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## Online Appendix A: Data Collection Methodology

### Gallup Data

The Gallup Daily survey was a dual-frame random digit dial telephone survey. Data were collected for 350 days per year. See: <http://www.gallup.com/174155/gallup-daily-tracking-methodology.aspx> for a description of study methodology.

Presidential approval for Barack Obama was collected beginning on January 21, 2009, the day after his inauguration. Gallup did not collect data on approval on national holidays, some days preceding or following national holidays, and 27 other select dates (2/13/09, 6/19/09, 9/16/09, 12/8/09, 12/9/09, 3/19/10, 5/20/10, 10/7/10, 11/18/10, 11/30/10, 12/8/10, 1/10/11, 8/28/11, 12/15/11, 2/4/12, 4/25/12, 7/26/12, 12/20/12, 2/21/13, 7/17/13, 11/20/13, 12/5/13, 2/4/14, 3/6/14, 6/3/14, 8/7/14, 9/4/14). Gallup also did not ask the Presidential Approval question in the month preceding the 2012 U.S. Presidential Election.

Daily valid Ns ranged from 364 to 962, with a mean of 480 responses. Although the Gallup Daily survey is a probability survey and weights were provided to match population proportions, all results presented in the paper do not use these weights, because there is little theoretical reason to believe that Twitter users will more closely mirror the national population than the population of Gallup respondents. These weights also would not have been appropriate to use for subgroup analyses.

**Categories for demographic analysis.** Table 1 displays the categories from the Gallup data used for demographic variables.

Table A1. Categories for demographic subgroup analysis.

<b>Demographic</b>	<b>Category</b>
<b>Gender</b>	Male
	Female
<b>Age</b>	18-24
	25-34
	35-44
	45-54
	55-64
	65-74
	75 +
<b>Partisanship</b>	Republican
	Lean Republican
	Independent, no lean
	Lean Democrat
	Democrat
<b>Education</b>	Less than high school diploma
	High school degree or diploma
	Technical/Vocational school
	Some college
	College graduate
	Post graduate work or degree
<b>Race/ethnicity (select one)</b>	White
	Other
	Black
	Asian
	Hispanic
<b>Census region</b>	Northeast
	Midwest
	South
	West
<b>Employment status</b>	Employed Full Time (Employer)
	Employed Full Time (Self)
	Employed Part Time, Do Not Want Full Time
	Unemployed
	Employed Part Time, Want Full Time
<b>Income</b>	Under \$720
	\$720 to \$5,999
	\$6,000 to \$11,999

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\$12,000 to \$23,999
\$24,000 to \$35,999
\$36,000 to \$47,999
\$48,000 to \$59,999
\$60,000 to \$89,999
\$90,000 to \$119,999
\$120,000 and over

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## **Twitter Data**

Topsy was a Twitter firehose access service that was purchased by Apple and is no longer publicly available. Due to data collection failures (i.e., gaps in the Topsy data, Twitter outages, or scraping issues) we were unable to calculate sentiment for five dates during the target period: July 4, 2010, September 2, 2010, and January 16-18, 2011.



## Online Appendix B: Additional Methodological Information

### GAM Smoothing

In order to smooth the data for Twitter sentiment, overall approval, and demographic subgroup approval before all analyses, we used generalized additive models (GAMs). These models were specified in the simplest manner possible in order to produce equivalent smoothing parameters for each measure. A spline predictor was used with a linear date variable to produce an estimate of the value for each of the data streams (twitter sentiment, overall survey approval, approval for each demographic subgroup). For all analyses, we opted to use 44 degrees of freedom across the 1,960 days (the rounded square root of the number of days of data). This number was chosen because it typically produced fits that closely resembled the raw data estimates, but were not particularly sensitive to changes over the course of only a few days. It also ensured that the number of days between the average knot and the number of knots was roughly equivalent. No other predictors were included in smoothing models other than the dates.

The *gam* package in R was used to conduct these analyses. With the exception of the smoothing parameter, all values were set at their defaults. One important value of this sort of smoothing, beyond that fact that it mitigates the influence of sampling variation in the results, is that the degrees of freedom used do not necessarily place knots at the same points for each trend. This means that the method is less likely to produce spurious results based on similar inflection points. These were run with the following R code:

```
gam([measure]~s(date, k=44))
```

## **Non-Negative Least Squares Regressions**

Non-negative least squares (NNLS) regression is simply an OLS regression model for which coefficients that are less than zero are set to zero. The outcome measure for each NNLS regression was the standardized Twitter sentiment score. Standardized values of either the GAM modeled daily values or the mean value of respondents within a particular demographic category were used as predictors. For each model, all demographic variables were simultaneously included as possible predictors. Hence, the primary demographic model had 44 possible predictors on the right side of the equation and the interacted demographic model had 828 possible predictors.

This model is robust to concerns about multicollinearity because highly correlated predictors will only enter the model simultaneously if they are going in opposite directions, which was not possible given the non-negative constraint. There is some concern that the set of predictors that load into the final model could be one among many possible equivalent combinations, but this can be teased out using the bootstrapping method employed in the main body of the paper.

## **Detrended Moving Average Cross-Correlations**

Detrended Moving Average Cross-Correlations were generated based on online code posted by Ladislav Kristoufek, who first presented the method in a 2013 paper. The original code, posted on his website at [http://staff.utia.cas.cz/kristoufek/Ladislav\\_Kristoufek/Codes.html](http://staff.utia.cas.cz/kristoufek/Ladislav_Kristoufek/Codes.html) was modified to standardize the pair of variables being compared before the moving average was calculated and the results were detrended (modifications in bold).

```
require(tseries)
require(weights)
```

```
DMCA_LRCC<-function(x,y,k){
  xx<-cumsum(stdz(x[!is.na(x) & !is.na(y)]))
  yy<-cumsum(stdz(y[!is.na(x) & !is.na(y)]))
  ma<-c(rep(1,k))/k
  X_MA<-filter(xx,ma)
  Y_MA<-filter(yy,ma)
  F2_xy<-mean((xx-X_MA)[(1+floor(k/2)):(length(xx)-floor(k/2))]*(yy-
Y_MA)[(1+floor(k/2)):(length(yy)-floor(k/2))])
  F2_xx<-mean((xx-X_MA)[(1+floor(k/2)):(length(xx)-floor(k/2))]*(xx-
X_MA)[(1+floor(k/2)):(length(xx)-floor(k/2))])
  F2_yy<-mean((yy-Y_MA)[(1+floor(k/2)):(length(yy)-floor(k/2))]*(yy-
Y_MA)[(1+floor(k/2)):(length(yy)-floor(k/2))])
  rho<-F2_xy/sqrt(F2_xx*F2_yy)
  return(rho)
}
```

Some of the analyses were initially run using a more widely adopted method called detrended cross-correlation analysis (DCCA), but this method took a much longer time to run and produced results that were nearly identical.

**Online Appendix C: Correlations Between Sentiment and Approval for Individual Demographic Categories and Interacted Subgroups**

Table C1. Demographic categories from Gallup data with proportion of respondents in each category and correlations with Twitter sentiment.

Demographic Category	N	Prop	Smoothed	Daily	Smoothed DMCA	Daily DMCA
Male	469,001	49.8%	.62	.38	.14	.13
Female	472,484	50.2%	.71	.44	.20	.16
age1824	62,190	6.6%	.77	.35	.19	.17
age2534	92,657	9.8%	.73	.33	.18	.12
age3544	120,803	12.8%	.61	.29	.13	.14
age4554	167,388	17.8%	.64	.35	.14	.11
age5564	197,077	20.9%	.70	.37	.18	.12
age6574	163,833	17.4%	.60	.31	.20	.16
age75up	137,537	14.6%	.72	.39	.16	.10
Republican	285,140	30.3%	.70	.45	.11	.08
Lean Republican	136,137	14.5%	.23	.15	-.10	-.07
Independent, no lean	88,638	9.4%	.67	.34	.17	.20
Lean Democrat	125,015	13.3%	.75	.43	.28	.20
Democrat	306,555	32.6%	.54	.31	.29	.30
Less than high school diploma	62,185	6.6%	.80	.40	.32	.27
High school degree or diploma	168,657	17.9%	.63	.35	.07	.07
Technical/Vocational school	88,280	9.4%	.50	.24	-.03	-.01
Some college	217,357	23.1%	.58	.32	.22	.23
College graduate	203,740	21.6%	.58	.32	.12	.11
Post graduate work or degree	201,266	21.4%	.81	.43	.24	.15
White	755,240	80.2%	.73	.47	.16	.12
Other	25,753	2.7%	.71	.26	.33	.28
Black	79,009	8.4%	.63	.28	.32	.27
Asian	19,418	2.1%	.50	.14	.03	.04
Hispanic	62,065	6.6%	.57	.31	.25	.26
Northeast	174,154	18.5%	.61	.33	.15	.11
Midwest	208,800	22.2%	.72	.40	.16	.13
South	339,574	36.1%	.63	.37	.14	.11
West	218,957	23.3%	.69	.38	.23	.20
Employed Full Time - Employer-	463,108	49.2%	.63	.38	.11	.09
Employed Full Time -Self-	112,527	12.0%	.71	.36	.32	.25

Employed Part Time, Do Not Want Full Time	164,049	17.4%	.67	.37	.22	.20
Unemployed	97,382	10.3%	.72	.32	.21	.17
Employed Part Time, Want Full Time	104,419	11.1%	.70	.33	.10	.01
Under \$720	19,652	2.1%	.59	.13	.04	.04
\$720 to \$5,999	20,760	2.2%	.60	.13	.12	.05
\$6,000 to \$11,999	54,265	5.8%	.77	.32	.34	.26
\$12,000 to \$23,999	112,013	11.9%	.73	.39	.26	.20
\$24,000 to \$35,999	121,292	12.9%	.65	.34	.07	.04
\$36,000 to \$47,999	118,623	12.6%	.66	.35	.20	.21
\$48,000 to \$59,999	112,601	12.0%	.61	.30	.10	.10
\$60,000 to \$89,999	156,531	16.6%	.66	.33	.24	.17
\$90,000 to \$119,999	84,468	9.0%	.61	.27	-.03	-.07
\$120,000 and over	141,280	15.0%	.63	.30	.15	.11
Average	171,179	18.2%	.65	.33	.17	.14
Minimum	19,418	2.1%	.23	.13	-.10	-.07
Maximum	755,240	80.2%	.81	.47	.34	.30

Table C2. Interacted two-way subgroups from Gallup data with proportion of respondents in each subgroup and correlations with Twitter sentiment.

Interacted Subgroup	N	Prop	Smoothed	Daily	Smoothed DMCA	Daily DMCA
Male x age1824	34,562	3.7%	.75	.27	.04	.08
Male x age2534	50,282	5.3%	.69	.25	.13	.06
Male x age3544	65,088	6.9%	.54	.21	.08	.09
Male x age4554	86,953	9.2%	.59	.26	.10	.07
Male x age5564	98,125	10.4%	.65	.28	.22	.16
Male x age6574	77,644	8.2%	.57	.24	.20	.17
Male x age75up	56,347	6.0%	.66	.29	.06	.05
Female x age1824	27,628	2.9%	.78	.27	.31	.23
Female x age2534	42,375	4.5%	.76	.28	.20	.14
Female x age3544	55,715	5.9%	.65	.26	.16	.12
Female x age4554	80,435	8.5%	.68	.32	.16	.12
Female x age5564	98,952	10.5%	.73	.35	.11	.05
Female x age6574	86,189	9.2%	.62	.28	.18	.11
Female x age75up	81,190	8.6%	.73	.35	.21	.13
Male x Republican	148,297	15.8%	.68	.40	.11	.07
Male x Lean Republican	79,862	8.5%	.17	.11	-.07	-.05
Male x Independent, no lean	47,474	5.0%	.61	.23	.13	.17
Male x Lean Democrat	64,725	6.9%	.73	.39	.29	.21
Male x Democrat	128,643	13.7%	.58	.27	.21	.21
Female x Republican	136,843	14.5%	.70	.44	.10	.08
Female x Lean Republican	56,275	6.0%	.32	.17	-.12	-.11
Female x Independent, no lean	41,164	4.4%	.70	.32	.19	.17
Female x Lean Democrat	60,290	6.4%	.75	.39	.26	.19
Female x Democrat	177,912	18.9%	.50	.25	.32	.31
Male x Less than high school diploma	29,348	3.1%	.82	.34	.38	.30
Male x High school degree or diploma	77,731	8.3%	.64	.29	-.01	-.01
Male x Technical/Vocational school	45,500	4.8%	.48	.18	.04	.03
Male x Some college	104,294	11.1%	.53	.24	.19	.20
Male x College graduate	105,340	11.2%	.45	.21	.07	.06
Male x Post graduate work or degree	106,788	11.3%	.74	.31	.17	.10
Female x Less than high school diploma	32,837	3.5%	.76	.31	.22	.15
Female x High school degree	90,926	9.7%	.59	.31	.12	.13

or diploma

Female x Technical/Vocational school	42,780	4.5%	.53	.20	-.07	-.03
Female x Some college	113,063	12.0%	.60	.29	.22	.21
Female x College graduate	98,400	10.5%	.69	.32	.16	.11
Female x Post graduate work or degree	94,478	10.0%	.83	.42	.28	.17
Male x White	376,477	40.0%	.71	.43	.15	.12
Male x Other	13,955	1.5%	.53	.17	.20	.20
Male x Black	35,779	3.8%	.58	.20	.15	.12
Male x Asian	11,232	1.2%	.47	.08	-.08	-.13
Male x Hispanic	31,558	3.4%	.57	.27	.28	.34
Female x White	378,763	40.2%	.75	.47	.16	.11
Female x Other	11,798	1.3%	.81	.21	.43	.27
Female x Black	43,230	4.6%	.64	.22	.41	.32
Female x Asian	8,186	0.9%	.50	.11	.13	.06
Female x Hispanic	30,507	3.2%	.56	.24	.15	.11
Male x Northeast	86,347	9.2%	.58	.27	.19	.14
Male x Midwest	103,955	11.0%	.66	.31	.08	.06
Male x South	167,922	17.8%	.59	.30	.13	.10
Male x West	110,777	11.8%	.61	.28	.14	.14
Female x Northeast	87,807	9.3%	.61	.28	.11	.05
Female x Midwest	104,845	11.1%	.75	.39	.24	.19
Female x South	171,652	18.2%	.65	.35	.15	.10
Female x West	108,180	11.5%	.75	.37	.30	.21
Male x Employed Full Time -Employer-	251,604	26.7%	.56	.32	.08	.07
Male x Employed Full Time -Self-	61,650	6.5%	.67	.26	.25	.14
Male x Employed Part Time, Do Not Want Full Time	65,403	6.9%	.63	.26	.18	.15
Male x Unemployed	43,948	4.7%	.68	.21	.14	.09
Male x Employed Part Time, Want Full Time	46,396	4.9%	.67	.21	.08	.01
Female x Employed Full Time -Employer-	211,504	22.5%	.69	.37	.14	.10
Female x Employed Full Time -Self-	50,877	5.4%	.74	.32	.38	.27
Female x Employed Part Time, Do Not Want Full Time	98,646	10.5%	.68	.34	.23	.21
Female x Unemployed	53,434	5.7%	.74	.30	.26	.19
Female x Employed Part	58,023	6.2%	.71	.31	.10	-.01

Time, Want Full Time

Male x Under \$720	8,717	0.9%	.49	.07	-.01	.03
Male x \$720 to \$5,999	8,309	0.9%	.57	.07	.18	.14
Male x \$6,000 to \$11,999	20,462	2.2%	.76	.23	.33	.21
Male x \$12,000 to \$23,999	45,643	4.8%	.75	.29	.26	.19
Male x \$24,000 to \$35,999	54,493	5.8%	.63	.26	.00	.04
Male x \$36,000 to \$47,999	56,379	6.0%	.59	.25	.11	.13
Male x \$48,000 to \$59,999	56,344	6.0%	.53	.19	.03	.03
Male x \$60,000 to \$89,999	84,541	9.0%	.61	.26	.30	.23
Male x \$90,000 to \$119,999	47,951	5.1%	.52	.18	-.06	-.10
Male x \$120,000 and over	86,162	9.2%	.59	.23	.08	.03
Female x Under \$720	10,935	1.2%	.62	.13	.06	.16
Female x \$720 to \$5,999	12,451	1.3%	.56	.07	.03	-.01
Female x \$6,000 to \$11,999	33,803	3.6%	.75	.26	.31	.22
Female x \$12,000 to \$23,999	66,370	7.0%	.71	.33	.22	.15
Female x \$24,000 to \$35,999	66,799	7.1%	.65	.30	.13	.03
Female x \$36,000 to \$47,999	62,244	6.6%	.71	.31	.27	.25
Female x \$48,000 to \$59,999	56,257	6.0%	.66	.29	.14	.13
Female x \$60,000 to \$89,999	71,990	7.6%	.69	.28	.14	.06
Female x \$90,000 to \$119,999	36,517	3.9%	.68	.24	.00	-.01
Female x \$120,000 and over	55,118	5.9%	.69	.27	.23	.16
age1824 x Republican	14,366	1.5%	.75	.28	.19	.21
age1824 x Lean Republican	8,683	0.9%	.75	.18	.12	.12
age1824 x Independent, no lean	6,774	0.7%	.69	.11	.13	.05
age1824 x Lean Democrat	11,999	1.3%	.72	.18	.24	.17
age1824 x Democrat	20,368	2.2%	.40	.08	-.10	.01
age2534 x Republican	23,133	2.5%	.71	.27	.13	.09
age2534 x Lean Republican	12,977	1.4%	.50	.07	-.15	-.18
age2534 x Independent, no lean	10,807	1.1%	.70	.18	-.03	-.04
age2534 x Lean Democrat	15,796	1.7%	.76	.27	.27	.25
age2534 x Democrat	29,944	3.2%	.58	.17	.24	.23
age3544 x Republican	35,763	3.8%	.67	.28	.03	-.03
age3544 x Lean Republican	17,479	1.9%	.30	.13	-.01	.02
age3544 x Independent, no lean	12,678	1.3%	.65	.17	.27	.26
age3544 x Lean Democrat	17,362	1.8%	.74	.23	.21	.15
age3544 x Democrat	37,521	4.0%	.56	.16	.30	.27
age4554 x Republican	51,922	5.5%	.68	.36	.07	.09



age4554 x Lean Republican	24,344	2.6%	.23	.08	-.05	-.05
age4554 x Independent, no lean	16,335	1.7%	.67	.18	.17	.16
age4554 x Lean Democrat	21,472	2.3%	.76	.27	.25	.12
age4554 x Democrat	53,315	5.7%	.53	.19	.27	.18
age5564 x Republican	57,728	6.1%	.67	.33	.03	.00
age5564 x Lean Republican	29,602	3.1%	.15	.09	-.08	-.04
age5564 x Independent, no lean	17,193	1.8%	.62	.17	.23	.19
age5564 x Lean Democrat	25,175	2.7%	.73	.31	.32	.24
age5564 x Democrat	67,379	7.2%	.53	.20	.10	.07
age6574 x Republican	53,888	5.7%	.67	.35	.18	.11
age6574 x Lean Republican	25,340	2.7%	.09	.03	-.11	-.06
age6574 x Independent, no lean	13,311	1.4%	.48	.11	-.04	-.09
age6574 x Lean Democrat	18,735	2.0%	.67	.28	.25	.18
age6574 x Democrat	52,559	5.6%	.49	.16	.30	.21
age75up x Republican	48,340	5.1%	.70	.38	.10	.06
age75up x Lean Republican	17,712	1.9%	.24	.13	-.16	-.13
age75up x Independent, no lean	11,540	1.2%	.64	.19	.00	.08
age75up x Lean Democrat	14,476	1.5%	.64	.24	.22	.09
age75up x Democrat	45,469	4.8%	.59	.21	.46	.45
age1824 x Less than high school diploma	5,958	0.6%	.61	.12	.10	.09
age1824 x High school degree or diploma	13,876	1.5%	.80	.23	.24	.20
age1824 x Technical/Vocational school	5,196	0.6%	.63	.13	.07	.07
age1824 x Some college	20,275	2.2%	.75	.21	.16	.14
age1824 x College graduate	9,915	1.1%	.68	.14	.22	.07
age1824 x Post graduate work or degree	6,970	0.7%	.64	.07	-.01	.00
age2534 x Less than high school diploma	6,259	0.7%	.78	.23	.29	.28
age2534 x High school degree or diploma	13,473	1.4%	.66	.16	.00	.07
age2534 x Technical/Vocational school	8,474	0.9%	.53	.12	.05	-.03
age2534 x Some college	19,947	2.1%	.71	.16	.32	.27
age2534 x College graduate	25,236	2.7%	.69	.19	.26	.20
age2534 x Post graduate work or degree	19,268	2.0%	.71	.18	-.04	-.15

age3544 x Less than high school diploma	7,050	0.7%	.76	.20	.29	.23
age3544 x High school degree or diploma	16,286	1.7%	.60	.18	.19	.15
age3544 x Technical/Vocational school	11,649	1.2%	.34	.08	.02	-.01
age3544 x Some college	24,551	2.6%	.50	.15	.06	.15
age3544 x College graduate	32,708	3.5%	.48	.12	.13	.13
age3544 x Post graduate work or degree	28,559	3.0%	.73	.20	.06	.06
age4554 x Less than high school diploma	9,361	1.0%	.75	.20	.18	.11
age4554 x High school degree or diploma	27,016	2.9%	.57	.21	-.05	-.04
age4554 x Technical/Vocational school	16,800	1.8%	.48	.14	-.14	.01
age4554 x Some college	36,830	3.9%	.55	.19	.27	.24
age4554 x College graduate	41,358	4.4%	.53	.19	-.05	-.03
age4554 x Post graduate work or degree	36,023	3.8%	.82	.28	.33	.26
age5564 x Less than high school diploma	9,993	1.1%	.74	.20	.15	.20
age5564 x High school degree or diploma	31,165	3.3%	.56	.23	.23	.19
age5564 x Technical/Vocational school	18,503	2.0%	.50	.12	.07	.05
age5564 x Some college	46,529	4.9%	.59	.22	.12	.09
age5564 x College graduate	43,075	4.6%	.65	.19	.10	-.02
age5564 x Post graduate work or degree	47,812	5.1%	.80	.29	.20	.08
age6574 x Less than high school diploma	10,964	1.2%	.79	.17	.31	.16
age6574 x High school degree or diploma	33,104	3.5%	.56	.20	-.01	.02
age6574 x Technical/Vocational school	15,032	1.6%	.41	.06	-.03	-.13
age6574 x Some college	38,697	4.1%	.34	.12	.10	.09
age6574 x College graduate	28,822	3.1%	.39	.11	.06	.04
age6574 x Post graduate work or degree	37,214	4.0%	.81	.26	.33	.25
age75up x Less than high school diploma	12,600	1.3%	.81	.22	.29	.09
age75up x High school degree or diploma	33,737	3.6%	.70	.25	.01	-.04
age75up x	12,626	1.3%	.64	.14	.02	.00

Technical/Vocational school

age75up x Some college	30,528	3.2%	.56	.18	.05	.10
age75up x College graduate	22,626	2.4%	.61	.20	.08	.05
age75up x Post graduate work or degree	25,420	2.7%	.82	.26	.38	.24
age1824 x White	35,953	3.8%	.79	.36	.11	.13
age1824 x Other	2,977	0.3%	.69	.10	.35	.19
age1824 x Black	9,176	1.0%	.59	.12	.16	.10
age1824 x Asian	3,492	0.4%	.58	.10	.14	.09
age1824 x Hispanic	10,592	1.1%	.59	.15	.14	.20
age2534 x White	61,945	6.6%	.75	.33	.13	.08
age2534 x Other	3,640	0.4%	.77	.17	.24	.19
age2534 x Black	11,068	1.2%	.63	.13	.08	-.01
age2534 x Asian	3,984	0.4%	.51	.07	.07	.04
age2534 x Hispanic	12,020	1.3%	.65	.19	.33	.28
age3544 x White	88,789	9.4%	.68	.33	.08	.10
age3544 x Other	4,139	0.4%	.68	.12	.20	.09
age3544 x Black	12,329	1.3%	.69	.11	.40	.32
age3544 x Asian	3,752	0.4%	.37	.04	-.20	-.09
age3544 x Hispanic	11,794	1.3%	.49	.15	.14	.15
age4554 x White	133,362	14.2%	.71	.39	.14	.10
age4554 x Other	5,095	0.5%	.53	.09	.04	.05
age4554 x Black	15,229	1.6%	.57	.15	.13	.03
age4554 x Asian	3,106	0.3%	.42	.06	-.10	-.08
age4554 x Hispanic	10,596	1.1%	.48	.12	.11	.09
age5564 x White	166,658	17.7%	.75	.40	.17	.09
age5564 x Other	4,813	0.5%	.62	.13	.27	.14
age5564 x Black	14,770	1.6%	.54	.13	.19	.00
age5564 x Asian	2,505	0.3%	.49	.05	.18	.20
age5564 x Hispanic	8,331	0.9%	.48	.11	.17	.21
age6574 x White	143,790	15.3%	.66	.34	.17	.12
age6574 x Other	3,066	0.3%	.59	.11	.37	.25
age6574 x Black	9,979	1.1%	.43	.08	.29	.13
age6574 x Asian	1,562	0.2%	.33	.05	-.02	-.08
age6574 x Hispanic	5,436	0.6%	.60	.10	.23	.13
age75up x White	124,743	13.2%	.74	.41	.15	.09
age75up x Other	2,023	0.2%	.57	.13	.22	.16
age75up x Black	6,458	0.7%	.37	.05	.27	.15
age75up x Asian	1,017	0.1%	.19	.02	.05	-.05
age75up x Hispanic	3,296	0.4%	.54	.06	.05	-.04

age1824 x Northeast	10,984	1.2%	.65	.13	.09	.09
age1824 x Midwest	13,355	1.4%	.78	.20	.17	.15
age1824 x South	22,632	2.4%	.76	.27	.13	.13
age1824 x West	15,219	1.6%	.73	.19	.16	.13
age2534 x Northeast	16,268	1.7%	.67	.15	.08	.01
age2534 x Midwest	19,577	2.1%	.78	.20	.36	.28
age2534 x South	34,181	3.6%	.71	.24	.03	.01
age2534 x West	22,631	2.4%	.70	.18	.18	.17
age3544 x Northeast	22,202	2.4%	.48	.13	.04	.08
age3544 x Midwest	26,649	2.8%	.65	.19	.11	.13
age3544 x South	43,575	4.6%	.53	.18	.22	.19
age3544 x West	28,377	3.0%	.64	.17	-.03	-.05
age4554 x Northeast	32,352	3.4%	.58	.21	.03	.01
age4554 x Midwest	38,042	4.0%	.64	.23	-.01	.00
age4554 x South	59,533	6.3%	.60	.24	.09	.09
age4554 x West	37,461	4.0%	.67	.23	.35	.24
age5564 x Northeast	36,952	3.9%	.63	.23	.19	.15
age5564 x Midwest	44,373	4.7%	.74	.29	.22	.16
age5564 x South	70,149	7.5%	.62	.24	.16	.11
age5564 x West	45,603	4.8%	.72	.23	.07	-.01
age6574 x Northeast	29,284	3.1%	.55	.14	.13	.03
age6574 x Midwest	35,483	3.8%	.65	.23	.05	-.02
age6574 x South	61,125	6.5%	.53	.20	.16	.08
age6574 x West	37,941	4.0%	.62	.19	.38	.34
age75up x Northeast	26,112	2.8%	.67	.23	.24	.13
age75up x Midwest	31,321	3.3%	.72	.28	.14	.10
age75up x South	48,379	5.1%	.71	.27	.08	-.01
age75up x West	31,725	3.4%	.67	.24	.14	.16
age1824 x Employed Full Time -Employer-	32,377	3.4%	.73	.26	.05	.08
age1824 x Employed Full Time -Self-	3,894	0.4%	.76	.13	.07	.14
age1824 x Employed Part Time, Do Not Want Full Time	6,668	0.7%	.72	.14	.30	.30
age1824 x Unemployed	8,700	0.9%	.76	.16	.28	.15
age1824 x Employed Part Time, Want Full Time	10,551	1.1%	.71	.15	.10	.07
age2534 x Employed Full Time -Employer-	59,251	6.3%	.73	.27	.29	.26
age2534 x Employed Full Time -Self-	7,087	0.8%	.59	.07	.09	.05

age2534 x Employed Part Time, Do Not Want Full Time	7,296	0.8%	.60	.12	-.12	-.03
age2534 x Unemployed	9,290	1.0%	.72	.12	.10	-.06
age2534 x Employed Part Time, Want Full Time	9,733	1.0%	.66	.10	-.22	-.28
age3544 x Employed Full Time -Employer-	76,403	8.1%	.54	.23	-.03	.01
age3544 x Employed Full Time -Self-	11,028	1.2%	.65	.15	.24	.16
age3544 x Employed Part Time, Do Not Want Full Time	11,264	1.2%	.59	.08	.27	.13
age3544 x Unemployed	10,756	1.1%	.60	.11	.23	.27
age3544 x Employed Part Time, Want Full Time	11,352	1.2%	.58	.10	.14	.08
age4554 x Employed Full Time -Employer-	100,310	10.7%	.60	.29	.08	.07
age4554 x Employed Full Time -Self-	17,669	1.9%	.66	.16	.30	.16
age4554 x Employed Part Time, Do Not Want Full Time	17,933	1.9%	.56	.13	-.04	.01
age4554 x Unemployed	15,403	1.6%	.70	.16	.25	.21
age4554 x Employed Part Time, Want Full Time	16,073	1.7%	.72	.17	.12	.06
age5564 x Employed Full Time -Employer-	99,449	10.6%	.65	.28	.09	.01
age5564 x Employed Full Time -Self-	24,631	2.6%	.72	.22	.29	.20
age5564 x Employed Part Time, Do Not Want Full Time	33,235	3.5%	.69	.21	.20	.16
age5564 x Unemployed	19,458	2.1%	.72	.16	.13	.08
age5564 x Employed Part Time, Want Full Time	20,304	2.2%	.72	.19	.13	.09
age6574 x Employed Full Time -Employer-	56,050	6.0%	.53	.18	.03	-.02
age6574 x Employed Full Time -Self-	25,187	2.7%	.58	.15	.27	.18
age6574 x Employed Part Time, Do Not Want Full Time	44,911	4.8%	.62	.22	.31	.29
age6574 x Unemployed	18,117	1.9%	.60	.15	.13	.14
age6574 x Employed Part Time, Want Full Time	19,568	2.1%	.63	.15	.12	.05

age75up x Employed Full Time -Employer-	39,268	4.2%	.73	.27	.38	.33
age75up x Employed Full Time -Self-	23,031	2.4%	.75	.24	.14	.06
age75up x Employed Part Time, Do Not Want Full Time	42,742	4.5%	.66	.27	.05	.00
age75up x Unemployed	15,658	1.7%	.64	.13	-.09	-.23
age75up x Employed Part Time, Want Full Time	16,838	1.8%	.70	.20	.09	-.01
age1824 x Under \$720	2,672	0.3%	.62	.06	.22	.19
age1824 x \$720 to \$5,999	2,797	0.3%	.49	.04	-.06	-.01
age1824 x \$6,000 to \$11,999	5,434	0.6%	.64	.11	.14	.08
age1824 x \$12,000 to \$23,999	9,554	1.0%	.76	.19	.14	-.02
age1824 x \$24,000 to \$35,999	8,704	0.9%	.70	.12	.03	.00
age1824 x \$36,000 to \$47,999	7,523	0.8%	.77	.15	.24	.15
age1824 x \$48,000 to \$59,999	6,460	0.7%	.65	.14	.17	.13
age1824 x \$60,000 to \$89,999	7,497	0.8%	.69	.15	.13	.16
age1824 x \$90,000 to \$119,999	4,326	0.5%	.61	.10	-.04	-.05
age1824 x \$120,000 and over	7,223	0.8%	.68	.12	-.04	.04
age2534 x Under \$720	2,110	0.2%	.56	.07	.05	-.16
age2534 x \$720 to \$5,999	2,070	0.2%	.48	.05	.06	.05
age2534 x \$6,000 to \$11,999	4,902	0.5%	.80	.11	.29	.19
age2534 x \$12,000 to \$23,999	11,277	1.2%	.78	.17	.30	.13
age2534 x \$24,000 to \$35,999	12,493	1.3%	.69	.17	-.19	-.18
age2534 x \$36,000 to \$47,999	11,987	1.3%	.65	.11	-.05	-.03
age2534 x \$48,000 to \$59,999	11,404	1.2%	.68	.14	.24	.21
age2534 x \$60,000 to \$89,999	16,671	1.8%	.70	.18	.40	.36
age2534 x \$90,000 to \$119,999	8,036	0.9%	.51	.06	-.14	-.06
age2534 x \$120,000 and over	11,707	1.2%	.53	.08	-.07	-.19
age3544 x Under \$720	2,224	0.2%	.36	.05	-.23	-.14

age3544 x \$720 to \$5,999	2,301	0.2%	.43	.04	.06	-.06
age3544 x \$6,000 to \$11,999	5,225	0.6%	.72	.13	.36	.16
age3544 x \$12,000 to \$23,999	11,087	1.2%	.75	.19	.39	.21
age3544 x \$24,000 to \$35,999	12,775	1.4%	.66	.18	.12	.13
age3544 x \$36,000 to \$47,999	13,649	1.4%	.58	.11	.19	.08
age3544 x \$48,000 to \$59,999	14,150	1.5%	.53	.13	.04	.09
age3544 x \$60,000 to \$89,999	23,027	2.4%	.50	.12	.03	.03
age3544 x \$90,000 to \$119,999	13,559	1.4%	.47	.10	-.20	-.06
age3544 x \$120,000 and over	22,806	2.4%	.57	.11	.15	.17
age4554 x Under \$720	3,585	0.4%	.45	.08	.26	.19
age4554 x \$720 to \$5,999	3,162	0.3%	.50	.04	.01	-.05
age4554 x \$6,000 to \$11,999	8,526	0.9%	.75	.18	.20	.10
age4554 x \$12,000 to \$23,999	15,981	1.7%	.69	.21	.08	.03
age4554 x \$24,000 to \$35,999	18,073	1.9%	.63	.14	.07	-.03
age4554 x \$36,000 to \$47,999	18,421	2.0%	.63	.17	.18	.06
age4554 x \$48,000 to \$59,999	19,664	2.1%	.57	.15	.01	.01
age4554 x \$60,000 to \$89,999	30,472	3.2%	.60	.20	.19	.16
age4554 x \$90,000 to \$119,999	17,514	1.9%	.54	.14	.00	-.05
age4554 x \$120,000 and over	31,990	3.4%	.64	.20	.13	.11
age5564 x Under \$720	3,643	0.4%	.38	.03	-.19	-.12
age5564 x \$720 to \$5,999	3,411	0.4%	.60	.09	.31	.28
age5564 x \$6,000 to \$11,999	10,619	1.1%	.72	.14	.27	.16
age5564 x \$12,000 to \$23,999	20,104	2.1%	.71	.23	.28	.28
age5564 x \$24,000 to \$35,999	23,232	2.5%	.68	.21	.13	.02
age5564 x \$36,000 to \$47,999	24,210	2.6%	.64	.21	.03	.02
age5564 x \$48,000 to \$59,999	23,872	2.5%	.65	.17	-.03	-.08
age5564 x \$60,000 to	36,019	3.8%	.69	.19	.21	.06

\$89,999						
age5564 x \$90,000 to \$119,999	19,018	2.0%	.70	.15	.19	.06
age5564 x \$120,000 and over	32,949	3.5%	.61	.18	.12	.05
age6574 x Under \$720	2,432	0.3%	.21	.00	-.12	-.15
age6574 x \$720 to \$5,999	3,178	0.3%	.30	.04	-.04	.03
age6574 x \$6,000 to \$11,999	9,687	1.0%	.70	.16	.36	.25
age6574 x \$12,000 to \$23,999	20,580	2.2%	.66	.17	.10	.01
age6574 x \$24,000 to \$35,999	23,777	2.5%	.50	.15	.05	.03
age6574 x \$36,000 to \$47,999	23,352	2.5%	.55	.18	.18	.19
age6574 x \$48,000 to \$59,999	20,961	2.2%	.55	.16	.26	.20
age6574 x \$60,000 to \$89,999	26,375	2.8%	.59	.11	.16	.11
age6574 x \$90,000 to \$119,999	12,847	1.4%	.37	.08	-.03	-.07
age6574 x \$120,000 and over	20,644	2.2%	.60	.11	.24	.03
age75up x Under \$720	2,986	0.3%	.61	.09	-.03	.07
age75up x \$720 to \$5,999	3,841	0.4%	.50	.02	-.09	-.09
age75up x \$6,000 to \$11,999	9,872	1.0%	.75	.11	.06	-.11
age75up x \$12,000 to \$23,999	23,430	2.5%	.73	.25	.19	.12
age75up x \$24,000 to \$35,999	22,238	2.4%	.70	.22	.03	.04
age75up x \$36,000 to \$47,999	19,481	2.1%	.71	.20	.21	.15
age75up x \$48,000 to \$59,999	16,090	1.7%	.54	.14	-.02	.03
age75up x \$60,000 to \$89,999	16,470	1.7%	.65	.19	.15	.10
age75up x \$90,000 to \$119,999	9,168	1.0%	.63	.14	.09	-.03
age75up x \$120,000 and over	13,961	1.5%	.70	.15	.24	.08
Republican x Less than high school diploma	14,227	1.5%	.84	.30	.38	.27
Republican x High school degree or diploma	51,092	5.4%	.76	.39	.20	.13
Republican x Technical/Vocational school	26,203	2.8%	.65	.26	-.05	-.08



Republican x Some college	69,892	7.4%	.67	.34	.18	.14
Republican x College graduate	68,401	7.3%	.65	.36	-.04	-.02
Republican x Post graduate work or degree	55,325	5.9%	.63	.32	-.02	-.01
Lean Republican x Less than high school diploma	8,085	0.9%	.76	.19	.15	.04
Lean Republican x High school degree or diploma	22,991	2.4%	.47	.16	-.09	-.06
Lean Republican x Technical/Vocational school	13,615	1.4%	.19	.08	-.09	-.08
Lean Republican x Some college	33,093	3.5%	.16	.07	-.16	-.10
Lean Republican x College graduate	30,725	3.3%	.11	.04	-.07	-.02
Lean Republican x Post graduate work or degree	27,628	2.9%	.06	.05	-.10	-.06
Independent, no lean x Less than high school diploma	8,428	0.9%	.69	.18	.19	.21
Independent, no lean x High school degree or diploma	17,548	1.9%	.63	.19	.18	.11
Independent, no lean x Technical/Vocational school	10,271	1.1%	.66	.13	.28	.25
Independent, no lean x Some college	19,534	2.1%	.61	.14	.13	.11
Independent, no lean x College graduate	16,332	1.7%	.69	.19	.18	.14
Independent, no lean x Post graduate work or degree	16,525	1.8%	.58	.13	-.04	-.06
Lean Democrat x Less than high school diploma	8,933	0.9%	.69	.21	.28	.27
Lean Democrat x High school degree or diploma	20,490	2.2%	.76	.30	.34	.27
Lean Democrat x Technical/Vocational school	11,530	1.2%	.70	.16	.14	.02
Lean Democrat x Some college	28,120	3.0%	.74	.31	.32	.21
Lean Democrat x College graduate	26,851	2.9%	.69	.32	.22	.14
Lean Democrat x Post graduate work or degree	29,091	3.1%	.68	.31	.21	.10
Democrat x Less than high school diploma	22,512	2.4%	.24	.10	.13	.23
Democrat x High school degree or diploma	56,536	6.0%	.19	.09	.02	.10
Democrat x	26,661	2.8%	.30	.08	.01	.02

Technical/Vocational school						
Democrat x Some college	66,718	7.1%	.54	.22	.31	.27
Democrat x College graduate	61,431	6.5%	.73	.25	.36	.32
Democrat x Post graduate work or degree	72,697	7.7%	.80	.29	.36	.28
Republican x White	261,546	27.8%	.70	.45	.10	.09
Republican x Other	5,261	0.6%	.62	.16	.16	.05
Republican x Black	4,624	0.5%	.69	.12	.23	.12
Republican x Asian	3,375	0.4%	.54	.07	-.26	-.25
Republican x Hispanic	10,334	1.1%	.72	.17	.19	.07
Lean Republican x White	118,597	12.6%	.32	.20	-.10	-.07
Lean Republican x Other	3,694	0.4%	.17	.03	.14	.08
Lean Republican x Black	3,905	0.4%	.24	.05	.17	.16
Lean Republican x Asian	2,384	0.3%	.13	-.01	-.32	-.37
Lean Republican x Hispanic	7,557	0.8%	.61	.12	.11	.05
Independent, no lean x White	68,411	7.3%	.70	.36	.10	.14
Independent, no lean x Other	3,635	0.4%	.63	.08	.06	.21
Independent, no lean x Black	6,384	0.7%	.43	.06	.04	-.05
Independent, no lean x Asian	2,327	0.2%	.39	.05	.06	.12
Independent, no lean x Hispanic	7,881	0.8%	.57	.17	.44	.36
Lean Democrat x White	93,974	10.0%	.71	.41	.24	.16
Lean Democrat x Other	4,178	0.4%	.75	.19	.23	.19
Lean Democrat x Black	11,824	1.3%	.69	.09	.33	.13
Lean Democrat x Asian	3,847	0.4%	.66	.09	.15	.07
Lean Democrat x Hispanic	11,192	1.2%	.63	.18	.26	.20
Democrat x White	212,712	22.6%	.64	.33	.29	.27
Democrat x Other	8,985	1.0%	.62	.11	.33	.28
Democrat x Black	52,272	5.6%	.34	.13	.15	.16
Democrat x Asian	7,485	0.8%	.24	.04	.13	.05
Democrat x Hispanic	25,101	2.7%	.40	.16	.16	.20
Republican x Northeast	44,254	4.7%	.72	.37	.12	.10
Republican x Midwest	62,802	6.7%	.69	.37	.06	.07
Republican x South	113,609	12.1%	.68	.40	.11	.08
Republican x West	64,475	6.8%	.68	.33	.11	.03
Lean Republican x Northeast	23,267	2.5%	.16	.08	-.11	-.07
Lean Republican x Midwest	30,802	3.3%	.35	.13	-.03	-.01
Lean Republican x South	51,360	5.5%	.21	.11	-.11	-.06
Lean Republican x West	30,708	3.3%	.19	.11	-.12	-.06
Independent, no lean x Northeast	16,570	1.8%	.56	.16	.07	.08

Independent, no lean x Midwest	20,086	2.1%	.65	.20	.06	.01
Independent, no lean x South	31,282	3.3%	.68	.24	.20	.16
Independent, no lean x West	20,700	2.2%	.64	.19	.20	.18
Lean Democrat x Northeast	26,182	2.8%	.75	.28	.29	.18
Lean Democrat x Midwest	28,888	3.1%	.75	.34	.30	.21
Lean Democrat x South	39,122	4.2%	.72	.34	.27	.22
Lean Democrat x West	30,823	3.3%	.75	.31	.21	.11
Democrat x Northeast	63,881	6.8%	.39	.16	.23	.19
Democrat x Midwest	66,222	7.0%	.61	.24	.25	.24
Democrat x South	104,201	11.1%	.45	.20	.26	.25
Democrat x West	72,251	7.7%	.67	.27	.33	.31
Republican x Employed Full Time -Employer-	139,802	14.8%	.68	.42	.06	.06
Republican x Employed Full Time -Self-	37,294	4.0%	.68	.30	.05	-.03
Republican x Employed Part Time, Do Not Want Full Time	52,338	5.6%	.68	.34	.15	.11
Republican x Unemployed	26,493	2.8%	.74	.29	.11	.03
Republican x Employed Part Time, Want Full Time	29,213	3.1%	.75	.33	.21	.14
Lean Republican x Employed Full Time -Employer-	68,569	7.3%	.16	.08	-.16	-.11
Lean Republican x Employed Full Time -Self-	17,453	1.9%	.23	.11	.05	.06
Lean Republican x Employed Part Time, Do Not Want Full Time	22,540	2.4%	.28	.14	-.02	.07
Lean Republican x Unemployed	13,304	1.4%	.35	.07	.01	-.07
Lean Republican x Employed Part Time, Want Full Time	14,271	1.5%	.28	.10	-.12	-.14
Independent, no lean x Employed Full Time -Employer-	43,994	4.7%	.63	.25	.08	.12
Independent, no lean x Employed Full Time -Self-	10,574	1.1%	.69	.16	.21	.15
Independent, no lean x Employed Part Time, Do Not Want Full Time	13,920	1.5%	.68	.20	.22	.23
Independent, no lean x Unemployed	9,739	1.0%	.71	.16	.33	.30

Independent, no lean x Employed Part Time, Want Full Time	10,411	1.1%	.56	.12	-.01	.04
Lean Democrat x Employed Full Time -Employer-	62,943	6.7%	.73	.37	.25	.15
Lean Democrat x Employed Full Time -Self-	13,839	1.5%	.74	.25	.35	.26
Lean Democrat x Employed Part Time, Do Not Want Full Time	20,263	2.2%	.71	.27	.29	.22
Lean Democrat x Unemployed	13,417	1.4%	.78	.28	.30	.26
Lean Democrat x Employed Part Time, Want Full Time	14,553	1.5%	.77	.27	.20	.16
Democrat x Employed Full Time -Employer-	147,800	15.7%	.54	.25	.27	.28
Democrat x Employed Full Time -Self-	33,367	3.5%	.60	.19	.43	.34
Democrat x Employed Part Time, Do Not Want Full Time	54,988	5.8%	.58	.21	.39	.33
Democrat x Unemployed	34,429	3.7%	.46	.14	.03	.05
Democrat x Employed Part Time, Want Full Time	35,971	3.8%	.47	.15	.06	.08
Republican x Under \$720	4,266	0.5%	.70	.16	.22	.17
Republican x \$720 to \$5,999	4,834	0.5%	.59	.11	.11	.17
Republican x \$6,000 to \$11,999	11,868	1.3%	.73	.20	.21	.16
Republican x \$12,000 to \$23,999	28,056	3.0%	.76	.33	.17	.12
Republican x \$24,000 to \$35,999	34,582	3.7%	.70	.34	.04	.00
Republican x \$36,000 to \$47,999	36,052	3.8%	.71	.32	.09	.08
Republican x \$48,000 to \$59,999	35,776	3.8%	.67	.29	.14	.09
Republican x \$60,000 to \$89,999	52,099	5.5%	.66	.32	.10	.06
Republican x \$90,000 to \$119,999	28,301	3.0%	.66	.29	-.02	-.04
Republican x \$120,000 and over	49,306	5.2%	.63	.31	.06	.05
Lean Republican x Under \$720	2,515	0.3%	.49	.05	.06	.07
Lean Republican x \$720 to \$5,999	2,690	0.3%	.40	.04	-.07	.00

Lean Republican x \$6,000 to \$11,999	6,451	0.7%	.61	.09	.04	.00
Lean Republican x \$12,000 to \$23,999	14,574	1.5%	.41	.13	-.17	-.15
Lean Republican x \$24,000 to \$35,999	16,994	1.8%	.27	.06	-.01	.04
Lean Republican x \$36,000 to \$47,999	17,368	1.8%	.16	.10	-.24	-.11
Lean Republican x \$48,000 to \$59,999	16,750	1.8%	.15	.07	-.12	-.08
Lean Republican x \$60,000 to \$89,999	23,775	2.5%	.14	.07	-.08	-.03
Lean Republican x \$90,000 to \$119,999	13,054	1.4%	.14	.05	-.08	-.06
Lean Republican x \$120,000 and over	21,966	2.3%	.17	.06	-.06	.00
Independent, no lean x Under \$720	2,647	0.3%	.47	.03	.07	.04
Independent, no lean x \$720 to \$5,999	2,717	0.3%	.42	.03	-.09	.04
Independent, no lean x \$6,000 to \$11,999	6,751	0.7%	.62	.14	.23	.16
Independent, no lean x \$12,000 to \$23,999	12,217	1.3%	.68	.19	.32	.25
Independent, no lean x \$24,000 to \$35,999	11,799	1.3%	.61	.16	.03	.08
Independent, no lean x \$36,000 to \$47,999	11,047	1.2%	.67	.16	.09	.07
Independent, no lean x \$48,000 to \$59,999	10,448	1.1%	.61	.14	.08	.11
Independent, no lean x \$60,000 to \$89,999	12,074	1.3%	.62	.15	.16	.23
Independent, no lean x \$90,000 to \$119,999	7,383	0.8%	.62	.09	.04	.12
Independent, no lean x \$120,000 and over	11,555	1.2%	.49	.07	-.09	-.06
Lean Democrat x Under \$720	2,972	0.3%	.75	.13	.25	.19
Lean Democrat x \$720 to \$5,999	3,017	0.3%	.62	.13	.22	.20
Lean Democrat x \$6,000 to \$11,999	7,868	0.8%	.77	.19	.27	.08
Lean Democrat x \$12,000 to \$23,999	15,891	1.7%	.78	.25	.32	.22
Lean Democrat x \$24,000 to \$35,999	16,340	1.7%	.75	.26	.22	.15

Lean Democrat x \$36,000 to \$47,999	15,612	1.7%	.73	.27	.27	.18
Lean Democrat x \$48,000 to \$59,999	14,503	1.5%	.72	.24	.22	.14
Lean Democrat x \$60,000 to \$89,999	20,120	2.1%	.68	.27	.23	.14
Lean Democrat x \$90,000 to \$119,999	10,844	1.2%	.64	.22	.22	.15
Lean Democrat x \$120,000 and over	17,848	1.9%	.65	.25	.20	.08
Democrat x Under \$720	7,252	0.8%	.21	.02	-.22	-.14
Democrat x \$720 to \$5,999	7,502	0.8%	.28	.03	.13	-.07
Democrat x \$6,000 to \$11,999	21,327	2.3%	.45	.15	.46	.42
Democrat x \$12,000 to \$23,999	41,275	4.4%	.37	.15	.28	.31
Democrat x \$24,000 to \$35,999	41,577	4.4%	.44	.17	.14	.10
Democrat x \$36,000 to \$47,999	38,544	4.1%	.52	.17	.29	.26
Democrat x \$48,000 to \$59,999	35,124	3.7%	.61	.18	.30	.20
Democrat x \$60,000 to \$89,999	48,463	5.1%	.63	.18	.21	.19
Democrat x \$90,000 to \$119,999	24,886	2.6%	.62	.15	.17	.11
Democrat x \$120,000 and over	40,605	4.3%	.62	.16	.15	.15
Less than high school diploma x White	39,258	4.2%	.78	.37	.22	.17
Less than high school diploma x Other	2,475	0.3%	.73	.18	.14	.19
Less than high school diploma x Black	7,838	0.8%	.57	.08	.20	.04
Less than high school diploma x Asian	698	0.1%	.20	.02	.10	.07
Less than high school diploma x Hispanic	11,916	1.3%	.69	.26	.33	.26
High school degree or diploma x White	132,458	14.1%	.69	.39	.02	.02
High school degree or diploma x Other	4,794	0.5%	.73	.16	.41	.23
High school degree or diploma x Black	15,858	1.7%	.62	.17	.32	.14
High school degree or diploma x Asian	1,949	0.2%	.41	.05	.11	.08

High school degree or diploma x Hispanic	13,598	1.4%	.65	.22	.26	.26
Technical/Vocational school x White	69,291	7.4%	.61	.31	.04	.05
Technical/Vocational school x Other	2,443	0.3%	.58	.08	-.07	-.22
Technical/Vocational school x Black	7,945	0.8%	.30	.05	-.12	.05
Technical/Vocational school x Asian	1,280	0.1%	.03	.00	-.07	-.26
Technical/Vocational school x Hispanic	7,321	0.8%	.51	.06	.16	.19
Some college x White	174,247	18.5%	.64	.35	.15	.17
Some college x Other	6,502	0.7%	.59	.12	.29	.21
Some college x Black	20,068	2.1%	.69	.21	.46	.42
Some college x Asian	3,527	0.4%	.39	.08	-.04	.03
Some college x Hispanic	13,013	1.4%	.46	.12	.16	.19
College graduate x White	169,805	18.0%	.69	.37	.12	.08
College graduate x Other	5,005	0.5%	.58	.12	.20	.17
College graduate x Black	14,405	1.5%	.61	.10	.38	.15
College graduate x Asian	5,307	0.6%	.46	.06	.07	.03
College graduate x Hispanic	9,218	1.0%	.34	.08	-.01	.11
Post graduate work or degree x White	170,181	18.1%	.83	.45	.25	.16
Post graduate work or degree x Other	4,534	0.5%	.56	.11	.24	.06
Post graduate work or degree x Black	12,895	1.4%	.48	.08	-.03	-.02
Post graduate work or degree x Asian	6,657	0.7%	.48	.07	-.02	-.02
Post graduate work or degree x Hispanic	6,999	0.7%	.37	.08	.17	.28
Less than high school diploma x Northeast	10,053	1.1%	.79	.16	.27	.13
Less than high school diploma x Midwest	13,313	1.4%	.82	.24	.36	.22
Less than high school diploma x South	25,963	2.8%	.78	.31	.31	.22
Less than high school diploma x West	12,856	1.4%	.76	.22	.15	.09
High school degree or diploma x Northeast	32,484	3.5%	.51	.18	.00	.00
High school degree or diploma x Midwest	42,732	4.5%	.69	.30	.10	.06
High school degree or	61,481	6.5%	.60	.27	.04	.05

diploma x South						
High school degree or diploma x West	31,960	3.4%	.60	.22	.11	.11
Technical/Vocational school x Northeast	15,106	1.6%	.33	.08	-.19	-.10
Technical/Vocational school x Midwest	21,905	2.3%	.58	.17	-.04	-.08
Technical/Vocational school x South	32,028	3.4%	.45	.15	.08	.04
Technical/Vocational school x West	19,241	2.0%	.52	.12	.04	-.02
Some college x Northeast	35,030	3.7%	.49	.16	.26	.26
Some college x Midwest	47,843	5.1%	.68	.27	.11	.12
Some college x South	79,001	8.4%	.53	.21	.21	.20
Some college x West	55,483	5.9%	.55	.21	.23	.20
College graduate x Northeast	39,638	4.2%	.53	.19	.06	.04
College graduate x Midwest	43,330	4.6%	.56	.18	.07	.06
College graduate x South	72,075	7.7%	.45	.18	.00	-.04
College graduate x West	48,697	5.2%	.70	.24	.34	.30
Post graduate work or degree x Northeast	41,843	4.4%	.77	.27	.23	.07
Post graduate work or degree x Midwest	39,677	4.2%	.81	.28	.29	.21
Post graduate work or degree x South	69,026	7.3%	.79	.29	.20	.12
Post graduate work or degree x West	50,720	5.4%	.80	.31	.17	.10
Less than high school diploma x Employed Full Time -Employer-	23,313	2.5%	.74	.29	.17	.18
Less than high school diploma x Employed Full Time -Self-	7,991	0.8%	.84	.19	.55	.37
Less than high school diploma x Employed Part Time, Do Not Want Full Time	11,423	1.2%	.80	.20	.30	.14
Less than high school diploma x Unemployed	9,687	1.0%	.79	.20	.30	.11
Less than high school diploma x Employed Part Time, Want Full Time	9,771	1.0%	.71	.17	-.04	-.05
High school degree or diploma x Employed Full Time -Employer-	69,913	7.4%	.58	.27	.09	.09



High school degree or diploma x Employed Full Time -Self-	21,706	2.3%	.62	.19	.00	.00
High school degree or diploma x Employed Part Time, Do Not Want Full Time	32,250	3.4%	.58	.22	.00	.08
High school degree or diploma x Unemployed	22,079	2.3%	.68	.19	.10	.06
High school degree or diploma x Employed Part Time, Want Full Time	22,709	2.4%	.68	.20	.09	.06
Technical/Vocational school x Employed Full Time - Employer-	43,380	4.6%	.41	.16	-.10	-.08
Technical/Vocational school x Employed Full Time -Self-	10,758	1.1%	.56	.12	.19	.17
Technical/Vocational school x Employed Part Time, Do Not Want Full Time	14,630	1.6%	.48	.12	-.06	-.03
Technical/Vocational school x Unemployed	9,490	1.0%	.60	.09	.24	.15
Technical/Vocational school x Employed Part Time, Want Full Time	10,022	1.1%	.51	.11	-.11	-.13
Some college x Employed Full Time -Employer-	101,506	10.8%	.51	.23	.11	.15
Some college x Employed Full Time -Self-	26,440	2.8%	.61	.19	.31	.27
Some college x Employed Part Time, Do Not Want Full Time	39,188	4.2%	.54	.20	.30	.26
Some college x Unemployed	24,116	2.6%	.70	.18	.21	.22
Some college x Employed Part Time, Want Full Time	26,107	2.8%	.63	.17	.14	.10
College graduate x Employed Full Time - Employer-	111,991	11.9%	.55	.25	.11	.07
College graduate x Employed Full Time -Self-	22,755	2.4%	.65	.20	.28	.19
College graduate x Employed Part Time, Do Not Want Full Time	32,180	3.4%	.53	.17	-.03	.02
College graduate x Unemployed	17,673	1.9%	.55	.11	.01	.12
College graduate x	19,141	2.0%	.56	.15	.05	.05

Employed Part Time, Want Full Time						
Post graduate work or degree x Employed Full Time - Employer-	113,005	12.0%	.77	.34	.13	.05
Post graduate work or degree x Employed Full Time -Self-	22,877	2.4%	.80	.24	.27	.17
Post graduate work or degree x Employed Part Time, Do Not Want Full Time	34,378	3.7%	.82	.30	.36	.25
Post graduate work or degree x Unemployed	14,337	1.5%	.79	.16	.24	.04
Post graduate work or degree x Employed Part Time, Want Full Time	16,669	1.8%	.82	.19	.28	.16
Less than high school diploma x Under \$720	4,041	0.4%	.70	.11	.16	.11
Less than high school diploma x \$720 to \$5,999	4,164	0.4%	.66	.08	.05	-.03
Less than high school diploma x \$6,000 to \$11,999	11,477	1.2%	.74	.19	.24	.10
Less than high school diploma x \$12,000 to \$23,999	14,756	1.6%	.79	.27	.27	.21
Less than high school diploma x \$24,000 to \$35,999	9,209	1.0%	.79	.19	.32	.22
Less than high school diploma x \$36,000 to \$47,999	6,366	0.7%	.69	.13	.13	.09
Less than high school diploma x \$48,000 to \$59,999	4,498	0.5%	.69	.11	.32	.14
Less than high school diploma x \$60,000 to \$89,999	3,845	0.4%	.69	.15	.10	.11
Less than high school diploma x \$90,000 to \$119,999	1,868	0.2%	.61	.05	.14	.05
Less than high school diploma x \$120,000 and over	1,961	0.2%	.57	.09	.01	-.05
High school degree or diploma x Under \$720	5,621	0.6%	.60	.07	.04	.05
High school degree or diploma x \$720 to \$5,999	5,935	0.6%	.45	.09	-.02	.08
High school degree or	15,890	1.7%	.71	.19	.29	.20

diploma x \$6,000 to \$11,999						
High school degree or diploma x \$12,000 to \$23,999	33,529	3.6%	.70	.23	.21	.19
High school degree or diploma x \$24,000 to \$35,999	30,265	3.2%	.63	.21	.06	.05
High school degree or diploma x \$36,000 to \$47,999	23,310	2.5%	.56	.18	.04	.03
High school degree or diploma x \$48,000 to \$59,999	18,323	1.9%	.52	.15	-.02	-.05
High school degree or diploma x \$60,000 to \$89,999	18,191	1.9%	.44	.11	-.17	-.17
High school degree or diploma x \$90,000 to \$119,999	7,621	0.8%	.39	.06	-.18	-.16
High school degree or diploma x \$120,000 and over	9,972	1.1%	.47	.16	.01	.09
Technical/Vocational school x Under \$720	2,126	0.2%	.35	.05	.00	-.01
Technical/Vocational school x \$720 to \$5,999	2,534	0.3%	.34	.03	.03	-.08
Technical/Vocational school x \$6,000 to \$11,999	5,926	0.6%	.73	.12	.30	.22
Technical/Vocational school x \$12,000 to \$23,999	12,635	1.3%	.60	.15	.20	.20
Technical/Vocational school x \$24,000 to \$35,999	13,749	1.5%	.51	.14	-.06	-.15
Technical/Vocational school x \$36,000 to \$47,999	12,821	1.4%	.41	.11	-.15	-.07
Technical/Vocational school x \$48,000 to \$59,999	11,471	1.2%	.38	.05	.07	-.05
Technical/Vocational school x \$60,000 to \$89,999	13,076	1.4%	.37	.09	-.13	-.14
Technical/Vocational school x \$90,000 to \$119,999	6,407	0.7%	.15	.00	-.36	-.31
Technical/Vocational school x \$120,000 and over	7,535	0.8%	.29	.03	-.06	-.09
Some college x Under \$720	3,903	0.4%	.58	.08	.21	.23
Some college x \$720 to \$5,999	4,334	0.5%	.46	.02	.28	.16
Some college x \$6,000 to \$11,999	11,769	1.3%	.76	.15	.18	.18

Some college x \$12,000 to \$23,999	27,536	2.9%	.70	.22	.21	.12
Some college x \$24,000 to \$35,999	32,036	3.4%	.58	.19	.12	.13
Some college x \$36,000 to \$47,999	31,157	3.3%	.53	.18	.21	.25
Some college x \$48,000 to \$59,999	28,214	3.0%	.51	.15	.03	.02
Some college x \$60,000 to \$89,999	36,829	3.9%	.45	.14	.35	.31
Some college x \$90,000 to \$119,999	17,542	1.9%	.32	.10	-.11	.04
Some college x \$120,000 and over	24,037	2.6%	.45	.13	.10	.09
College graduate x Under \$720	2,496	0.3%	.23	.02	-.28	-.19
College graduate x \$720 to \$5,999	2,378	0.3%	.19	.04	.10	.09
College graduate x \$6,000 to \$11,999	5,809	0.6%	.61	.09	.20	.16
College graduate x \$12,000 to \$23,999	14,742	1.6%	.71	.16	.20	.16
College graduate x \$24,000 to \$35,999	21,482	2.3%	.62	.16	-.14	-.12
College graduate x \$36,000 to \$47,999	24,903	2.6%	.66	.19	.15	.12
College graduate x \$48,000 to \$59,999	26,366	2.8%	.54	.18	.08	.09
College graduate x \$60,000 to \$89,999	42,351	4.5%	.61	.19	.28	.16
College graduate x \$90,000 to \$119,999	23,634	2.5%	.53	.12	.08	.06
College graduate x \$120,000 and over	39,579	4.2%	.48	.16	.07	.08
Post graduate work or degree x Under \$720	1,465	0.2%	.29	.00	.05	.05
Post graduate work or degree x \$720 to \$5,999	1,415	0.2%	.31	.01	.14	.16
Post graduate work or degree x \$6,000 to \$11,999	3,394	0.4%	.77	.08	.31	.18
Post graduate work or degree x \$12,000 to \$23,999	8,815	0.9%	.70	.14	.06	-.01
Post graduate work or degree x \$24,000 to \$35,999	14,551	1.5%	.80	.17	.19	.07
Post graduate work or degree x \$36,000 to \$47,999	20,066	2.1%	.86	.26	.37	.25

Post graduate work or degree x \$48,000 to \$59,999	23,729	2.5%	.76	.21	.16	.12
Post graduate work or degree x \$60,000 to \$89,999	42,239	4.5%	.81	.29	.17	.11
Post graduate work or degree x \$90,000 to \$119,999	27,396	2.9%	.77	.24	.16	.03
Post graduate work or degree x \$120,000 and over	58,196	6.2%	.75	.27	.20	.12
White x Northeast	144,844	15.4%	.69	.38	.13	.08
White x Midwest	182,436	19.4%	.74	.42	.12	.09
White x South	259,866	27.6%	.71	.42	.13	.09
White x West	168,094	17.9%	.75	.40	.26	.21
Other x Northeast	3,776	0.4%	.53	.09	.37	.30
Other x Midwest	4,067	0.4%	.53	.08	.12	-.04
Other x South	8,565	0.9%	.75	.22	.32	.26
Other x West	9,345	1.0%	.62	.14	.22	.11
Black x Northeast	12,558	1.3%	.60	.12	.17	.09
Black x Midwest	13,712	1.5%	.59	.14	.43	.25
Black x South	44,085	4.7%	.63	.22	.25	.21
Black x West	8,654	0.9%	.53	.11	.16	.18
Asian x Northeast	4,025	0.4%	.32	.05	.20	.18
Asian x Midwest	2,604	0.3%	.46	.08	-.07	.02
Asian x South	5,155	0.5%	.42	.08	.10	-.03
Asian x West	7,634	0.8%	.53	.07	-.12	-.09
Hispanic x Northeast	8,951	1.0%	.43	.07	.18	.04
Hispanic x Midwest	5,981	0.6%	.56	.11	.26	.21
Hispanic x South	21,903	2.3%	.55	.22	.14	.08
Hispanic x West	25,230	2.7%	.60	.26	.24	.28
White x Employed Full Time -Employer-	365,942	38.9%	.71	.43	.11	.09
White x Employed Full Time -Self-	93,959	10.0%	.75	.37	.33	.24
White x Employed Part Time, Do Not Want Full Time	140,789	15.0%	.70	.38	.18	.16
White x Unemployed	74,462	7.9%	.78	.37	.16	.10
White x Employed Part Time, Want Full Time	80,088	8.5%	.75	.36	.04	-.05
Other x Employed Full Time -Employer-	11,849	1.3%	.68	.19	.28	.19
Other x Employed Full Time -Self-	3,176	0.3%	.49	.11	.03	-.07
Other x Employed Part	3,720	0.4%	.72	.12	.37	.09

Time, Do Not Want Full Time						
Other x Unemployed	3,364	0.4%	.62	.11	.27	.24
Other x Employed Part Time, Want Full Time	3,644	0.4%	.69	.11	.29	.20
Black x Employed Full Time -Employer-	40,093	4.3%	.58	.20	.23	.17
Black x Employed Full Time -Self-	7,850	0.8%	.58	.10	.20	.07
Black x Employed Part Time, Do Not Want Full Time	10,373	1.1%	.52	.10	.34	.28
Black x Unemployed	10,195	1.1%	.61	.11	.26	.16
Black x Employed Part Time, Want Full Time	10,498	1.1%	.65	.14	.24	.02
Asian x Employed Full Time -Employer-	11,318	1.2%	.45	.09	-.06	-.06
Asian x Employed Full Time -Self-	1,781	0.2%	.44	.05	.07	.21
Asian x Employed Part Time, Do Not Want Full Time	2,471	0.3%	.48	.06	.10	.14
Asian x Unemployed	1,694	0.2%	.31	.04	.01	-.19
Asian x Employed Part Time, Want Full Time	2,154	0.2%	.49	.10	.11	.10
Hispanic x Employed Full Time -Employer-	33,906	3.6%	.52	.20	.12	.13
Hispanic x Employed Full Time -Self-	5,761	0.6%	.57	.15	.18	.17
Hispanic x Employed Part Time, Do Not Want Full Time	6,696	0.7%	.58	.10	.26	.17
Hispanic x Unemployed	7,667	0.8%	.55	.13	.27	.18
Hispanic x Employed Part Time, Want Full Time	8,035	0.9%	.61	.17	.30	.23
White x Under \$720	12,946	1.4%	.70	.15	-.04	.01
White x \$720 to \$5,999	13,772	1.5%	.71	.16	.10	.03
White x \$6,000 to \$11,999	36,420	3.9%	.79	.32	.32	.21
White x \$12,000 to \$23,999	82,773	8.8%	.76	.41	.15	.10
White x \$24,000 to \$35,999	95,529	10.1%	.71	.37	.00	-.01
White x \$36,000 to \$47,999	96,176	10.2%	.74	.39	.20	.20
White x \$48,000 to \$59,999	93,004	9.9%	.69	.34	.11	.10
White x \$60,000 to \$89,999	131,531	14.0%	.73	.36	.23	.15
White x \$90,000 to \$119,999	71,419	7.6%	.70	.31	.04	-.04

White x \$120,000 and over	121,670	12.9%	.69	.33	.18	.11
Other x Under \$720	858	0.1%	.49	.07	.27	.15
Other x \$720 to \$5,999	832	0.1%	.58	.07	.09	.27
Other x \$6,000 to \$11,999	2,262	0.2%	.69	.13	.09	.07
Other x \$12,000 to \$23,999	3,884	0.4%	.73	.13	.36	.24
Other x \$24,000 to \$35,999	3,482	0.4%	.62	.13	.03	.04
Other x \$36,000 to \$47,999	3,148	0.3%	.63	.10	.36	.24
Other x \$48,000 to \$59,999	2,827	0.3%	.57	.10	-.07	-.02
Other x \$60,000 to \$89,999	3,607	0.4%	.64	.14	.40	.30
Other x \$90,000 to \$119,999	1,854	0.2%	.38	.05	-.06	.00
Other x \$120,000 and over	2,999	0.3%	.48	.06	.20	.04
Black x Under \$720	3,002	0.3%	.57	.06	.28	.15
Black x \$720 to \$5,999	3,024	0.3%	.25	.01	-.10	-.11
Black x \$6,000 to \$11,999	8,239	0.9%	.59	.08	.09	.11
Black x \$12,000 to \$23,999	12,261	1.3%	.55	.11	.38	.24
Black x \$24,000 to \$35,999	11,236	1.2%	.64	.17	.48	.42
Black x \$36,000 to \$47,999	9,957	1.1%	.54	.10	.02	-.03
Black x \$48,000 to \$59,999	8,461	0.9%	.68	.12	.37	.31
Black x \$60,000 to \$89,999	10,540	1.1%	.62	.10	.17	-.08
Black x \$90,000 to \$119,999	5,309	0.6%	.30	.05	-.04	-.05
Black x \$120,000 and over	6,980	0.7%	.41	.07	.15	.12
Asian x Under \$720	500	0.1%	.26	.02	.01	.14
Asian x \$720 to \$5,999	404	0.0%	.31	.01	.20	.56
Asian x \$6,000 to \$11,999	772	0.1%	.36	.04	.06	.14
Asian x \$12,000 to \$23,999	1,567	0.2%	.33	.04	.05	-.02
Asian x \$24,000 to \$35,999	1,931	0.2%	.39	.05	.15	.12
Asian x \$36,000 to \$47,999	2,080	0.2%	.32	.05	.03	.01
Asian x \$48,000 to \$59,999	2,117	0.2%	.35	.04	-.20	-.18
Asian x \$60,000 to \$89,999	3,497	0.4%	.50	.06	-.02	-.08
Asian x \$90,000 to \$119,999	2,059	0.2%	.21	.02	-.04	-.01
Asian x \$120,000 and over	4,491	0.5%	.45	.05	.00	-.17
Hispanic x Under \$720	2,346	0.2%	.47	.06	.13	.05
Hispanic x \$720 to \$5,999	2,728	0.3%	.26	.02	.11	.06
Hispanic x \$6,000 to \$11,999	6,572	0.7%	.64	.16	.31	.23
Hispanic x \$12,000 to \$23,999	11,528	1.2%	.68	.20	.36	.26
Hispanic x \$24,000 to \$35,999	9,114	1.0%	.63	.16	.16	.11
Hispanic x \$36,000 to \$47,999	7,262	0.8%	.53	.12	.21	.24
Hispanic x \$48,000 to	6,192	0.7%	.46	.07	.08	.00

\$59,999

Hispanic x \$60,000 to \$89,999	7,356	0.8%	.40	.09	.24	.20
Hispanic x \$90,000 to \$119,999	3,827	0.4%	.30	.03	-.01	-.01
Hispanic x \$120,000 and over	5,140	0.5%	.30	.06	-.15	-.09
Northeast x Employed Full Time -Employer-	86,896	9.2%	.57	.27	.13	.11
Northeast x Employed Full Time -Self-	19,552	2.1%	.65	.18	.23	.17
Northeast x Employed Part Time, Do Not Want Full Time	29,926	3.2%	.61	.18	.12	.03
Northeast x Unemployed	18,356	1.9%	.57	.15	-.01	-.01
Northeast x Employed Part Time, Want Full Time	19,424	2.1%	.64	.17	.27	.19
Midwest x Employed Full Time -Employer-	104,204	11.1%	.69	.33	.10	.08
Midwest x Employed Full Time -Self-	23,677	2.5%	.72	.22	.25	.15
Midwest x Employed Part Time, Do Not Want Full Time	37,774	4.0%	.67	.25	.21	.12
Midwest x Unemployed	20,605	2.2%	.75	.20	.25	.13
Midwest x Employed Part Time, Want Full Time	22,540	2.4%	.70	.19	-.07	-.06
South x Employed Full Time -Employer-	169,311	18.0%	.57	.29	.09	.07
South x Employed Full Time -Self-	41,394	4.4%	.65	.25	.24	.17
South x Employed Part Time, Do Not Want Full Time	56,675	6.0%	.64	.25	.18	.17
South x Unemployed	35,273	3.7%	.69	.20	.20	.18
South x Employed Part Time, Want Full Time	36,921	3.9%	.63	.18	-.02	-.14
West x Employed Full Time -Employer-	102,697	10.9%	.62	.27	.10	.09
West x Employed Full Time -Self-	27,904	3.0%	.73	.24	.33	.23
West x Employed Part Time, Do Not Want Full Time	39,674	4.2%	.71	.25	.29	.25
West x Unemployed	23,148	2.5%	.73	.20	.28	.21
West x Employed Part Time, Want Full Time	25,534	2.7%	.73	.22	.20	.12



Northeast x Under \$720	3,198	0.3%	.54	.07	-.06	-.14
Northeast x \$720 to \$5,999	3,655	0.4%	.38	.06	.23	.09
Northeast x \$6,000 to \$11,999	9,126	1.0%	.68	.12	.27	.19
Northeast x \$12,000 to \$23,999	18,994	2.0%	.57	.15	.10	-.01
Northeast x \$24,000 to \$35,999	21,346	2.3%	.57	.17	.22	.24
Northeast x \$36,000 to \$47,999	20,774	2.2%	.61	.19	.14	.19
Northeast x \$48,000 to \$59,999	20,931	2.2%	.60	.17	.04	.03
Northeast x \$60,000 to \$89,999	29,051	3.1%	.57	.15	.04	-.02
Northeast x \$90,000 to \$119,999	16,589	1.8%	.50	.13	.07	.09
Northeast x \$120,000 and over	30,490	3.2%	.57	.18	.12	.05
Midwest x Under \$720	4,513	0.5%	.52	.07	-.04	.01
Midwest x \$720 to \$5,999	4,746	0.5%	.59	.10	-.05	.01
Midwest x \$6,000 to \$11,999	11,935	1.3%	.80	.20	.36	.23
Midwest x \$12,000 to \$23,999	26,382	2.8%	.76	.26	.17	.09
Midwest x \$24,000 to \$35,999	29,112	3.1%	.68	.23	-.08	-.10
Midwest x \$36,000 to \$47,999	27,785	3.0%	.72	.22	.16	.11
Midwest x \$48,000 to \$59,999	25,750	2.7%	.63	.19	.04	-.02
Midwest x \$60,000 to \$89,999	34,379	3.7%	.70	.23	.36	.25
Midwest x \$90,000 to \$119,999	17,298	1.8%	.65	.16	-.06	-.02
Midwest x \$120,000 and over	26,900	2.9%	.63	.18	.13	.16
South x Under \$720	7,801	0.8%	.46	.06	-.05	-.01
South x \$720 to \$5,999	8,138	0.9%	.54	.06	.03	-.01
South x \$6,000 to \$11,999	21,934	2.3%	.71	.22	.11	.08
South x \$12,000 to \$23,999	42,075	4.5%	.75	.32	.36	.25
South x \$24,000 to \$35,999	43,779	4.6%	.63	.24	.04	.03
South x \$36,000 to \$47,999	42,603	4.5%	.58	.19	.13	.11
South x \$48,000 to \$59,999	40,202	4.3%	.51	.19	.13	.15
South x \$60,000 to \$89,999	54,840	5.8%	.57	.20	.16	.12
South x \$90,000 to \$119,999	29,676	3.2%	.48	.12	-.06	-.12

South x \$120,000 and over	48,526	5.2%	.59	.19	.11	.07
West x Under \$720	4,140	0.4%	.56	.07	.22	.19
West x \$720 to \$5,999	4,221	0.4%	.45	.07	.12	.15
West x \$6,000 to \$11,999	11,270	1.2%	.78	.18	.47	.29
West x \$12,000 to \$23,999	24,562	2.6%	.71	.23	.13	.08
West x \$24,000 to \$35,999	27,055	2.9%	.64	.18	.14	.06
West x \$36,000 to \$47,999	27,461	2.9%	.66	.24	.22	.21
West x \$48,000 to \$59,999	25,718	2.7%	.61	.17	.12	.14
West x \$60,000 to \$89,999	38,261	4.1%	.69	.21	.20	.10
West x \$90,000 to \$119,999	20,905	2.2%	.62	.15	.00	-.02
West x \$120,000 and over	35,364	3.8%	.62	.16	.13	.10
Employed Full Time - Employer- x Under \$720	4,253	0.5%	.50	.07	.17	.20
Employed Full Time - Employer- x \$720 to \$5,999	6,129	0.7%	.49	.06	.21	.18
Employed Full Time - Employer- x \$6,000 to \$11,999	16,514	1.8%	.71	.20	.08	.04
Employed Full Time - Employer- x \$12,000 to \$23,999	41,359	4.4%	.73	.29	.38	.31
Employed Full Time - Employer- x \$24,000 to \$35,999	52,921	5.6%	.62	.25	.03	.02
Employed Full Time - Employer- x \$36,000 to \$47,999	56,868	6.0%	.63	.26	.10	.08
Employed Full Time - Employer- x \$48,000 to \$59,999	58,716	6.2%	.55	.23	-.02	.02
Employed Full Time - Employer- x \$60,000 to \$89,999	89,113	9.5%	.60	.25	.18	.12
Employed Full Time - Employer- x \$90,000 to \$119,999	50,530	5.4%	.56	.18	-.07	-.13
Employed Full Time - Employer- x \$120,000 and over	86,705	9.2%	.60	.25	.07	.07
Employed Full Time -Self- x Under \$720	2,039	0.2%	.44	.05	-.07	.06
Employed Full Time -Self- x \$720 to \$5,999	2,212	0.2%	.49	.06	.29	.18
Employed Full Time -Self- x \$6,000 to \$11,999	6,324	0.7%	.76	.12	.47	.21

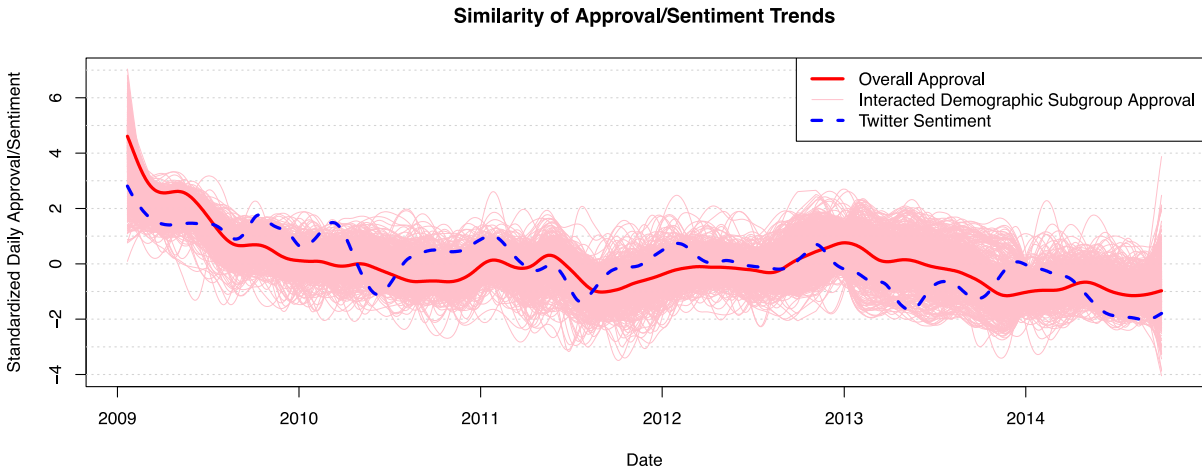
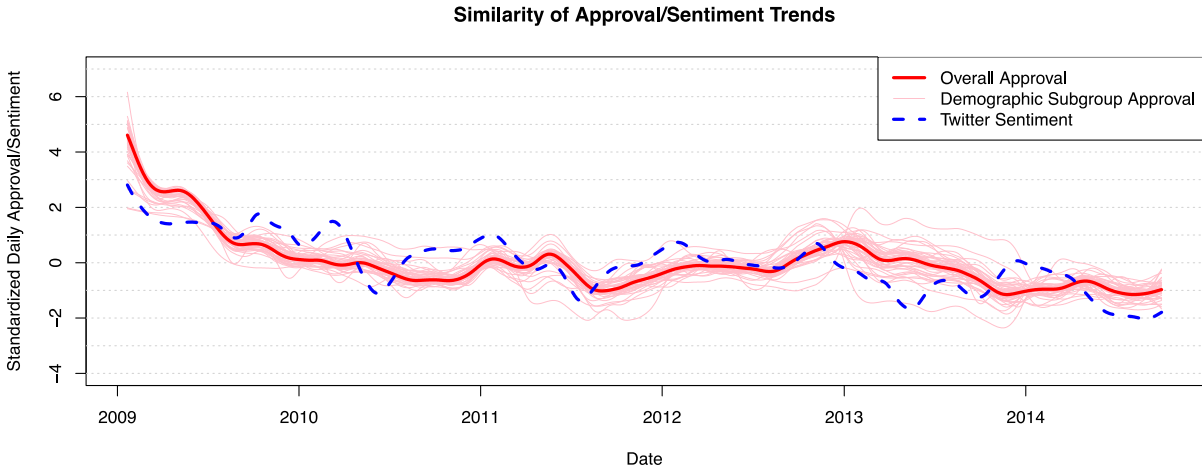
Employed Full Time -Self- x \$12,000 to \$23,999	12,964	1.4%	.72	.17	.09	.05
Employed Full Time -Self- x \$24,000 to \$35,999	14,070	1.5%	.67	.19	.25	.25
Employed Full Time -Self- x \$36,000 to \$47,999	14,267	1.5%	.59	.13	.19	.14
Employed Full Time -Self- x \$48,000 to \$59,999	13,338	1.4%	.66	.16	.35	.27
Employed Full Time -Self- x \$60,000 to \$89,999	18,356	1.9%	.73	.17	.24	.08
Employed Full Time -Self- x \$90,000 to \$119,999	10,062	1.1%	.64	.15	.13	.03
Employed Full Time -Self- x \$120,000 and over	18,895	2.0%	.61	.15	.19	.03
Employed Part Time, Do Not Want Full Time x Under \$720	3,310	0.4%	.51	.05	.19	.17
Employed Part Time, Do Not Want Full Time x \$720 to \$5,999	4,089	0.4%	.57	.09	.11	.05
Employed Part Time, Do Not Want Full Time x \$6,000 to \$11,999	11,149	1.2%	.74	.17	.26	.14
Employed Part Time, Do Not Want Full Time x \$12,000 to \$23,999	22,403	2.4%	.70	.24	.18	.01
Employed Part Time, Do Not Want Full Time x \$24,000 to \$35,999	23,465	2.5%	.61	.18	.06	.03
Employed Part Time, Do Not Want Full Time x \$36,000 to \$47,999	21,975	2.3%	.66	.21	.22	.24
Employed Part Time, Do Not Want Full Time x \$48,000 to \$59,999	19,632	2.1%	.63	.17	.13	.09
Employed Part Time, Do Not Want Full Time x \$60,000 to \$89,999	25,089	2.7%	.63	.19	.30	.24
Employed Part Time, Do Not Want Full Time x \$90,000 to \$119,999	12,796	1.4%	.55	.11	.02	.00
Employed Part Time, Do Not Want Full Time x \$120,000 and over	20,141	2.1%	.61	.14	.13	.03
Unemployed x Under \$720	6,418	0.7%	.53	.08	-.18	-.02
Unemployed x \$720 to	4,236	0.4%	.52	.09	.18	.10

\$5,999						
Unemployed x \$6,000 to \$11,999	9,878	1.0%	.79	.16	.47	.21
Unemployed x \$12,000 to \$23,999	17,726	1.9%	.67	.17	.10	.09
Unemployed x \$24,000 to \$35,999	15,000	1.6%	.71	.17	.14	.06
Unemployed x \$36,000 to \$47,999	11,969	1.3%	.70	.14	.12	.01
Unemployed x \$48,000 to \$59,999	9,842	1.0%	.64	.08	.06	-.01
Unemployed x \$60,000 to \$89,999	10,865	1.2%	.59	.10	-.05	.05
Unemployed x \$90,000 to \$119,999	4,871	0.5%	.47	.08	.04	-.06
Unemployed x \$120,000 and over	6,577	0.7%	.75	.10	.33	.17
Employed Part Time, Want Full Time x Under \$720	3,632	0.4%	.50	.04	.07	.08
Employed Part Time, Want Full Time x \$720 to \$5,999	4,094	0.4%	.47	.02	-.24	-.14
Employed Part Time, Want Full Time x \$6,000 to \$11,999	10,400	1.1%	.73	.15	.21	.13
Employed Part Time, Want Full Time x \$12,000 to \$23,999	17,561	1.9%	.74	.22	.03	-.02
Employed Part Time, Want Full Time x \$24,000 to \$35,999	15,836	1.7%	.66	.15	-.09	-.01
Employed Part Time, Want Full Time x \$36,000 to \$47,999	13,544	1.4%	.70	.16	.23	.26
Employed Part Time, Want Full Time x \$48,000 to \$59,999	11,073	1.2%	.52	.11	.01	.04
Employed Part Time, Want Full Time x \$60,000 to \$89,999	13,108	1.4%	.72	.16	.23	.00
Employed Part Time, Want Full Time x \$90,000 to \$119,999	6,209	0.7%	.57	.09	-.15	-.06
Employed Part Time, Want Full Time x \$120,000 and over	8,962	1.0%	.52	.07	.16	.08

Average	31,838	3.4%	.60	.18	.13	.10
Minimum	404	0.043%	.03	-.01	-.36	-.37
Maximum	378,763	40.2%	.86	.47	.55	.56

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**Figure C1: Similarity of Approval/Sentiment Trends by Subgroup**



### Online Appendix D – Models for Daily Data

Table D1 - Pearson's Correlations Between Trends for Smoothed and Daily Mean Values of Approval/Sentiment								
		Smoothed				Daily		
		Twitter Sentiment	Crossed Subgroup Model Approval	Subgroup Model Approval	Global Approval	Crossed Subgroup Model Approval	Subgroup Model Approval	Global Approval
Daily	Twitter Sentiment	.70	.61	.56	.46	.59	.53	.44
	Global Approval	.62	.81	.83	.93	.87	.89	
	Subgroup Model Approval	.75	.91	.92	.86	.95		
	Crossed Subgroup Model Approval	.76	.89	.90	.83			
Smoothed	Global Approval	.67	.87	.89				
	Subgroup Model Approval	.82	.98					
	Crossed Subgroup Model Approval	.90						

Table D2 - Non-negative least squares predictors using daily means for approval/sentiment with single demographic group predictors

	Prop. of Resamples	Avg. Coef.	N of Respondents in Category	Prop. of all Respondents
Lean Democrat	100.0%	.17	125015	13.3%
Republican	100.0%	.13	285140	30.3%
Less than high school diploma	99.6%	.07	62185	6.6%
Post graduate work or degree	98.9%	.07	201266	21.4%
Black	99.9%	.07	79009	8.4%
Independent, no lean	96.0%	.04	88638	9.4%
Other	96.5%	.04	25753	2.7%
Hispanic	72.1%	.02	62065	6.6%
age1824	69.9%	.02	62190	6.6%
\$12,000 to \$23,999	52.7%	.01	112013	11.9%
age75up	48.9%	.01	137537	14.6%
\$36,000 to \$47,999	52.7%	.01	118623	12.6%
Democrat	39.1%	.008	306555	32.6%
Asian	46.6%	.007	19418	2.1%
Employed Full Time -Self-	28.8%	.006	112527	12.0%
Employed Part Time, Do Not Want	20.1%	.004	164049	17.4%
\$24,000 to \$35,999	22.0%	.003	121292	12.9%
Unemployed	17.2%	.002	97382	10.3%
Employed Part Time, Want Full Tim	14.3%	.002	104419	11.1%
White	5.6%	.002	755240	80.2%
Midwest	9.1%	.001	208800	22.2%
\$90,000 to \$119,999	6.1%	.0007	84468	9.0%
\$6,000 to \$11,999	5.0%	.0005	54265	5.8%
West	3.3%	.0004	218957	23.3%
\$720 to \$5,999	3.5%	.0003	20760	2.2%
age5564	2.1%	.0002	197077	20.9%
\$48,000 to \$59,999	1.7%	.0002	112601	12.0%
age2534	1.7%	.0001	92657	9.8%
age4554	1.3%	.0001	167388	17.8%
Some college	1.1%	.0001	217357	23.1%
\$60,000 to \$89,999	1.2%	.0001	156531	16.6%
Under \$720	1.5%	.00010	19652	2.1%
Female	0.6%	.00008	472484	50.2%
age6574	0.4%	.00004	163833	17.4%
College graduate	0.3%	.00003	203740	21.6%
High school degree or diploma	0.3%	.00003	168657	17.9%
Lean Republican	0.1%	.00001	136137	14.5%
Technical/Vocational school	0.07%	.000005	88280	9.4%
age3544	0.02%	.0000006	120803	12.8%



Table D3 - Non-negative least squares predictors using daily means for approval/sentiment with crossed demographic group predictors (top 80 predictors)

	Prop. of Resamples	Avg. Coef.	N of Respondents in Category	Prop. of all Respondents
Less than high school diploma x \$60,000 to \$89,999	99.4%	.06	3845	0.4%
Black x \$24,000 to \$35,999	99.6%	.05	11236	1.2%
Some college x Black	99.0%	.05	20068	2.1%
Asian x Employed Part Time, Want Full Time	92.0%	.03	2154	0.2%
Female x Post graduate work or degree	82.5%	.03	94478	10.0%
age2534 x Less than high school diploma	93.4%	.03	6259	0.7%
Republican x Less than high school diploma	85.6%	.03	14227	1.5%
College graduate x \$720 to \$5,999	88.5%	.03	2378	0.3%
Lean Democrat x Unemployed	87.9%	.03	13417	1.4%
age1824 x Technical/Vocational school	88.8%	.03	5196	0.6%
Lean Democrat x Under \$720	86.5%	.02	2972	0.3%
age1824 x Asian	86.2%	.02	3492	0.4%
Lean Democrat x College graduate	78.3%	.02	26851	2.9%
Post graduate work or degree x Employed Part Time, Do Not Want Full Time	79.6%	.02	34378	3.7%
Black x \$48,000 to \$59,999	84.1%	.02	8461	0.9%
age6574 x Other	80.0%	.02	3066	0.3%
Other x \$60,000 to \$89,999	79.1%	.02	3607	0.4%
age75up x Other	75.1%	.02	2023	0.2%
age5564 x Lean Democrat	74.3%	.02	25175	2.7%
age1824 x Lean Republican	79.2%	.02	8683	0.9%
Lean Republican x Less than high school diploma	80.2%	.02	8085	0.9%
Lean Democrat x \$90,000 to \$119,999	72.9%	.02	10844	1.2%
age2534 x Other	76.5%	.02	3640	0.4%
Republican x High school degree or diploma	45.7%	.02	51092	5.4%
Independent, no lean x Employed Part Time, Do Not Want Full Time	75.2%	.02	13920	1.5%
Post graduate work or degree x \$36,000 to \$47,999	72.9%	.02	20066	2.1%
age75up x Post graduate work or degree	68.1%	.02	25420	2.7%
Lean Democrat x \$36,000 to \$47,999	67.2%	.02	15612	1.7%
age6574 x Lean Democrat	66.2%	.02	18735	2.0%
age6574 x Hispanic	75.2%	.02	5436	0.6%
age75up x Independent, no lean	68.3%	.02	11540	1.2%
Republican x \$90,000 to \$119,999	66.3%	.02	28301	3.0%
Lean Democrat x Other	68.1%	.02	4178	0.4%
Hispanic x Employed Full Time -Self-	70.1%	.02	5761	0.6%
age5564 x Employed Part Time, Want Full Time	73.4%	.01	20304	2.2%
High school degree or diploma x Black	69.5%	.01	15858	1.7%
age1824 x \$60,000 to \$89,999	68.2%	.01	7497	0.8%
age6574 x Asian	58.8%	.01	1562	0.2%
age2534 x \$60,000 to \$89,999	66.5%	.01	16671	1.8%
Lean Democrat x Employed Full Time -Self-	60.9%	.01	13839	1.5%

Table D3 Cont. - Non-negative least squares predictors using daily means for approval/sentiment with crossed demographic group predictors (top 80 predictors)

	Prop. of Resamples	Avg. Coef.	N of Respondents in Category	Prop. of all Respondents
Republican x Under \$720	62.9%	.01	4266	0.5%
Republican x Employed Part Time, Want Full Time	62.5%	.01	29213	3.1%
Employed Full Time -Self- x \$90,000 to \$119,999	67.7%	.01	10062	1.1%
age3544 x \$24,000 to \$35,999	67.2%	.01	12775	1.4%
Post graduate work or degree x \$6,000 to \$11,999	64.5%	.01	3394	0.4%
Other x Northeast	62.5%	.01	3776	0.4%
High school degree or diploma x \$120,000 and over	62.3%	.01	9972	1.1%
Male x Less than high school diploma	56.6%	.01	29348	3.1%
Unemployed x \$720 to \$5,999	59.6%	.01	4236	0.4%
Asian x \$36,000 to \$47,999	53.3%	.01	2080	0.2%
Less than high school diploma x \$120,000 and over	53.2%	.01	1961	0.2%
Lean Democrat x Post graduate work or degree	49.4%	.01	29091	3.1%
Less than high school diploma x Other	53.8%	.01	2475	0.3%
Lean Democrat x \$720 to \$5,999	53.8%	.01	3017	0.3%
Republican x Northeast	52.7%	.01	44254	4.7%
Other x \$6,000 to \$11,999	53.6%	.01	2262	0.2%
age1824 x Republican	56.8%	.01	14366	1.5%
Democrat x \$6,000 to \$11,999	57.9%	.01	21327	2.3%
Other x South	52.7%	.01	8565	0.9%
age1824 x \$48,000 to \$59,999	56.6%	.01	6460	0.7%
age5564 x Hispanic	55.4%	.01	8331	0.9%
Asian x Midwest	52.6%	.010	2604	0.3%
Unemployed x \$90,000 to \$119,999	54.0%	.009	4871	0.5%
Post graduate work or degree x Other	51.0%	.009	4534	0.5%
age3544 x Black	54.6%	.009	12329	1.3%
Asian x \$24,000 to \$35,999	49.7%	.009	1931	0.2%
South x \$12,000 to \$23,999	46.8%	.009	42075	4.5%
Technical/Vocational school x \$6,000 to \$11,999	49.7%	.009	5926	0.6%
age3544 x \$6,000 to \$11,999	51.5%	.009	5225	0.6%
Unemployed x \$120,000 and over	52.1%	.009	6577	0.7%
Hispanic x \$6,000 to \$11,999	50.4%	.008	6572	0.7%
Lean Democrat x Midwest	43.5%	.008	28888	3.1%
Independent, no lean x \$24,000 to \$35,999	51.0%	.008	11799	1.3%
age5564 x \$12,000 to \$23,999	49.0%	.008	20104	2.1%
age1824 x \$12,000 to \$23,999	49.6%	.008	9554	1.0%
High school degree or diploma x \$720 to \$5,999	48.7%	.008	5935	0.6%
Technical/Vocational school x Under \$720	44.0%	.008	2126	0.2%
Democrat x Employed Full Time -Self-	47.6%	.008	33367	3.5%
Some college x Under \$720	47.0%	.008	3903	0.4%
Black x \$120,000 and over	52.3%	.008	6980	0.7%

## Online Appendix E: Dates With Largest Deviations from Modeled Fit in Twitter

Table E1 - Events With Sentiment that Most Differed From Model

	Date	Event	Daily Sentiment	Difference from fit
1	10/9/09	Nobel Prize	.083	.080
2	10/10/09	Nobel Prize	.049	.046
3	12/10/09	Nobel Prize	.033	.033
4	8/4/10	Birthday	.020	.025
5	10/11/09	Nobel Prize	.028	.025
6	8/4/11	Birthday	.012	.023
7	1/21/13	Second Inaugural Address	.014	.021
8	3/28/11	Libya speech	.015	.021
9	11/7/12	Reelected	.018	.020
10	5/9/12	Suports Same Sex Marriage	.014	.019
11	12/29/09	<b>Shoe bomber speech</b>	-.021	-.019
12	10/24/09	<b>Swine Flu</b>	-.017	-.019
13	10/12/09	Nobel Prize	.021	.018
14	1/22/13	Second inaugural address	.011	.018
15	12/30/09	<b>Camp Chapman Attack</b>	-.020	-.018
16	4/28/13	Correspondents' Dinner	.004	.017
17	10/5/11	UNCLEAR	.011	.017
18	1/2/10	<b>Shoe bomber speech</b>	-.019	-.017
19	8/4/09	Birthday	.017	.017
20	12/11/09	Nobel Prize	.016	.017
21	10/25/09	<b>Swine Flu</b>	-.014	-.017
22	4/23/13	<b>AP Twitter hack</b>	-.029	-.016
23	8/4/12	Birthday	.009	.016
24	11/17/11	<b>UNCLEAR</b>	-.021	-.015
25	12/15/12	<b>Sandy Hook</b>	-.021	-.015
26	7/9/13	UNCLEAR	.006	.015
27	1/20/12	UNCLEAR	.012	.014
28	8/5/11	Birthday	.003	.014
29	11/8/12	Reelected	.012	.014
30	3/20/09	UNCLEAR	.016	.014

Notes: Events were indetified by searching the news for what was happening on a particular day related to Obama. Bold events were negative shocks. Dates with UNCLEAR did not have a single relevant event that we were confident caused the shock.