Public Opinion Polls

Michael Peress

SUNY-Stony Brook

November 16, 2022

Overview

- Accuracy of Polling:
  - Exit Polling

Overview

- Accuracy of Polling:
  - Exit Polling
  - Internet Polls

Overview

- Accuracy of Polling:
  - Exit Polling
  - Internet Polls
  - Pre-election Polling

Overview

- Accuracy of Polling:
  - Exit Polling
  - Internet Polls
  - Pre-election Polling
- Adjusting Polls:
  - Time series

Overview

- Accuracy of Polling:
  - Exit Polling
  - Internet Polls
  - Pre-election Polling
- Adjusting Polls:
  - Time series
  - Pre-election polls

Accuracy of Polling

- Puzzle:
  - We spent most of the class talking about all the things that can go wrong with polls
    - Sampling error
    - Nonresponse bias (unit and item)
    - Measurement error (misreporting, question wording and ordering)
    - Likely voter models

Accuracy of Polling

- Puzzle:
  - We spent most of the class talking about all the things that can go wrong with polls
    - Sampling error
    - Nonresponse bias (unit and item)
    - Measurement error (misreporting, question wording and ordering)
    - Likely voter models
  - Yet, conventional wisdom is that the polls perform pretty well (though this has changed somewhat since 2016)

Accuracy of Polling

- Puzzle:
  - We spent most of the class talking about all the things that can go wrong with polls
    - Sampling error
    - Nonresponse bias (unit and item)
    - Measurement error (misreporting, question wording and ordering)
    - Likely voter models
  - Yet, conventional wisdom is that the polls perform pretty well (though this has changed somewhat since 2016)
  - How do we reconcile?

Accuracy of Polling

- How do we reconcile?
  - Telephone, pre-election polls, in general election races, usually, predict the winner correctly

Accuracy of Polling

- How do we reconcile?
  - Telephone, pre-election polls, in general election races, usually, predict the winner correctly

Accuracy of Polling

- How do we reconcile?
  - Telephone vs. exit poll vs. internet polls

Accuracy of Polling

- How do we reconcile?
  - Telephone vs. exit poll vs. internet polls
  - Pre-election polls vs. political participation vs. crime victimization

Accuracy of Polling

- How do we reconcile?
  - Telephone vs. exit poll vs. internet polls
  - Pre-election polls vs. political participation vs. crime victimization
  - In general election races vs. primary election races

Accuracy of Polling

- How do we reconcile?
  - Telephone vs. exit poll vs. internet polls
  - Pre-election polls vs. political participation vs. crime victimization
  - In general election races vs. primary election races
  - Usually i.e. there have been a few exceptions

Accuracy of Polling

- How do we reconcile?
  - Telephone vs. exit poll vs. internet polls
  - Pre-election polls vs. political participation vs. crime victimization
  - In general election races vs. primary election races
  - Usually i.e. there have been a few exceptions
  - Predict the winner correctly i.e. people don't notice $\pm$ 3 points when it doesn't affect outcome

Exit Polls

- The Exit polls in 2004:
  - Election result: Bush Share = 51.2%

Exit Polls

- The Exit polls in 2004:
  - Election result: Bush Share = 51.2%
  - Exit polls un-weighted = 47.6%

Exit Polls

- The Exit polls in 2004:
  - Election result: Bush Share = 51.2%
  - Exit polls un-weighted = 47.6%
  - Exit polls weighted = 51.5%

Exit Polls

- The Exit polls in 2004:

	Result	Exit Poll (corrected)	Exit Poll (election night)	Exit Poll (leaked)
US	0.51	0.52		0.45
CO	0.52	0.53	0.51	0.52
FL	0.53	0.52	0.50	0.49
IA	0.50	0.51	0.49	0.46
MI	0.48	0.49	0.47	0.45
MN	0.48	0.48	0.45	0.44
NH	0.49	0.49	0.45	0.44
NM	0.50	0.51	0.49	0.47
NV	0.51	0.51	0.49	0.49
OH	0.51	0.51	0.48	0.47
PA	0.49	0.49	0.46	0.44
WI	0.50	0.50	0.50	0.46
Avg:	0.50	0.50	0.48	0.47

Exit Polls

- Exit Polls (Cluster Sample):
  - Randomly sample precincts in each state

Exit Polls

- Exit Polls (Cluster Sample):
  - Randomly sample precincts in each state
  - Assign 1 or more interviewers to each precinct

Exit Polls

- Exit Polls (Cluster Sample):
  - Randomly sample precincts in each state
  - Assign 1 or more interviewers to each precinct
  - Instruct interviewers to approach 1 out of every x voters as they leave the polls

Exit Polls

- Exit Polls (Cluster Sample):
  - Randomly sample precincts in each state
  - Assign 1 or more interviewers to each precinct
  - Instruct interviewers to approach 1 out of every x voters as they leave the polls
  - x is smaller in precincts with fewer voters

Exit Polls

- Exit Polls (Cluster Sample):
  - Randomly sample precincts in each state
  - Assign 1 or more interviewers to each precinct
  - Instruct interviewers to approach 1 out of every x voters as they leave the polls
  - x is smaller in precincts with fewer voters
  - Oversample black precincts to allow for accurate black/non-black comparisons

Exit Polls

- Sources of Bias:
  - Not all selected individuals will agree to participate in the exit poll

Exit Polls

- Sources of Bias:
  - Not all selected individuals will agree to participate in the exit poll
  - The interviewer may not select respondents in a systematic way (especially if the interviewer is poorly trained)

Exit Polls

- Sources of Bias:
  - Not all selected individuals will agree to participate in the exit poll
  - The interviewer may not select respondents in a systematic way (especially if the interviewer is poorly trained)
  - Respondents may volunteer

Exit Polls

- Sources of Bias:
  - Not all selected individuals will agree to participate in the exit poll
  - The interviewer may not select respondents in a systematic way (especially if the interviewer is poorly trained)
  - Respondents may volunteer
  - Worse yet, activist groups may encourage their supporters to volunteer (or refuse)

Exit Polls

- Previous Performance of Exit Polls in Presidential Races (negative numbers in "Average" indicate bias in favor of Democratic candidates):

For the Precinct WPE:	2004	2000	1996	1992	1988
Average	-6.5	-1.8	-2.2	-5.0	-2.2
Average Absolute Value	14.4	11.3	9.9	NA	NA
Standard Deviation	18.2	16.8	13.3	NA	NA

Exit Polls

- 2004 Exit Polls:
  - Preliminary results of exit polls widely leaked on internet / suggested a Kerry landslide
  - Of course, Kerry did not win according to official tally
  - Why the discrepancy?

Exit Polls

- Source of Bias (Precinct Traffic):

Interviewing rate at the beginning of election day*	mean WPE	median WPE	mean Abs(WPE)	N
1	-3.9	-4.5	14.0	142
2	-3.3	-3.7	11.9	144
3	-6.7	-4.9	14.1	178
4	-7.0	-7.2	13.4	136
5	-6.9	-5.1	13.9	159
6	-8.4	-9.4	15.0	101
7	-7.0	-7.4	12.6	80
8	-7.1	-4.5	13.3	62
9	-5.7	-5.8	11.0	50
10	-10.5	-9.7	15.4	198

*1 = attempt to interview every voter, 2 = every other voter, 3 = every third voter, etc.

Exit Polls

- Source of Bias (Precinct Traffic):

Interviewing rate at the beginning of election day	Completion Rate	Refusal Rate	Miss Rate
1	0.54	0.35	0.12
2	0.49	0.37	0.14
3	0.50	0.38	0.12
4	0.53	0.36	0.11
5	0.54	0.35	0.11
6	0.56	0.35	0.09
7	0.58	0.32	0.11
8	0.54	0.39	0.08
9	0.62	0.29	0.08
10	0.56	0.35	0.09

Exit Polls

- Source of Bias (Interviewer Distance):

Distance	mean WPE	median WPE	mean Abs(WPE)	N
Inside	-5.3	-4.2	11.8	416
Right outside the entrance	-6.4	-7.5	13.4	207
10 to 25 feet away	-5.6	-4.2	14.0	220
25 to 50 feet away	-7.6	-7.3	14.8	150
50 to 100 feet away	-9.6	-10.3	17.7	97
More than 100 feet away	-12.3	-12.1	16.7	37

Exit Polls

- Source of Bias (Interviewer Distance):

Distance	Completion Rate	Refusal Rate	Miss Rate
Inside	0.59	0.33	0.09
Right outside the entrance	0.54	0.36	0.10
10 to 25 feet away	0.53	0.36	0.11
25 to 50 feet away	0.51	0.37	0.13
50 to 100 feet away	0.45	0.39	0.16
More than 100 feet away	0.43	0.39	0.18

Exit Polls

- Source of Bias (Precinct Cooperativeness):

Was the precinct official cooperative (according to interviewer)?	mean WPE	median WPE	mean Abs(WPE)	N
Cooperative	-6.4	-6.0	13.5	1017
Not cooperative	-8.0	-7.7	15.6	87

Was the precinct official cooperative (according to interviewer)?	Completion Rate	Refusal Rate	Miss Rate
Cooperative	0.55	0.35	0.10
Not cooperative	0.46	0.38	0.15

Exit Polls

- Source of Bias (Number of Precincts at Polling Place):

Number of precincts at polling place	mean WPE	median WPE	mean Abs(WPE)	N
1 precinct	-6.3	-5.8	13.2	888
2 precincts	-6.1	-6.9	14.0	201
3 precincts	-8.3	-7.8	15.1	95
4 or more precincts	-13.6	-10.8	18.8	66

Number of precincts at polling place	Completion Rate	Refusal Rate	Miss Rate
1 precinct	0.54	0.36	0.11
2 precincts	0.54	0.35	0.11
3 precincts	0.54	0.35	0.11
4 or more precincts	0.54	0.35	0.11

Exit Polls

- Source of Bias (Interviewer Preparation):

When was the interviewer hired?	mean WPE	median WPE	mean Abs(WPE)	N
At least a week before the election	-6.5	-5.9	13.5	1154
Within a few days before election or on election day	-9.5	-10.1	16.3	82

When was the interviewer hired?	Completion Rate	Refusal Rate	Miss Rate
At least a week before the election	0.54	0.35	0.11
Within a few days before election or on election day	0.48	0.40	0.13

Exit Polls

- Steven Freeman (2004): Exit polls demonstrate that 2004 Presidential election was "stolen" from John Kerry

Exit Polls

- Steven Freeman (2004): Exit polls demonstrate that 2004 Presidential election was "stolen" from John Kerry
- Robert F. Kennedy (2006): Repeats and elaborates on some of Freeman's arguments

Exit Polls

- Freeman's argument:
  - Final exit poll data weighted to match election results

Exit Polls

- Freeman's argument:
  - Final exit poll data weighted to match election results
  - Look at exit poll results released before being "corrected" to diagnose voter fraud

Exit Polls

- Freeman's argument:
  - Final exit poll data weighted to match election results
  - Look at exit poll results released before being "corrected" to diagnose voter fraud
    - Some claims that exit polls were accurate were based on corrected data!

Exit Polls

- Freeman's argument:
  - Final exit poll data weighted to match election results
  - Look at exit poll results released before being "corrected" to diagnose voter fraud
    - Some claims that exit polls were accurate were based on corrected data!
  - Bush did better in final count that exit poll in almost every state (and difference is highly statistically significant)

Exit Polls

- Freeman's argument:
  - Final exit poll data weighted to match election results
  - Look at exit poll results released before being "corrected" to diagnose voter fraud
    - Some claims that exit polls were accurate were based on corrected data!
  - Bush did better in final count that exit poll in almost every state (and difference is highly statistically significant)
    - "Assuming independent state polls with no systematic bias, the odds against any two of these statistical anomalies occurring together are more that 5000:1. The odds against all three occurring together are 662,000-to-one."

Exit Polls

- Freeman's argument continued:
  - Exit polls are typically very accurate (German example)

Exit Polls

- Freeman's argument continued:
  - Exit polls are typically very accurate (German example)
  - Difference between exit polls and final tally means that either the polls were wrong or the tally was wrong

Exit Polls

- Freeman's argument continued:
  - Exit polls are typically very accurate (German example)
  - Difference between exit polls and final tally means that either the polls were wrong or the tally was wrong
  - Since we know exit polls are accurate, tally must be wrong (implication: electoral fraud)

Exit Polls

- Freeman's argument continued:
  - Exit polls are typically very accurate (German example)
  - Difference between exit polls and final tally means that either the polls were wrong or the tally was wrong
  - Since we know exit polls are accurate, tally must be wrong (implication: electoral fraud)
  - Additional evidence: difference was biggest in Bush strongholds and in precincts with certain types of voting technology

Exit Polls

- Exit poll discrepancy:
  - Tally could be wrong because voting did not capture intent of voters, but survey did

Exit Polls

- Exit poll discrepancy:
  - Tally could be wrong because voting did not capture intent of voters, but survey did
    - Over-votes, under-votes, etc.
  - Given that elections are independently administered in $\approx$ 3,000, tallies probably are inaccurate

Exit Polls

- Exit poll discrepancy:
  - Tally could be wrong because voting did not capture intent of voters, but survey did
    - Over-votes, under-votes, etc.
  - Given that elections are independently administered in $\approx$ 3,000, tallies probably are inaccurate
  - Question is whether exit polls prove that these inaccuracies were one-sided and large

Exit Polls

- Exit poll discrepancy:
  - In absence of direct evidence of widespread fraud, most likely situation is that the exit polls were systematically biased towards Kerry

Exit Polls

- Exit poll discrepancy:
  - In absence of direct evidence of widespread fraud, most likely situation is that the exit polls were systematically biased towards Kerry
  - We covered why exit polls might be inaccurate, but why systematically biased towards Kerry?

Exit Polls

- Why exit poll discrepancy:
  - Exit pollsters identified with "mainstream" media organizations unpopular with conservatives

Exit Polls

- Why exit poll discrepancy:
  - Exit pollsters identified with "mainstream" media organizations unpopular with conservatives
  - Many young interviewers who voters may assume are Democratic activists

Exit Polls

- Why exit poll discrepancy:
  - Exit pollsters identified with "mainstream" media organizations unpopular with conservatives
  - Many young interviewers who voters may assume are Democratic activists
  - Republican reluctance to participate

Exit Polls

- Why exit poll discrepancy:
  - Exit pollsters identified with "mainstream" media organizations unpopular with conservatives
  - Many young interviewers who voters may assume are Democratic activists
  - Republican reluctance to participate
  - Democratic voters encouraged to participate, volunteer to participate

Exit Polls

- Why exit poll discrepancy:
  - Exit pollsters identified with "mainstream" media organizations unpopular with conservatives
  - Many young interviewers who voters may assume are Democratic activists
  - Republican reluctance to participate
  - Democratic voters encouraged to participate, volunteer to participate
- US Elections are not state of the art, but exit poll discrepancy does not prove widespread fraud

Exit Polls

- After 2004 election, left-leaning commentators treated the exit poll discrepancy as evidence of electoral fraud

Exit Polls

- After 2004 election, left-leaning commentators treated the exit poll discrepancy as evidence of electoral fraud
- After 2020 election, right-leaning commentators treated the discrepancy between early and late election tally's and evidence or fraud, using strikingly similar arguments

Internet Polls

- Telephone surveys are expensive
- Internet surveys have become increasingly popular

Internet Polls

- Telephone surveys are expensive
- Internet surveys have become increasingly popular
- Internet surveys:
  - Recruit respondents via email

Internet Polls

- Telephone surveys are expensive
- Internet surveys have become increasingly popular
- Internet surveys:
  - Recruit respondents via email
  - Administer survey electronically (e.g. html)

Internet Polls

- Telephone surveys are expensive
- Internet surveys have become increasingly popular
- Internet surveys:
  - Recruit respondents via email
  - Administer survey electronically (e.g. html)
  - Advantages: Cost, Flexibility, Sample Size, Turnaround Time

Internet Polls

- Telephone surveys are expensive
- Internet surveys have become increasingly popular
- Internet surveys:
  - Recruit respondents via email
  - Administer survey electronically (e.g. html)
  - Advantages: Cost, Flexibility, Sample Size, Turnaround Time
  - Disadvantages: May be impossible to obtain probability sample, very low response/cooperation rates

Internet Polls

- Some Internet Polls
  - Knowledge Networks (Stanford Prof. Doug Rivers):
    - Attempt to create probability sample for an internet survey

Internet Polls

- Some Internet Polls
  - Knowledge Networks (Stanford Prof. Doug Rivers):
    - Attempt to create probability sample for an internet survey
  - Harris Interactive:
    - Conduct a telephone survey once a month
    - Telephone survey is presumably more precise than internet survey
    - Weight internet survey based on targets obtained from this telephone survey

Internet Polls

- Some Internet Polls
  - Knowledge Networks (Stanford Prof. Doug Rivers):
    - Attempt to create probability sample for an internet survey
  - Harris Interactive:
    - Conduct a telephone survey once a month
    - Telephone survey is presumably more precise than internet survey
    - Weight internet survey based on targets obtained from this telephone survey
  - YouGov, and most modern internet polls:
    - Apply demographic weighting to self-selected sample

Internet Polls

- Malhotra and Krosnick (2007) evaluate the performance of some internet surveys

Internet Polls

- Malhotra and Krosnick (2007) evaluate the performance of some internet surveys
- How can we evaluate an internet survey:
  - Use Census Current Population Survey as a Benchmark (CPS)

Internet Polls

- Malhotra and Krosnick (2007) evaluate the performance of some internet surveys
- How can we evaluate an internet survey:
  - Use Census Current Population Survey as a Benchmark (CPS)
  - Use American National Election Study (ANES) as a benchmark

Internet Polls

Table 1 Marginal distributions for demographic variables compared to the CPS (unweighted)

2004 data	*ANES (%)*	*YouGov (%)*	*Nov. CPS (%)*	*ANES − CPS (%)*	*YouGov − CPS (%)*	N *(ANES)*	N *(YouGov)*
Gender							
Male	46.7	40.3	47.6	−0.9	−7.3***	566	10,642
Female	53.3	59.7	52.4	0.9	7.3***	646	15,730
						1212	26,372
Race							
Black	14.8	6.0	10.5	4.3†	−4.5***	180	1580
Others	85.2	94.0	89.5	−4.3***	4.5***	1032	24,792
						1212	26,372
Education							
Less than high school	9.2	3.2	14.3	−5.1†	−11.1***	111	834
High school	29.3	15.4	32.3	−3.0	−16.9***	355	4061
Some college	21.8	36.0	19.2	2.6	16.8***	264	9480
College	28.3	33.3	25.5	2.8	7.8***	343	8791
Graduate	11.5	12.2	8.7	2.8	3.5***	139	3206
						1212	26,372
Age							
18–29	19.7	15.9	19.9	−0.2	−4.0***	239	4199
30–39	16.2	21.7	18.3	−2.1	3.4***	197	5733
40–49	19.2	28.2	21.2	−2.0	7.0***	233	7444
50–64	27.6	27.7	23.8	3.8	3.9***	335	7307
65+	17.2	6.4	16.9	0.3	−10.5***	208	1689
						1212	26,372

Internet Polls

2000 data	*ANES (%)*	*Harris (%)*	*Nov. CPS (%)*	*ANES − CPS (%)*	*Harris − CPS (%)*	N *(ANES)*	N *(Harris)*
Gender							
Male	44.6	45.5	48.0	−3.4	−2.5*	449	1811
Female	55.4	54.5	52.0	3.4	2.5*	557	2169
						1006	3980
Race							
Black	12.9	3.3	11.9	1.0	−8.6***	129	132
Others	87.1	96.7	88.1	−1.0	8.6***	869	3819
						998	3951
Education							
Less than high school	11.1	1.9	16.9	−5.8†	−15.0***	111	76
High school	30.4	12.3	32.8	−2.4	−20.5***	306	487
Some college	19.4	40.7	19.8	−0.4	20.9***	195	1612
College	29.4	32.3	23.0	6.4*	9.3***	296	1280
Graduate	9.7	12.8	7.5	2.2	5.3***	98	506
						1006	3961
Age							
18–24	9.1	11.8	13.2	−4.1	−1.4	92	471
25–34	17.8	18.9	18.7	−0.9	0.2	179	752
35–44	23.1	25.8	22.1	1.0	3.7**	232	1027
45–54	17.1	23.4	18.3	−1.2	5.1***	172	931
55–64	13.9	12.8	11.6	2.3	1.2	140	508
65+	19.0	7.3	15.9	3.1	−8.6***	191	291
						1006	3980

***$p < .001$; **$p < .01$; *$p < .05$; †$p < .10$ (two-tailed).

Internet Polls

Table 2 Marginal distributions of demographic variables

	Unweighted data (%)			*Weighted data (%)*		
2004 data	*ANES*	*YouGov*	*Difference*	*ANES*	*YouGov*	*Difference*
Gender						
Male	46.7	40.3	6.4**	48.5	48.9	−0.4
Female	53.3	59.7	6.4**	51.5	51.1	0.4
Race						
Black	14.8	6.0	8.8**	15.6	12.9	2.7
Others	85.2	94.0	−8.8***	84.4	87.1	−2.7*
Education						
Less than high school	9.2	3.2	6.0*	14.5	3.2	11.3***
High school	29.3	15.4	13.9***	31.4	13.6	17.8***
Some college	21.8	36	−14.2***	19.6	37.2	−17.6***
College	28.3	33.3	−5.0*	24.9	32.4	−7.5**
Graduate	11.5	12.2	−0.7	9.5	13.6	−4.1
Age						
18–29	19.7	15.9	3.8	20.7	20.5	0.2
30–39	16.2	21.7	−5.5*	17.7	19.1	−1.4
40–49	19.2	28.2	−9.0***	20.3	23.9	−3.6
50–64	27.6	27.7	−0.1	24.1	20.2	3.9
65+	17.2	6.4	10.8***	17.2	16.2	1.0

Internet Polls

2000 data	*ANES*	*Harris*	*Difference*	*ANES*	*Harris*	*Difference*
Gender						
Male	44.6	45.5	−0.9	44.6	47.7	−3.1
Female	55.4	54.5	0.9	55.4	52.3	3.1
Race						
Black	12.9	3.3	9.6**	13.3	9.3	4.0
Others	87.1	96.7	−9.6***	86.7	90.7	−4.0***
Education						
Less than high school	11.1	1.9	9.2**	16.3	6.3	10.0*
High school	30.4	12.3	18.1***	35.0	39.0	−4.0
Some college	19.4	40.7	−21.3***	18.1	29.1	−11.0***
College	29.4	32.3	−2.9	23.6	20.4	3.2
Graduate	9.7	12.8	−3.1	7.0	5.1	1.9
Age						
18–24	9.1	11.8	−2.7	14.0	13.5	0.5
25–34	17.8	18.9	−1.1	17.9	17.4	0.5
35–44	23.1	25.8	−2.7	21.1	24.7	−3.6
45–54	17.1	23.4	−6.3*	16.0	19.9	−3.9
55–64	13.9	12.8	1.1	12.5	11.4	1.1
65+	19.0	7.3	11.7***	18.5	13.1	5.4

***$p < .001$; **$p < .01$; *$p < .05$ (two-tailed).

Internet Polls

Table 3 Marginal distributions for 2004 ANES and YouGov data, political variables

	Unweighted data (%)			*Weighted data (%)*			*Unweighted Ns*	
	ANES	*YouGov*	*Difference*	*ANES*	*YouGov*	*Difference*	*ANES*	*YouGov*
Predicted vote choice								
Bush	49.4	52.8	−3.4	48.9	49.7	−0.8	545	11,306
Kerry	50.6	47.2	3.4	51.1	50.3	0.8	558	12,624
							1103	23,930
Actual vote choice								
Bush	49.8	52.4	−2.6	49.6	49.5	0.1	354	1746
Kerry	50.2	47.6	2.6	50.4	50.5	−0.1	357	1587
							711	3333
Actual turnout								
Voted	82.1	94.6	−12.5***	79.9	94.9	−15.0***	441	3428
Did not vote	17.9	5.4	12.5**	20.1	5.1	15.0***	96	194
							537	3622
Party ID								
Strong Democrat	17.0	19.1	−2.1	16.5	21.2	−4.7†	203	2122
Weak Democrat	15.0	13.3	1.7	15.6	13.5	2.1	179	1474
Lean Democrat	17.6	9.1	8.5**	17.5	9.0	8.5**	210	1013
Independent	9.9	15.6	−5.7*	9.7	15.2	−5.5†	118	1728
Lean Republican	11.6	8.8	2.8	11.7	8.6	3.1	138	971
Weak Republican	12.9	12.9	0.0	12.5	12.2	0.3	154	1428
Strong Republican	16.2	21.2	−5.0†	16.5	20.4	−3.9	193	2351
							1195	11,087

Internet Polls

Iraq worth it								
Worth it	39.4	50.9	−11.5***	39.9	47.2	−7.3**	465	3991
Not worth it	60.6	49.1	11.5***	60.1	52.8	7.3***	714	3851
							1179	7842
Sociotropic retrospective								
Gotten much better	3.5	9.1	−5.6†	3.7	9.7	−6.0†	42	848
Gotten somewhat better	19.7	28.9	−9.2***	19.9	26.6	−6.7*	236	2698
Stayed about the same	31.6	22.2	9.4***	30.9	22.6	8.3**	378	2075
Gotten somewhat worse	25.7	22.4	3.3	25.7	22.9	2.8	308	2093
Gotten much worse	19.5	17.5	2.0	19.7	18.2	1.5	234	1631
							1198	9345
Sociotropic prospective								
Get much better	8.3	12.7	−4.4	8.9	13.2	−4.3	96	1123
Get somewhat better	27.3	36.6	−9.3***	27.7	35.6	−7.9**	316	3235
Stay about the same	46.4	29.0	17.4***	46.2	29.3	16.9***	537	2564

Continued

Internet Polls

Table 4 Marginal distributions for 2000 ANES and Harris data, political variables

	Unweighted data (%)			*Weighted data (%)*			*Unweighted Ns*	
	ANES	*Harris*	*Difference*	*ANES*	*Harris*	*Difference*	*ANES*	*Harris*
Predicted vote choice								
Bush	44.1	56.2	−12.1***	44.1	53.4	−9.3***	382	1838
Gore	55.9	43.8	12.1***	55.9	46.6	9.3***	485	1433
							867	3271
Actual vote choice								
Bush	45.7	55.7	−10.0**	46.6	53.1	−6.5†	223	1527
Gore	54.3	44.3	10.0**	53.4	46.9	6.5†	265	1215
							488	2742
Actual turnout								
Voted	73.6	91.3	−17.7***	69.4	88.1	−18.7***	634	1986
Did not vote	26.5	8.7	17.7***	30.6	11.9	18.7***	228	190
							862	2176
Party ID								
Strong Democrat	19.6	18.8	0.8	19.6	23.8	−4.2	194	694
Weak Democrat	16.6	13.2	3.4	17.0	13.0	−4.0	164	488
Lean Democrat	16.7	9.4	7.3*	16.7	8.6	8.1*	165	349
Independent	10.8	9.4	1.4	12.0	11.2	0.8	107	349
Lean Republican	14.0	10.0	4.0	14.0	9.4	4.6	138	371
Weak Republican	11.3	14.4	−3.1	10.5	13.3	−2.8	112	534
Strong Republican	10.9	24.8	−13.9***	10.3	20.6	−10.3**	108	917
							988	3702

Internet Polls

Gun control								
A lot more difficult	45.5	38.4	7.1**	44.3	37.6	6.7*	454	1527
Somewhat more difficult	13.3	18.9	−5.6†	13.9	19.1	−5.2	133	754
About the same	36.7	30.0	6.7*	37.6	31.3	6.3*	366	1195
Somewhat easier	2.5	7.0	−4.5	2.5	6.2	−3.7	25	279
A lot easier	2.0	5.7	−3.7	1.8	5.8	−4.0	20	225
							998	3980
Clinton retrospective: economy								
Much better	28.7	36.3	−7.6†	27.9	35.3	−7.4†	145	1444
Somewhat better	33.7	33.7	0.0	34.9	32.8	2.1	170	1343
No difference	32.7	20.3	12.4**	31.9	21.1	10.8**	165	808
Somewhat worse	3.4	6.7	−3.3	3.7	7.0	−3.3	17	267
Much worse	1.6	3.0	−1.4	1.6	3.8	−2.2	8	118
							505	3980
Clinton retrospective: crime								
Much better	9.9	8.9	1.0	8.7	8.5	0.2	50	354
Somewhat better	27.8	31.2	−3.4	24.9	29.5	−4.6	140	1240
No difference	31.2	33.9	−2.7	33.0	34.4	−1.4	157	1349
Somewhat worse	16.1	18.2	−2.1	17.2	19.2	−2.0	81	725
Much worse	15.1	7.8	7.3†	16.3	8.5	7.8†	76	312
							504	3980

Continued

Internet Polls

Table 7 Cross-tabulations between predicted vote choice and independent variables

	Unweighted data				*Weighted data*			
	ANES		*YouGov/Harris*		*ANES*		*YouGov/Harris*	
	Percent voting for		*Percent voting for*		*Percent voting for*		*Percent voting for*	
	Bush	*Kerry/ Gore*	*Bush*	*Kerry/ Gore*	*Bush*	*Kerry/ Gore*	*Bush*	*Kerry/ Gore*
2004 data: pocketbook retrospective								
A lot better off	73.9	26.1	93.2	6.8	73.2	26.8	92.8	7.2
A little better off	62.2	37.8	79.9	20.1	60.8	39.2	78.0	22.0
About the same	45.6	54.4	56.0	44.0	47.5	52.5	53.7	46.3
A little worse off	30.3	69.7	33.6	66.4	30.0	70.0	29.0	71.0
A lot worse off	29.5	70.5	21.8	78.2	25.4	74.7	18.6	81.4
2000 data: Clinton crime retrospective								
Much worse	48.7	51.3	95.8	4.2	49.6	50.4	94.1	5.9
Somewhat worse	60.9	39.1	86.3	13.7	64.3	35.7	83.6	16.4
About the same	51.8	48.2	68.2	31.8	48.8	51.2	63.9	36.1
Somewhat better	34.6	65.4	31.7	68.3	35.7	64.4	27.8	72.2
Much better	33.3	66.7	7.7	92.3	34.3	65.7	6.6	93.4

Internet Polls

- Summary:
  - Internet polls seem to attract more polarized responses across a range of issues

Internet Polls

- Summary:
  - Internet polls seem to attract more polarized responses across a range of issues
  - Internet polls attract people who an interested in politics

Performance of Pre-election Polls

- Election Predictions (2004 Presidential Race):

	Elec.	ARG	Zogby	Survey USA	Gallup	Ras.	Mason Dixon	Str. Vis. (R)
FL	Bush+5	Kerry+2	Tie	Bush+1	Kerry+3	Bush+3	Bush+4	Bush+4
OH	Bush+2	Kerry+2	Bush+6	Bush+2	Kerry+4	Bush+4	Bush+2	Bush+2
PA	Kerry+3	Kerry+3	Kerry+4	Kerry+1	Bush+4	Kerry+2	Kerry+2	Kerry+1
WI	Kerry+	Tie	Kerry+6		Bush+8	Kerry+1	Kerry+2	Bush+2
IA	Kerry+	Bush+1	Kerry+5	Tie	Bush+2	Bush+2	Bush+5	Bush+3
MN	Kerry+3		Kerry+6		Kerry+8	Kerry+1	Bush+2	Tie
MI	Kerry+3		Kerry+6	Kerry+3		Kerry+4	Kerry+2	Bush+1
MS	Bush+7	Bush+6		Bush+5		Bush+5	Bush+5	
NM	Bush+1	Kerry+1	Kerry+3		Bush+3	Bush+4	Bush+4	
NV	Bush+3		Bush+5	Bush+8		Bush+2	Bush+6	
CO	Bush+5		Bush+2	Bush+3	Bush+6	Bush+5	Bush+7	
NH	Kerry+1	Bush+1				Kerry+2	Kerry+1	
ME	Kerry+9		Kerry+11	Kerry+8				
WV	Bush+13	Tie	Bush+9		Bush+6	Bush+6	Bush+8	
OR	Kerry+4	Kerry+4		Kerry+3	Kerry+8	Kerry+8	Kerry+6	
NJ	Kerry+7			Kerry+12				Tie
AR	Bush+10	Bush+3	Bush+1	Bush+5			Bush+8	
Avg. Err.		**3**	**4**	**2**	**5**	**2**	**2**	**3**

Performance of Pre-election Polls

- Given the degree of difficulties encountered, (some) pollsters are extremely good at predicting elections
- In 2004, pollsters such as Rasmussen, Survey USA, and Mason Dixon, got the presidential race correct in almost every state!
- Other pollsters were spectacularly wrong:
  - Gallup was all over the place
  - Strategic Vision (R) predicted small Republican victories in almost every swing state- of course, this did not materialize
  - Zogby predicted on Election Day at 5pm that Kerry would get 311 electoral votes!

Performance of Pre-election Polls

- Lessons:
  - Many pollsters "fudge" their results
  - In this group are some of the best pollsters (Rasmussen, Survey USA) and some of the worst pollsters (Zogby and Strategic Vision)
  - Good pollsters fudge their results to be consistent with the bulk of other polls in order to reduce the variance in their predictions
  - Bad pollsters fudge their results to achieve partisan aims (Strategic Vision) or appear like sages (Zogby)

Performance of Pre-election Polls

- How to Fudge Poll Results:
  - Changing weighting targets / Weight by party
  - Change likely voter model
  - Selectively report polls

Performance of Pre-election Polls

- Example:
  - Zogby made a name for himself by being the only pollster to correctly predict the extent of the Clinton's victory in 1996
  - In 2004, predicted overwhelming Kerry victory after preliminary exit polls show Kerry was up (despite the fact that no other pollsters suggested anything like this)
  - As it turned out, the exit polls were spectacularly wrong- as in many years, unadjusted results significantly overstated Democratic support
  - Zogby's reputation took a beating

Performance of Pre-election Polls

- Election Predictions (2012 Presidential Race):

State	Result	RCP Avg.	Princeton	Votamatic	538
CO	Obama+4	Obama+1.5	Obama+2	Obama+2.4	Obama+2.5
FL	Obama+1	Romney+1.5	Tie	Obama+0.4	Tie
IA	Obama +6	Obama+2.4	Obama+2	Obama+3.2	Obama+3.2
MI	Obama +9	Obama+4.0		Obama+5.4	Obama+7.1
MN	Obama +8	Obama+5.2		Obama+8.4	Obama+8.6
MO	Romney +10	Romney +10.2		Romney+9.4	Romney+8.1
NV	Obama +6	Obama+2.8	Obama+2.5	Obama+4.4	Obama+4.5
NH	Obama +6	Obama+2.0	Obama+3	Obama+3.2	Obama+3.5
NC	Romney +3	Romney +3.0	Romney+1	Romney+1.8	Romney+1.7
OH	Obama +2	Obama +2.9	Obama+3	Obama+3.2	Obama+3.6
PA	Obama +5	Obama +3.8		Obama+5.4	Obama+5.9
VA	Obama +3	Obama +0.3	Obama+2	Obama+2.2	Obama+2.0
WI	Obama +7	Obama+4.2		Obama+5	Obama+5.5

Performance of Pre-election Polls

- Election Predictions (2012 Presidential Race):

State	Result	RCP Avg.	Princeton	Votamatic	538
CO	Obama+4	-2.5	-2.0	-1.6	-1.5
FL	Obama+1	-2.5	-1.0	-0.6	-1.0
IA	Obama+6	-3.6	-4.0	-2.8	-2.8
MI	Obama+9	-5.0		-3.6	-1.9
MN	Obama+8	-2.8		0.4	0.6
MO	Romney+10	-0.2		0.6	1.9
NV	Obama+6	-3.2	-3.5	-1.6	-1.5
NH	Obama+6	-4.0	-3.0	-2.8	-2.5
NC	Romney+3	0.0	2.0	1.2	1.3
OH	Obama+2	0.9	1.0	1.2	1.6
PA	Obama+5	-1.2		0.4	0.9
VA	Obama+3	-2.7	-1.0	-0.8	-1.0
WI	Obama+7	-2.8		-2.0	-1.5
Average		-2.3	-1.4	-0.9	-0.6

Performance of Pre-election Polls

- Pre-election Polls (2010 Senate Races):

State	Result	RCP	RCP Error
CT	-11.8	-8.7	3.1
CA	-9.8	-5	4.8
CO	-0.9	3	3.9
IL	1.9	3.3	1.4
NV	-5.6	2.7	8.3
PA	2	4.5	2.5
WA	-3.8	-0.3	3.5
WV	-10.1	-4.5	5.6
AK	-4		n/a
KY	11.6	11	-0.6
MO	13.7	10.4	-3.3
WI	4.9	7.7	2.8
Average			2.9

Performance of Pre-election Polls

- Pre-election Polls (2012 Senate Races):

State	Result	RCP	RCP Error	538	538 Error
CT	-11.7	-5	6.7	-7	4.7
FL	-13	-6.2	6.8	-8	5
MO	-15	-6.3	8.7	-6.2	8.8
OH	-6	-5	1	-5.4	0.6
PA	-9.1	-5.4	3.7	-7.6	1.5
IN	-5.7	n/a	n/a	-2.4	3.3
MA	-7.5	-3	4.5	-4.4	3.1
MT	-3.7	0.4	4.1	1.5	5.2
NV	1.2	4	2.8	2.9	1.7
ND	-0.9	5.7	6.6	5.6	6.5
VA	-5.9	-1.8	4.1	-3.4	2.5
WI	-5.5	-2.2	3.3	-2.2	3.3
AZ	3	5.5	2.5	5.1	2.1
NE	15.6	n/a	n/a	7.8	-7.8
Average			4.6		2.9

Performance of Pre-election Polls

- Pre-election Polls (2014 Senate Races):

					Errors		
St.	**Res.**	**RCP**	**538**	**PPP (D)**	**Ras.**	**CBS/NYT/ Yougov**	**NBC/ Marist**
AK	R+3.2	-0.8	-1.2	-2.2	1.8	0.8	n/a
CO	R+2.5	0	-0.5	0.5	3.5	-3.5	-1.5
GA	R+7.9	-4.9	-5.9	-6.9	n/a	-4.9	-3.9
IA	R+8.5	-6.2	-6.5	-5.5	-7.5	-8.5	-5.5
KS	R+10.8	-11.6	-10.8	-11.8	-15.8	-6.8	-11.8
NC	R+1.7	-2.4	-2.7	-3.7	n/a	-4.7	-1.7
NH	D+3.2	2.4	1.2	1.2	-3.8	-1.8	n/a
LA	D+1.2	-4.5	6.2	-6.8	-5.8	-3.8	-6.8
AR	R+17	-10	-12	-9	-10	-12	-15
KY	R+15.5	-8.3	-9.5	-7.5	-7.5	-9.5	-6.5
VA	D+0.8	-8.9	-8.2	n/a	n/a	-9.2	n/a
Average:		-5.0	-5.4	-5.2	-5.6	-5.8	-6.6

Performance of Pre-election Polls

- Pre-election Polls (2022 Senate Races):

		Errors					
St.	**Res.**	**RCP**	**538**	**Traf. (R)**	**DFP (D)**	**Emm.**	**Local**
NY	D+14	-3.0	-5.1	1.3	-4.5	-5.4	-2.2
AZ	D+5	5.7	3.8	6.5	6.4	5.4	5.4
CO	D+14	8.1	5.2	12.0	6.7	5.6	-0.2
GA	D+1	2.4	2.0	4.0	2.0	-1.1	3.0
NH	D+9	8.0	7.2	10.6	6.4	5.3	7.5
NV	D+1	4.3	2.2	6.0	2.8	5.9	-0.4
WA	D+14	11.1	9.3	13.2		4.6	8.0
PA	D+4	4.8	4.9	6.5		5.5	6.5
WI	R+1	2.7	2.8	2.1	5.0	4.2	1.2
NC	R+4	2.7	0.8	2.5	2.5	1.4	2.3
FL	R+17	-7.4	-7.4		-4.3		-10.3
OH	R+7	1.9	-1.8	3.7	3.5	2.8	-6.5
IA	R+12		-2.0			0.4	0.5
MO	R+14	-2.2	-1.9	-2.1		1.3	-3.8
UT	R+14		-2.4			-2.5	-7.3
Avg. Err.:		3.0	1.7	5.5	2.5	1.5	-1.4
Avg. Abs. Err.:		4.9	4.2	5.9	4.1	3.3	5.6