of terrorism?

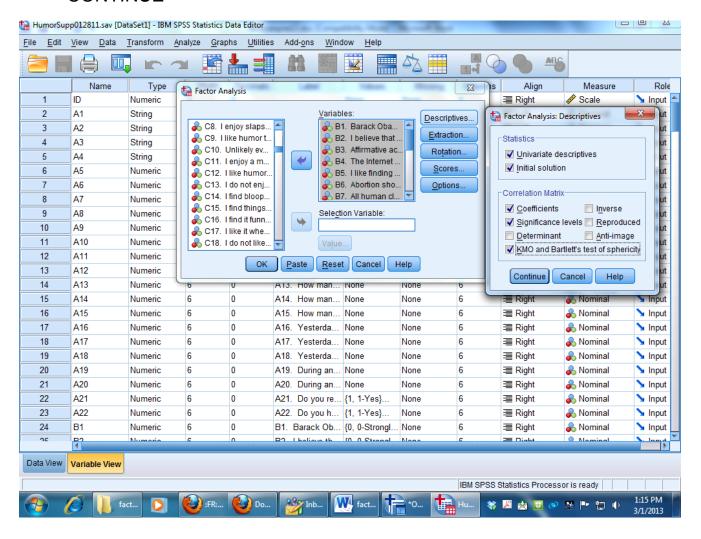
For item B20, 0=too little regulation, 10=too much regulation:

B20. In general, do you think there is too much or too little government regulation of business and industry?

II. RUNNING SPSS

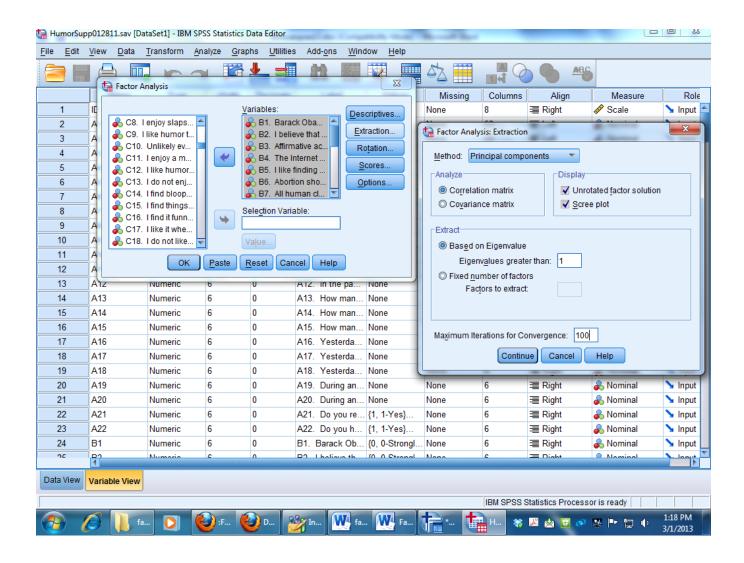
ANALYZE → DIMENSION REDUCTION [DATA REDUCTION] → FACTOR

DESCRIPTIVES \rightarrow STATISTICS \rightarrow $\sqrt{}$ UNIVARIATE DESCRIPTIVES, $\sqrt{}$ INITIAL SOLUTION \rightarrow CORRELATION MATRIX \rightarrow $\sqrt{}$ COEFFICIENTS, $\sqrt{}$ SIGNIFICANCE LEVELS, $\sqrt{}$ KMO & BARTI FTT'S



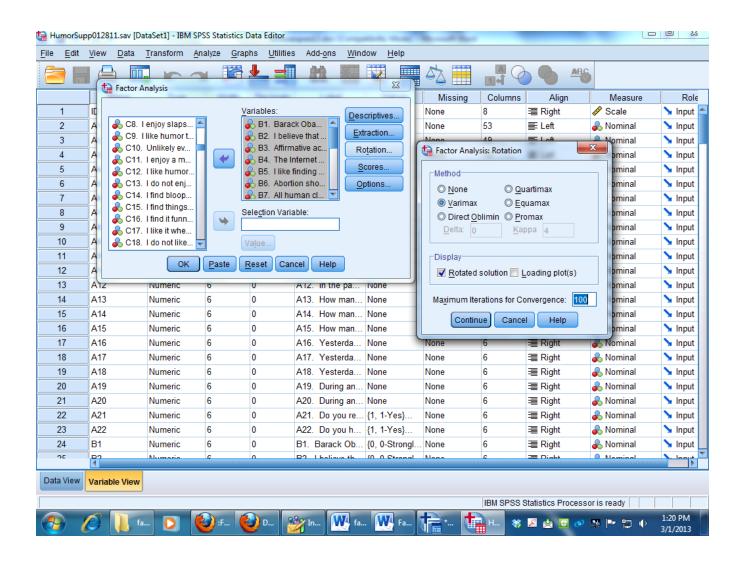
- EXTRACTION → METHOD → PRINCIPAL COMPONENTS
 - → ANALYZE → CORRELATION MATRIX
 - → DISPLAY → VUNROTATED FACTOR SOLUTION,

 VSCREE PLOT
 - → EXTRACT → EIGENVALUES GREATER THAN 1
 - → MAXIMUM ITERATIONS FOR CONVERGENCE 100

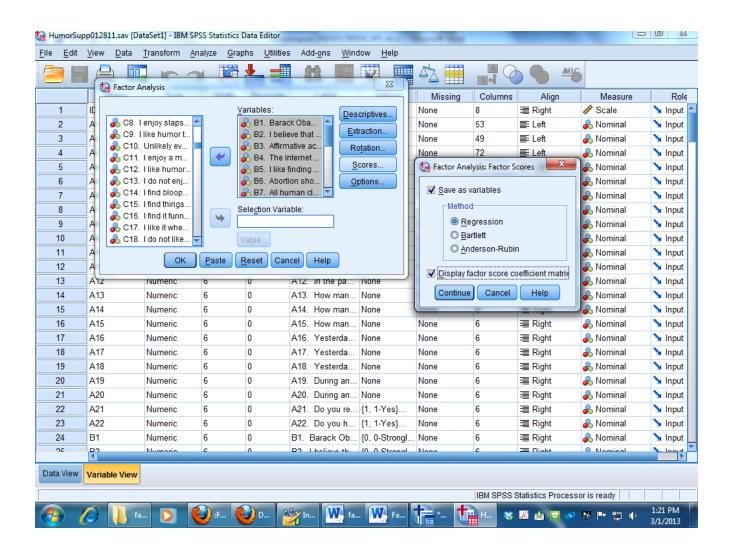


ROTATION → METHOD → VARIMAX

- → DISPLAY → √ ROTATED SOLUTION
- → MAXIMUM ITERATIONS FOR CONVERGENCE 100



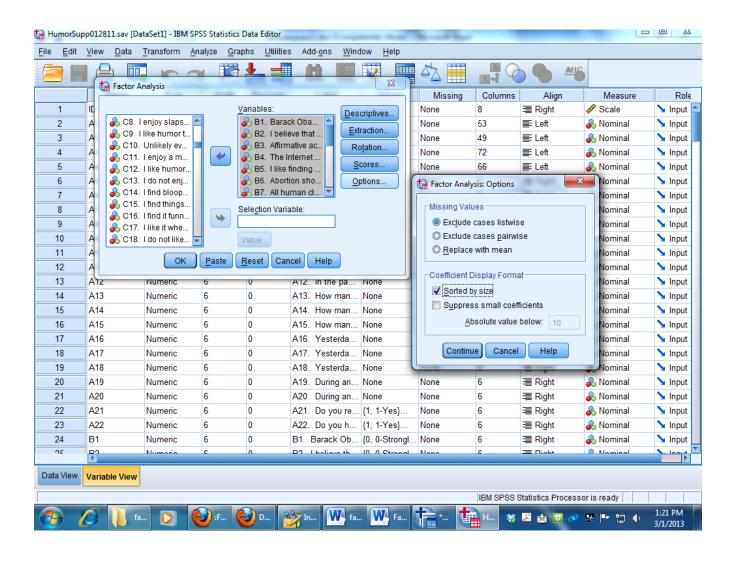
SCORES → SAVE AS VARIABLES → METHOD → REGRESSION → √ DISPLAY FACTOR SCORE COEFFICIENT MATRIX



OPTIONS → MISSING VALUES → EXCLUDE CASES LISTWISE → COEFFICIENT DISPLAY FORMAT→ √ SORTED BY SIZE

CONTINUE

OK



III. SPSS OUTPUT

NOTE: Correlations shown here are from a separate run of the Correlations procedure, just because the correlation matrix provided by the Factor procedure did not survive the translation to Word very well!

CORRELATIONS

/VARIABLES=B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17 B18 B19 B20 /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.

Correlations

Correlations

			_						
				B3. Affirmati					
				ve					B8. I
				action is					favor
		B1.	B2. I	still	B4. The	B5. I			the
		Barack	believe	necessa	Internet	like			death
		Obama	that O.J.	ry to	provides	finding		B7. All	penalty
		is doing	Simpson	help	me with	unexpec	B6.	human	for a
		a good	is	minoritie	lots of	ted	Abortion	cloning	person
		job as presiden	innocent of	s and other	informati on I	linkages on the	should remain	should be	convicte d of
		t.	murder.	groups.	need.	Internet.	legal.	banned.	murder.
B1. Barack	Pearson	ι. 1	.169**	.431 ^{**}	.158**	.115	.268**	.005	244**
Obama is doing	Correlation	'	.169	.431	.156	.115	.200	.005	244
a good job as president.	Sig. (2- tailed)		.005	.000	.008	.056	.000	.937	.000
	N	280	279	280	277	277	277	278	277
B2. I believe that O.J.	Pearson Correlation	.169**	1	.309**	.009	015	.014	.167**	129 [*]
Simpson is innocent of	Sig. (2- tailed)	.005		.000	.886	.810	.819	.005	.032
murder.	N	279	279	279	276	276	276	277	276
B3. Affirmative	Pearson	.431**	.309**	1	.156**	.118 [*]	.116	.114	208 ^{**}
action is still necessary to	Correlation Sig. (2-	.000	.000		.009	.050	.053	.058	.000
help minorities	tailed)								
and other groups.	N	280	279	280	277	277	277	278	277
B4. The	Pearson Correlation	.158**	.009	.156**	1	.311**	015	.005	010
Internet provides me	Sig. (2-	.008	.886	.009		.000	.806	.930	.866
with lots of information I	tailed) N	277	276	277	277	274	274	275	274
need.		2,7,	270			27 1	271		
B5. I like finding	Pearson Correlation	.115	015	.118 [*]	.311 ^{**}	1	.042	120 [*]	072
unexpected linkages on the	Sig. (2- tailed)	.056	.810	.050	.000		.487	.046	.235
Internet.	N	277	276	277	274	277	274	275	274
B6. Abortion	Pearson	.268**	.014	.116	015	.042	1	088	.001
should remain	Correlation								
legal.	Sig. (2- tailed)	.000	.819	.053	.806	.487		.144	.987
	N N	277	276	277	274	274	277	275	274
B7. All human cloning should	Pearson Correlation	.005	.167**	.114	.005	120 [*]	088	1	013
s.s.mig onodia			1	I			1	1	

be banned.	Sig. (2- tailed)	.937	.005	.058	.930	.046	.144		.832
	N	278	277	278	275	275	275	278	275
B8. I favor the death penalty	Pearson Correlation	244**	129 [*]	208 ^{**}	010	072	.001	013	1
for a person convicted of	Sig. (2- tailed)	.000	.032	.000	.866	.235	.987	.832	
murder.	N	277	276	277	274	274	274	275	277
B9. Marriages between same-	Pearson Correlation	.177**	066	.009	.017	.157 ^{**}	.367 ^{**}	257 ^{**}	.000
sex couples should be	Sig. (2- tailed)	.003	.271	.878	.775	.009	.000	.000	.998
recognized by the law as valid, with the same rights as traditional	N	280	279	280	277	277	277	278	277
marriages.									
B10. The laws covering the	Pearson Correlation	.306**	.039	.182**	.169**	.079	.129 [*]	.160**	.045
sale of firearms should be	Sig. (2- tailed)	.000	.520	.002	.005	.188	.032	.008	.454
made more strict.	N	279	278	279	276	276	276	277	276
B11. The problem of	Pearson Correlation	.102	.121*	.155**	.109	.041	020	.203**	.076
drugs in the United States is	Sig. (2- tailed)	.090	.045	.009	.070	.497	.745	.001	.206
extremely serious.	N	279	278	279	276	276	276	277	276
B12. The U.S. healthcare	Pearson Correlation	.361**	.021	.238**	.236**	.205**	.130 [*]	021	131 [*]
system today is in a state of	Sig. (2- tailed)	.000	.730	.000	.000	.001	.031	.727	.030
crisis.	N	278	277	278	275	275	276	276	275
B13. How satisfied are	Pearson Correlation	210 ^{**}	045	251 ^{**}	.061	074	065	.019	.199**
you with the way women are	Sig. (2- tailed)	.000	.454	.000	.311	.220	.281	.746	.001
treated?	N	280	279	280	277	277	277	278	277
B14. How about Blacks?	Pearson Correlation	209**	224**	355 ^{**}	.043	.048	116	056	.257**
	Sig. (2- tailed)	.000	.000	.000	.475	.427	.054	.355	.000
	N	280	279	280	277	277	277	278	277
B15. Asians?	Pearson Correlation	089	083	216 ^{**}	.132 [*]	.068	072	007	.208**
	Sig. (2- tailed)	.143	.172	.000	.030	.269	.236	.908	.001
	N	273	272	273	270	270	270	271	270
B16. How satisfied are	Pearson Correlation	200**	026	241 ^{**}	.028	017	056	.079	.274**
you with the way Arabs are	Sig. (2- tailed)	.001	.661	.000	.642	.777	.357	.187	.000
treated?	N	280	279	280	277	277	277	278	277
B17. How about	Pearson Correlation	223**	033	237**	.097	007	037	.003	.259**
immigrants?	Sig. (2- tailed)	.000	.581	.000	.108	.911	.545	.956	.000
	N	279	278	279	276	276	276	277	276
B18. Hispanics?	Pearson Correlation	170 ^{**}	063	269 ^{**}	.024	.048	067	.037	.172**
	Sig. (2- tailed)	.004	.296	.000	.692	.428	.271	.544	.004

	N	278	277	278	275	275	275	276	275
B19. How worried are you	Pearson Correlation	.033	.015	.086	.011	009	042	.023	.095
that you or someone in	Sig. (2- tailed)	.582	.808	.153	.853	.884	.491	.706	.115
your family will become a	N	280	279	280	277	277	277	278	277
victim of terrorism?									
B20. In general, do you	Pearson Correlation	309**	084	177**	088	023	175 ^{**}	.016	.220**
think there is too much or too	Sig. (2- tailed)	.000	.162	.003	.145	.700	.003	.793	.000
little government regulation of business and industry?	N	280	279	280	277	277	277	278	277

Correlations B9. Marriag es between samesex couples should be recogniz B10. The B11. B12. ed by the law laws The The B13. B16. covering as valid, problem U.S. How How with the the sale of drugs healthca satisfied satisfied same of in the re are you are you rights as firearms United system with the with the tradition should States is today is B14. way way be made women How Arabs al extremel in a B15. marriag more state of are about are serious. treated? Blacks? Asians? treated? strict. crisis. es. .102 B1. Barack Pearson .177 .306 .361 -.210^{*} -.209 -.089 -.200 Obama is doing Correlation a good job as Sig. (2-.003 .000 .090 .000 .000 .000 .143 .001 president. tailed) Ν 280 279 279 278 280 280 273 280 B2. I believe Pearson -.066 .039 .121 .021 -.045 -.224^{*} -.083 -.026 that O.J. Correlation Simpson is Sig. (2-.271 .520 .045 .730 .454 .000 .172 .661 innocent of tailed) murder. Ν 279 278 278 277 279 279 272 279 B3. Affirmative Pearson -.355^{*} -.241 .009 .182 .155[°] .238 -.251[°] -.216^{*} action is still Correlation necessary to .002 .009 .000 .000 Sig. (2-.878 .000 .000 .000 help minorities tailed) and other Ν 279 279 278 280 280 273 280 280 groups. B4. The Pearson .017 .169 .109 .236 .061 .043 .132 .028 Internet Correlation provides me Sig. (2-.775 .005 .070 .000 .311 .475 .030 .642 with lots of tailed) information I Ν 277 276 276 275 277 277 270 277 need. B5. I like Pearson .079 .041 .205 -.074 .048 .068 -.017 .157 finding Correlation

unexpected	Sig. (2-	.009	.188	.497	.001	.220	.427	.269	.777
linkages on the Internet.	tailed) N	277	276	276	275	277	277	270	277
B6. Abortion	Pearson	.367**	.129 [*]	020	.130*	065	116	270 072	277 056
should remain legal.	Correlation Sig. (2-	.000	.032	.745	.031	.281	.054	.236	.357
	tailed)								
B7. All human	N Pearson	277 257 ^{**}	276 .160 [™]	.276	276 021	.019	277 056	270 007	.079
cloning should	Correlation	251	.100	.203	021	.019	050	007	.079
be banned.	Sig. (2- tailed)	.000	.008	.001	.727	.746	.355	.908	.187
	N	278	277	277	276	278	278	271	278
B8. I favor the death penalty	Pearson Correlation	.000	.045	.076	131 [*]	.199**	.257**	.208**	.274**
for a person convicted of	Sig. (2- tailed)	.998	.454	.206	.030	.001	.000	.001	.000
murder.	N	277	276	276	275	277	277	270	277
B9. Marriages between same-	Pearson Correlation	1	.198**	161 ^{**}	.119 [*]	107	066	098	103
sex couples should be	Sig. (2-tailed)		.001	.007	.047	.073	.273	.107	.086
recognized by the law as	N	280	279	279	278	280	280	273	280
valid, with the same rights as traditional marriages.									
B10. The laws	Pearson	.198**	1	.324**	.282**	111	119 [*]	153 [*]	165 ^{**}
covering the sale of firearms	Correlation Sig. (2-	.001		.000	.000	.064	.047	.012	.006
should be made more strict.	tailed) N	279	279	278	277	279	279	272	279
B11. The	Pearson	161 ^{^^}	.324 ^ ^	1	.379 ^^	082	074	084	.040
problem of drugs in the United States is	Correlation Sig. (2-	.007	.000		.000	.172	.215	.166	.504
extremely serious.	tailed) N	279	278	279	277	279	279	272	279
B12. The U.S. healthcare	Pearson Correlation	.119 [*]	.282**	.379**	1	246**	208**	183**	142 [*]
system today is in a state of	Sig. (2- tailed)	.047	.000	.000		.000	.000	.002	.018
crisis.	N	278	277	277	278	278	278	271	278
B13. How satisfied are	Pearson Correlation	107	111	082	246 ^{**}	1	.640**	.588**	.445**
you with the way women are	Sig. (2- tailed)	.073	.064	.172	.000		.000	.000	.000
treated?	N	280	279	279	278	280	280	273	280
B14. How about Blacks?	Pearson Correlation	066	119 [*]	074	208**	.640**	1	.703**	.621**
	Sig. (2- tailed)	.273	.047	.215	.000	.000		.000	.000
	N	280	279	279	278	280	280	273	280
B15. Asians?	Pearson Correlation	098	153 [*]	084	183	.588**	.703**	1	.532**
	Sig. (2- tailed)	.107	.012	.166	.002	.000	.000	070	.000
B16. How	N Pearson	273 103	272 165 ^{**}	.040	271 142 [*]	.445 ^{**}	.621**	.532**	273
satisfied are you with the	Correlation Sig. (2-	.086	.006	.504	142 .018	.000	.000	.000	1
way Arabs are	tailed)	.000	.000	.504	.010	.000	.000	.000	

treated?	N	280	279	279	278	280	280	273	280
B17. How	Pearson	096	144 [*]	026	198 ^{**}	.466**	.604**	.487**	.759 ^{**}
about	Correlation		2.12						
immigrants?	Sig. (2- tailed)	.111	.016	.662	.001	.000	.000	.000	.000
	N	279	278	278	277	279	279	272	279
B18. Hispanics?	Pearson Correlation	045	114	075	224 ^{**}	.532**	.736 ^{**}	.619 ^{**}	.643**
	Sig. (2- tailed)	.455	.057	.214	.000	.000	.000	.000	.000
	N	278	277	277	276	278	278	271	278
B19. How worried are you	Pearson Correlation	.019	.146 [*]	.177**	.050	054	.017	079	.033
that you or someone in	Sig. (2- tailed)	.755	.015	.003	.410	.369	.773	.190	.577
your family will become a victim of terrorism?	N	280	279	279	278	280	280	273	280
B20. In	Pearson Correlation	153 [*]	294**	137 [*]	214**	.146 [*]	.198**	.157**	.205**
general, do you think there is too much or too	Sig. (2- tailed)	.010	.000	.022	.000	.014	.001	.009	.001
little government regulation of business and industry?	N	280	279	279	278	280	280	273	280

Correlations

		B17. How about immigrants?	B18. Hispanics?	B19. How worried are you that you or someone in your family will become a victim of terrorism?	B20. In general, do you think there is too much or too little government regulation of business and industry?
B1. Barack Obama is	Pearson Correlation	223 ^{**}	170 ^{**}	.033	309 ^{**}
doing a good job as president.	Sig. (2-tailed)	.000	.004	.582	.000
•	N	279	278	280	280
B2. I believe that O.J.	Pearson Correlation	033	063	.015	084
Simpson is innocent of murder.	Sig. (2-tailed)	.581	.296	.808	.162
	N	278	277	279	279
B3. Affirmative action is	Pearson Correlation	237**	269	.086	177**
still necessary to help minorities and other	Sig. (2-tailed)	.000	.000	.153	.003
groups.	N	279	278	280	280
B4. The Internet provides	Pearson Correlation	.097	.024	.011	088
me with lots of	Sig. (2-tailed)	.108	.692	.853	.145
information I need.	N	276	275	277	277
B5. I like finding	Pearson Correlation	007	.048	009	023
unexpected linkages on	Sig. (2-tailed)	.911	.428	.884	.700
the Internet.	N	276	275	277	277
B6. Abortion should	Pearson Correlation	037	067	042	175**
remain legal.	Sig. (2-tailed)	.545	.271	.491	.003
	N	276	275	277	277
B7. All human cloning	Pearson Correlation	.003	.037	.023	.016
should be banned.	Sig. (2-tailed)	.956	.544	.706	.793
	N	277	276	278	278
B8. I favor the death	Pearson Correlation	.259	.172	.095	.220^
penalty for a person	Sig. (2-tailed)	.000	.004	.115	.000

convicted of murder.	N I	276	275	277	277
B9. Marriages between	Pearson Correlation	096	045	.019	153 [*]
same-sex couples should	Sig. (2-tailed)	.111	.455	.755	.010
be recognized by the law	N ,	279	278	280	280
as valid, with the same					
rights as traditional					
marriages.	D	444*	444	4.40*	00.4**
B10. The laws covering the sale of firearms	Pearson Correlation	144	114	.146	294
should be made more	Sig. (2-tailed)	.016	.057	.015	.000
strict.	N	278	277	279	279
B11. The problem of	Pearson Correlation	026	075	.177**	137 [*]
drugs in the United States	Sig. (2-tailed)	.662	.214	.003	.022
is extremely serious.	N	278	277	279	279
B12. The U.S. healthcare	Pearson Correlation	198 ^{**}	224**	.050	214 ^{**}
system today is in a state	Sig. (2-tailed)	.001	.000	.410	.000
of crisis.	N	277	276	278	278
B13. How satisfied are	Pearson Correlation	.466**	.532**	054	.146 [*]
you with the way women	Sig. (2-tailed)	.000	.000	.369	.014
are treated?	N	279	278	280	280
B14. How about Blacks?	Pearson Correlation	.604**	.736 ^{**}	.017	.198**
	Sig. (2-tailed)	.000	.000	.773	.001
	N	279	278	280	280
B15. Asians?	Pearson Correlation	.487^^	.619 [^]	079	.157 ^
	Sig. (2-tailed)	.000	.000	.190	.009
	N	272	271	273	273
B16. How satisfied are	Pearson Correlation	.759 ^{**}	.643	.033	.205
you with the way Arabs	Sig. (2-tailed)	.000	.000	.577	.001
are treated?	N	279	278	280	280
B17. How about	Pearson Correlation	1	.740**	.059	.225**
immigrants?	Sig. (2-tailed)		.000	.326	.000
	N	279	277	279	279
B18. Hispanics?	Pearson Correlation	.740^	1	052	.186
	Sig. (2-tailed)	.000		.386	.002
	N	277	278	278	278
B19. How worried are	Pearson Correlation	.059	052	1	.048
you that you or someone	Sig. (2-tailed)	.326	.386		.424
in your family will become a victim of terrorism?	N	279	278	280	280
B20. In general, do you	Pearson Correlation	.225**	.186**	.048	1
think there is too much or	Sig. (2-tailed)	.000	.002	.424	
too little government regulation of business	N	279	278	280	280
and industry?		_, 5			

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

^{*.} Correlation is significant at the 0.05 level (2-tailed).

FACTOR

/VARIABLES B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17 B18 B19 B20 /MISSING LISTWISE
/ANALYSIS B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17 B18 B19 B20 /PRINT UNIVARIATE INITIAL KMO EXTRACTION ROTATION FSCORE
/FORMAT SORT
/PLOT EIGEN
/CRITERIA MINEIGEN(1) ITERATE(100)
/EXTRACTION PC
/CRITERIA ITERATE(100)
/ROTATION VARIMAX
/SAVE REG(ALL)
/METHOD=CORRELATION.

Factor Analysis

Descriptive Statistics

	M	Std.	Analysis
	Mean	Deviation	N
B1. Barack Obama is doing a good job as president.	5.75	2.774	252
B2. I believe that O.J. Simpson is innocent of murder.	2.52	2.620	252
B3. Affirmative action is still necessary to help minorities and other groups.	5.00	3.049	252
B4. The Internet provides me with lots of information I need.	8.50	1.963	252
B5. I like finding unexpected linkages on the Internet.	5.79	3.149	252
B6. Abortion should remain legal.	6.45	3.465	252
B7. All human cloning should be banned.	4.83	3.479	252
B8. I favor the death penalty for a person convicted of murder.	5.66	3.468	252
B9. Marriages between same-sex couples should be recognized by the law as	6.88	3.643	252
valid, with the same rights as traditional marriages.			
B10. The laws covering the sale of firearms should be made more strict.	6.59	3.225	252
B11. The problem of drugs in the United States is extremely serious.	6.27	2.984	252
B12. The U.S. healthcare system today is in a state of crisis.	7.14	2.475	252
B13. How satisfied are you with the way women are treated?	5.44	2.583	252
B14. How about Blacks?	5.21	2.693	252
B15. Asians?	5.81	2.443	252
B16. How satisfied are you with the way Arabs are treated?	4.40	2.739	252
B17. How about immigrants?	4.51	2.705	252
B18. Hispanics?	5.11	2.575	252
B19. How worried are you that you or someone in your family will become a	2.53	2.684	252
victim of terrorism?			
B20. In general, do you think there is too much or too little government	5.03	2.453	252
regulation of business and industry?			

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure	.796					
Bartlett's Test of Sphericity	Bartlett's Test of Sphericity Approx. Chi-Square					
	df	190				
	Sig.	.000				

Communalities

	Initial	Extraction
B1. Barack Obama is doing a good job as president.	1.000	.579
B2. I believe that O.J. Simpson is innocent of murder.	1.000	.638
B3. Affirmative action is still necessary to help minorities and other groups.	1.000	.576
B4. The Internet provides me with lots of information I need.	1.000	.556
B5. I like finding unexpected linkages on the Internet.	1.000	.622
B6. Abortion should remain legal.	1.000	.614
B7. All human cloning should be banned.	1.000	.495
B8. I favor the death penalty for a person convicted of murder.	1.000	.540
B9. Marriages between same-sex couples should be recognized by the law as	1.000	.675
valid, with the same rights as traditional marriages.		
B10. The laws covering the sale of firearms should be made more strict.	1.000	.601
B11. The problem of drugs in the United States is extremely serious.	1.000	.626
B12. The U.S. healthcare system today is in a state of crisis.	1.000	.499
B13. How satisfied are you with the way women are treated?	1.000	.577
B14. How about Blacks?	1.000	.811
B15. Asians?	1.000	.667
B16. How satisfied are you with the way Arabs are treated?	1.000	.685
B17. How about immigrants?	1.000	.715
B18. Hispanics?	1.000	.755
B19. How worried are you that you or someone in your family will become a victim	1.000	.509
of terrorism?		
B20. In general, do you think there is too much or too little government regulation	1.000	.547
of business and industry?		

Extraction Method: Principal Component Analysis.

Total Variance Explained

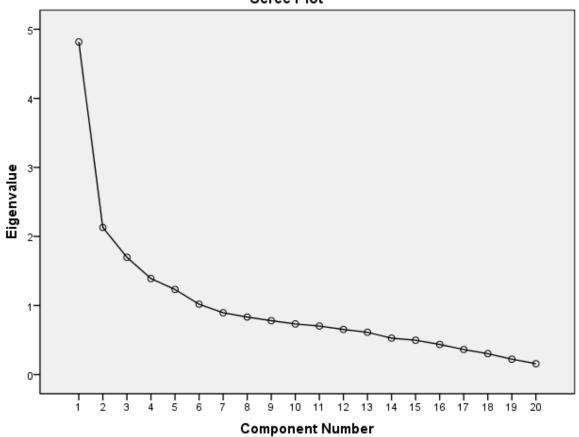
	l otal Variance Explained									
		Initial Eigenvalu	ies	Extraction	Extraction Sums of Squared Loadings					
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %				
1	4.817	24.085	24.085	4.817	24.085	24.085				
2	2.130	10.649	34.734	2.130	10.649	34.734				
3	1.698	8.488	43.222	1.698	8.488	43.222				
4	1.390	6.950	50.173	1.390	6.950	50.173				
5 6	1.232 1.018	6.160	56.332	1.232 1.018	6.160	56.332				
7	.895	5.092 4.476	61.425 65.901	1.010	5.092	61.425				
8	.833	4.164	70.066							
9	.780	3.901	73.967							
10	.733	3.666	77.633							
11	.703	3.513	81.145							
12	.654	3.268	84.413							
13	.612	3.060	87.474							
14	.527	2.634	90.108							
15	.497	2.487	92.595							
16	.436	2.181	94.775							
17	.363	1.814	96.589							
18	.303	1.515	98.105							
19	.222	1.111	99.215							
20	.157	.785	100.000							

Total Variance Explained

	Rotatio	n Sums of Square	d Loadings
Component	Total	% of Variance	Cumulative %
1	4.238	21.190	21.190
2 3 4 5 6	2.041	10.204	31.395
3	1.599	7.994	39.389
4	1.536	7.679	47.068
5	1.508 1.364	7.539 6.818	54.607 61.425
7	1.504	0.010	01.423
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix^a

		Com	ponent	
	1	2	3	4
B14. How about Blacks?	.849	.226	099	.022
B18. Hispanics?	.811	.260	114	048
B17. How about immigrants?	.786	.223	.036	.021
B16. How satisfied are you with the way Arabs are treated?	.762	.266	.089	.045
B15. Asians?	.726	.270	139	187
B13. How satisfied are you with the way women are treated?	.701	.167	049	057
B3. Affirmative action is still necessary to help minorities and other groups.	510	.319	.143	276
B1. Barack Obama is doing a good job as president.	471	.464	192	138
B10. The laws covering the sale of firearms should be made more strict.	312	.551	.037	.418
B4. The Internet provides me with lots of information I need.	015	.535	113	338
B12. The U.S. healthcare system today is in a state of crisis.	386	.513	006	.078
B11. The problem of drugs in the United States is extremely serious.	125	.506	.494	.284
B9. Marriages between same-sex couples should be recognized by the law	195	.097	674	.338
as valid, with the same rights as traditional marriages.				
B7. All human cloning should be banned.	036	.220	.557	037
B6. Abortion should remain legal.	207	.138	472	.293
B8. I favor the death penalty for a person convicted of murder.	.412	017	.108	.503
B19. How worried are you that you or someone in your family will become a	067	.148	.316	.419
victim of terrorism?				
B5. I like finding unexpected linkages on the Internet.	067	.350	307	338
B2. I believe that O.J. Simpson is innocent of murder.	240	.160	.296	353
B20. In general, do you think there is too much or too little government	.396	342	.216	078
regulation of business and industry?				

Component Matrix^a

	Comp	onent
	5	6
B14. How about Blacks?	018	168
B18. Hispanics?	.117	.011
B17. How about immigrants?	.042	.210
B16. How satisfied are you with the way Arabs are treated?	.087	.125
B15. Asians?	.085	070
B13. How satisfied are you with the way women are treated?	.196	115
B3. Affirmative action is still necessary to help minorities and other groups.	.130	.318
B1. Barack Obama is doing a good job as president.	.291	.004
B10. The laws covering the sale of firearms should be made more strict.	.078	132
B4. The Internet provides me with lots of information I need.	368	.083
B12. The U.S. healthcare system today is in a state of crisis.	233	164
B11. The problem of drugs in the United States is extremely serious.	115	127
B9. Marriages between same-sex couples should be recognized by the law	.038	.241
as valid, with the same rights as traditional marriages.		
B7. All human cloning should be banned.	.355	083
B6. Abortion should remain legal.	.418	.262
B8. I favor the death penalty for a person convicted of murder.	103	.307
B19. How worried are you that you or someone in your family will become a	334	.309
victim of terrorism?		
B5. I like finding unexpected linkages on the Internet.	513	.152
B2. I believe that O.J. Simpson is innocent of murder.	.345	.472
B20. In general, do you think there is too much or too little government	214	.418
regulation of business and industry?		

Extraction Method: Principal Component Analysis. a. 6 components extracted.

Rotated Component Matrix^a

·	Component			
	1	2	3	4
B18. Hispanics?	.861	084	.012	075
B14. How about Blacks?	.848	026	092	284
B17. How about immigrants?	.794	137	027	.025
B16. How satisfied are you with the way Arabs are treated?	.794	040	068	.026
B15. Asians?	.790	081	047	066
B13. How satisfied are you with the way women are treated?	.740	055	058	084
B10. The laws covering the sale of firearms should be made more strict.	076	.732	.212	.048
B11. The problem of drugs in the United States is extremely serious.	.009	.660	281	.120
B12. The U.S. healthcare system today is in a state of crisis.	203	.574	.019	.010
B20. In general, do you think there is too much or too little government	.168	548	204	.050
regulation of business and industry?				
B1. Barack Obama is doing a good job as president.	162	.411	.312	.381
B9. Marriages between same-sex couples should be recognized by the	101	.040	.787	147
law as valid, with the same rights as traditional marriages.				
B6. Abortion should remain legal.	027	.113	.745	.151
B2. I believe that O.J. Simpson is innocent of murder.	082	065	024	.791
B3. Affirmative action is still necessary to help minorities and other	303	.183	.059	.627
groups.				
B7. All human cloning should be banned.	.092	.323	336	.413
B5. I like finding unexpected linkages on the Internet.	.002	012	.060	007
B4. The Internet provides me with lots of information I need.	.137	.184	059	.136
B19. How worried are you that you or someone in your family will	117	.204	047	.024
become a victim of terrorism?				
B8. I favor the death penalty for a person convicted of murder.	.307	048	.121	141

Rotated Component Matrix^a

	Comp	onent
	5	6
B18. Hispanics?	.033	.016
B14. How about Blacks?	.038	.020
B17. How about immigrants?	.026	.252
B16. How satisfied are you with the way Arabs are treated?	026	.216
B15. Asians?	.119	121
B13. How satisfied are you with the way women are treated?	094	088
B10. The laws covering the sale of firearms should be made more strict.	.000	.110
B11. The problem of drugs in the United States is extremely serious.	.012	.310
B12. The U.S. healthcare system today is in a state of crisis.	.359	008
B20. In general, do you think there is too much or too little government	.000	.418
regulation of business and industry?		
B1. Barack Obama is doing a good job as president.	.171	336
B9. Marriages between same-sex couples should be recognized by the	.141	.042
law as valid, with the same rights as traditional marriages.		
B6. Abortion should remain legal.	139	054
B2. I believe that O.J. Simpson is innocent of murder.	.002	002
B3. Affirmative action is still necessary to help minorities and other	.229	053
groups.		
B7. All human cloning should be banned.	315	012
B5. I like finding unexpected linkages on the Internet.	.786	019
B4. The Internet provides me with lots of information I need.	.693	036
B19. How worried are you that you or someone in your family will	.069	.668
become a victim of terrorism?		
B8. I favor the death penalty for a person convicted of murder.	172	.616

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 9 iterations.

Component Transformation Matrix

Component	1	2	3	4	5	6
1	.895	296	156	239	080	.153
2	.382	.739	.110	.304	.450	.013
3	067	.188	770	.361	317	.370
4	051	.396	.374	405	442	.584
5	.213	.071	.304	.474	681	411
6	.000	411	.372	.575	.178	.574

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Component Score Coefficient Matrix

	Component			
	1	2	3	4
B1. Barack Obama is doing a good job as president.	.059	.145	.163	.203
B2. I believe that O.J. Simpson is innocent of murder.	.045	169	.045	.600
B3. Affirmative action is still necessary to help minorities and other groups.	011	042	.042	.411
B4. The Internet provides me with lots of information I need.	.046	.023	072	.057
B5. I like finding unexpected linkages on the Internet.	014	096	003	025
B6. Abortion should remain legal.	.067	.010	.506	.153
B7. All human cloning should be banned.	.073	.184	193	.252
B8. I favor the death penalty for a person convicted of murder.	.033	006	.159	013
B9. Marriages between same-sex couples should be recognized by the law as	.002	028	.505	067
valid, with the same rights as traditional marriages.				
B10. The laws covering the sale of firearms should be made more strict.	.038	.391	.105	064
B11. The problem of drugs in the United States is extremely serious.	.018	.363	192	015
B12. The U.S. healthcare system today is in a state of crisis.	023	.276	055	114
B13. How satisfied are you with the way women are treated?	.198	.051	001	.006
B14. How about Blacks?	.198	.088	031	140
B15. Asians?	.211	.013	001	.021
B16. How satisfied are you with the way Arabs are treated?	.199	.022	.028	.110
B17. How about immigrants?	.191	044	.063	.129
B18. Hispanics?	.224	.017	.059	.037
B19. How worried are you that you or someone in your family will become a	072	.066	.010	.015
victim of terrorism?				
B20. In general, do you think there is too much or too little government	030	323	049	.154
regulation of business and industry?				

Component Score Coefficient Matrix

	Comp	onent
	5	6
B1. Barack Obama is doing a good job as president.	.026	207
B2. I believe that O.J. Simpson is innocent of murder.	014	.061
B3. Affirmative action is still necessary to help minorities and other groups.	.120	.037
B4. The Internet provides me with lots of information I need.	.460	.005
B5. I like finding unexpected linkages on the Internet.	.550	.047
B6. Abortion should remain legal.	157	.023
B7. All human cloning should be banned.	256	059
B8. I favor the death penalty for a person convicted of murder.	080	.456
B9. Marriages between same-sex couples should be recognized by the law as	.063	.113
valid, with the same rights as traditional marriages.		
B10. The laws covering the sale of firearms should be made more strict.	084	.077
B11. The problem of drugs in the United States is extremely serious.	032	.193
B12. The U.S. healthcare system today is in a state of crisis.	.191	.008
B13. How satisfied are you with the way women are treated?	077	141
B14. How about Blacks?	.026	073
B15. Asians?	.071	152
B16. How satisfied are you with the way Arabs are treated?	013	.106
B17. How about immigrants?	.034	.147

B18. Hispanics? B19. How worried are you that you or someone in your family will become a	.016 .079	050 .529
victim of terrorism? B20. In general, do you think there is too much or too little government	.097	.332
regulation of business and industry?		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Component Scores.

Component Score Covariance Matrix

Component	1	2	3	4	5	6
1	1.000	.000	.000	.000	.000	.000
2	.000	1.000	.000	.000	.000	.000
3	.000	.000	1.000	.000	.000	.000
4	.000	.000	.000	1.000	.000	.000
5	.000	.000	.000	.000	1.000	.000
6	.000	.000	.000	.000	.000	1.000

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Component Scores.

IV. TABLING RESULTS

Table 1. Principal Components Factor Analysis of Public Opinion Measures (Orthogonal Rotation).

	1: Subpop treatment	2: Reform & intervention	Factor Loa 3: Sexual freedoms	adings 4: Still issues for AfAms	5: Internet	6: Fear	Commu- nalities
B18. Hispanics?	.861	084	.012	075	.033	.016	.722
B14. How about Blacks?	.848	026	092	284	.038	.020	.620
B17. How about immigrants?	.794	137	027	.025	.026	.252	.614
B16. How satisfied are you with the	.794	040	068	.026	026	.216	.575
way Arabs are treated?	.134	040	000	.020	020	.210	.575
B15. Asians?	.790	081	047	066	.119	121	.630
B13. How satisfied are you with the	.740	055	058	084	094	088	.472
way women are treated?	40	.000	.000	.004	.004	.000	.712
B10. The laws covering the sale of	076	.732	.212	.048	.000	.110	.654
firearms should be made more strict.							.00 .
B11. The problem of drugs in the	.009	.660	281	.120	.012	.310	.588
United States is extremely serious.							
B12. The U.S. healthcare system	203	.574	.019	.010	.359	008	.392
today is in a state of crisis.							
B20. In general, do you think there is	.168	548	204	.050	.000	.418	.542
too much or too little government							
regulation of business and industry?							
[higher score = too much]	400		0.40	004	4-4	000	=0.4
B1. Barack Obama is doing a good	162	.411	.312	.381	.171	336	.594
job as president.	101	040	.787	117	111	042	676
B9. Marriages between same-sex	101	.040	./6/	147	.141	.042	.676
couples should be recognized by the law as valid, with the same rights as							
traditional marriages.							
B6. Abortion should remain legal.	027	.113	.745	.151	139	054	.694
B2. I believe that O.J. Simpson is	082	065	024	.791	.002	002	.706
innocent of murder.	.002	.000	.02 .		.002	.002	.700
B3. Affirmative action is still necessary	303	.183	.059	.627	.229	053	.671
to help minorities and other groups.							
B7. All human cloning should be	.092	.323	336	.413	315	012	.626
banned.							
B5. I like finding unexpected linkages	.002	012	.060	007	.786	019	.559
on the Internet.							
B4. The Internet provides me with lots	.137	.184	059	.136	.693	036	.639
of information I need.							
B19. How worried are you that you or	117	.204	047	.024	.069	.668	.718
someone in your family will become a							
victim of terrorism?	.307	048	.121	141	170	.616	FFC
B8. I favor the death penalty for a person convicted of murder.	.307	040	.121	I 4 I	172	.010	.556
person convicted of marder.							
Eigenvalue	4.238	2.041	1.599	1.536	1.508	1.364	[12.286]
Percent of Total Variance	21.190%		7.994%				61.43%
Percent of Total Variance Percent of Common Variance							
reident of Common Variance	34.5%	16.6%	13.0%	12.5%	12.3%	11.1%	100.0%

KMO measure of sampling adequacy = .796 Bartlett's test of sphericity: approx. chi-square = 1568.335, df = 190, p<.001 n = 252;

V. WRITEUP OF RESULTS

Factor Analysis Writeup

A set of 20 public opinion measures were submitted to an exploratory factor analysis, with principal components factoring, orthogonal rotation and an extraction cutoff of eigenvalue=1.0 (i.e., latent root criterion). The measure of sampling adequacy (MSA) was .796 (i.e., "middling" according to Kaiser, just shy of "meritorious"; see Hair et al.) and the Bartlett's test of sphericity resulted in a highly significant chi-square (1568.335, *p*<.001), indicating the appropriateness of factor analysis for this set of 20 items. Communalities ranged from a low of .392 to a high of .722, indicating a moderate amount of shared variance for all items.

The analysis resulted in six factors with eigenvalues ranging from 4.238 (21.190% of total variance) to 1.364 (6.818% of total variance). The full six-factor solution explained 61.43% of the total variance of the pool of 20 items. The six factors were given labels based on those items loading highly and cleanly on each factor.

Factor 1 was titled "Subpopulation Treatment" due to high loadings by all six items that measured perceived positive treatment of various groups in society (i.e., Hispanics, Blacks, immigrants, Arabs, Asians, women). Factor 2, "[Political] Reform and Intervention," was given that label because of high loadings by items measuring support for gun control, perceptions of the seriousness of drug problems in the U.S., perceiving a crisis in the healthcare system, perceptions of too much government regulation (a negative loading), and the opinion that Obama is doing a good job as President. Factor 3 was called "Sexual Freedoms" due to its dependence on items measuring support of same-sex marriage and abortion. Factor 4 was a "Still Issues for African Americans" factor—its highloadings by perceiving O.J. Simpson innocent of murder and perceiving a need for continued Affirmation Action are joined by an unexpected primary loading by support for a ban on human cloning. Factor 5 was labeled "Internet" because it represents two positive perceptions of the Internet. Finally, Factor 6, "Fear," seems to represent a general fear of crime and terrorism, with two main loadings by worry over being a victim of terrorism and support for capital punishment.

Given an *n* of 252, any factor loading of at least .35 may be considered significant. On that basis, only one item, B1, "Barack Obama is doing a good job as president," was shown to have a cross-loading: A loading of .411 on Factor 2, and a loading of .381 on Factor 4. This may indicate that respondents reacted to this question in at least two distinctly different ways (i.e., with regard to political "Reform and Intervention," and with regard to "Issue re African Americans").