Introduction to Election Surveys: Examining the 2016 Presidential Election
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Who am I?
- Faculty member at the University of Illinois at Chicago.
- Research and teaching related to:
  - public opinion and behavior: politics and policy-making
  - survey methodology
- Work with University of Illinois Survey Research Laboratory to design surveys and collect survey data.

What is a survey or poll?
- Often used interchangeably
- "Poll" more commonly used to refer to surveys conducted by the media or in a political context.
- Note: "Polling place" or "polls" also used to refer to the place people go to cast actual votes.
- Involves asking a group of people (or organizations) a series of standardized questions
  - Goal: To measure the characteristics, opinions, and behaviors of a population (e.g., American adults) – prevalence estimates
- Almost always involves asking a sample rather than everyone in the population (Census)
- Relies almost exclusively on self-report
- Requires that respondents are willing and able to answer questions completely and accurately
- Some exceptions (but not usually in pre-election polls)

Important features in how a survey is designed:
- Who do you ask? (sampling)
  - Probability – each unit in the population has a known and nonzero probability of being selected
  - Nonprobability
  - Probability is more difficult and expensive, but generally better - especially for making prevalence estimates
- How do you ask? (mode affects: speed, participation, ability to clarify, privacy, visual v. aural presentation)
  - Interviewer administered
  - Telephone (interviewer or IVR)
  - Face-to-face
  - Self-administered
  - Web
  - Multi/Paper-and-pencil instrument (PAPI)
- What do you ask them? (question wording and order)

Housekeeping
- Hold questions until the end – chat function.
- Slides will be made available on the SRL site where you registered (www.srl.uic.edu).
- Please raise your hand to acknowledge that you can hear me.

How are surveys/polls used in elections?
- Exit polling
- Pre-election polling
- Use 2016 election as an example in this presentation.
How are surveys/polls used in elections?

- Exit polling
- Pre-election polling

What is exit polling?

- Intercept voters after they have voted
  - In 2016, interviewers at 1000+ of the more than 110,000 places where people can vote (approx. 85,000 surveys)
  - More exit polling in swing states and those with competitive races
  - Asked to complete self-administered paper-and-pencil questionnaire that assesses:
    - Who they voted for
    - Demographic characteristics
    - Other relevant beliefs, attitudes, and behaviors
  - Also use telephone surveys to reach early and absentee voters (increasingly important; approx. 16,000 interviews)
- Goal
  - “Predict” or “call” the outcome of a race
  - Understand voting among subgroups
  - Understand predictors of vote choice
  - In other countries, used as a check on the validity of the election

Exit polling: challenges and issues

- Two step sampling process – introduces a lot of sampling error
- Nonresponse
  - Not everyone agrees to participate
  - Historically, Democrats may be more likely to participate
- Try to observe characteristics of nonrespondents
- Knowing how many respondents to sample from each polling place
  - Registration at voting place
  - Likely voter turnout (based on past elections)
- Data are ultimately weighted to election result to provide the best estimates of variables associated with vote choice

Exit polling: challenges and issues

- Largest U.S. exit poll – coalition of media organizations.
- Raw data are analyzed by each organization’s experts along with actual returns – make decision about “calling” a state or race
  - “media desks” - cloistered from coverage or other news
- Organizations want to call states early, but do not want to be wrong (Florida, 2000)
- Most major networks wait until a the polls in a state have closed

How did exit polls perform in 2016?

- Overestimated support for Clinton
  - Consistent with errors observed in past elections
- Hard to use exit polls to calling close elections:
  - Multi-stage sampling
  - Increased early and absentee voting
  - Nonresponse bias
  - Integral for understanding the who and why of election outcomes

How are surveys/polls used in elections?

- Exit polling
- Pre-election polling

Pre-election polling represents a small portion of survey research overall, but is perhaps the most visible example of survey research to the public and the most covered by the media.
Pre-election polling: Typical methodology

<table>
<thead>
<tr>
<th>Telephone</th>
<th>Web</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Probability</strong> (every unit in the population has a known and nonzero chance of being selected)</td>
<td>RDD Recruitment to a Web panel (GfK or NORC's Amerispeak panel)</td>
</tr>
<tr>
<td>• Sample of telephone numbers (RDD+Cell phone)</td>
<td>• Invitation to participate sent to subsample of panel</td>
</tr>
<tr>
<td>• Live interviewers or Interactive Voice Response</td>
<td></td>
</tr>
<tr>
<td>• Randomly select someone to interview from eligible residents in the household</td>
<td></td>
</tr>
<tr>
<td><strong>Nonprobability</strong></td>
<td>Web panels that recruit using nonprobability methods (e.g., volunteers, river sampling)</td>
</tr>
<tr>
<td>• Often use probability sampling to sample telephone numbers</td>
<td>• Invitation to participate sent to people chosen to get a sample that &quot;looks like&quot; the population demographically (quota sampling)</td>
</tr>
<tr>
<td>• Within household sampling</td>
<td>• may try to oversample those less likely to participate</td>
</tr>
<tr>
<td>• Sample only among those who are at home</td>
<td></td>
</tr>
<tr>
<td>• Interviewer person who answers the phone</td>
<td></td>
</tr>
</tbody>
</table>

Voting question wording: (ABC/Washington Post Example)

- If the presidential election were being held today and the candidates were [(Hillary Clinton and Tim Kaine, the Democrats), (Donald Trump and Mike Pence, the Republicans)], [(Gary Johnson and Bill Weld of the Libertarian Party) and (Jill Stein and Ajamu Baraka of the Green Party)], for whom would you vote?
- **If don’t know or refused:** “Would you lean toward [(Clinton and Kaine), (Trump and Pence)], [(Johnson and Weld) or Stein and Baraka]]?"
- **If they reported they already voted:** “Confidentially and for statistical purposes, did you vote for…”

Common characteristics of voting question wording: (ABC/Washington Post Example)

- List party ID
- List third party candidates
- List VP candidates
- Rotate order of to major party candidates and two third party candidates
- Asks about behavior rather than preference

Analyzing pre-election polls: (Upshot example)

- **Weighting**
  - Probability of selection (e.g., number of eligible adults in the household)
  - Weighting for nonresponse – weight to match “population”
- **Unique to pre-election polling: Likely voter prediction**
  - Voter turnout
  - Who will turnout (e.g., young people, conservatives, etc.)

Determining who is a “likely voter”:

- **Information used**
  - Registered to vote
  - Follow politics
  - Self-reported behavioral intention
  - Confidence in behavioral intention
  - Enthusiasm for vote choice
  - Other characteristics related to voting?

- **One approach:** Anyone who has particular characteristics included.
- **Another approach:** Index of likelihood of voting – choose percent of respondents based on predicted turnout.
- Almost every polling organization has a different approach to doing this.
- **It is much more difficult to predict turnout than it is to predict vote choice (turnout varies from election to election)**

What did the pre-election polls show in fall, 2016?

- Most national polls showed Clinton with an advantage (3-4%).
### November 7-8 (from RCP): National surveys

<table>
<thead>
<tr>
<th>State Level</th>
<th>Poll Aggregator</th>
<th>Trump</th>
<th>Clinton</th>
<th>Johnson</th>
<th>Stein</th>
<th>Prediction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgia: Trump vs. Clinton vs. Johnson</td>
<td>Trafalgar Group (R)</td>
<td>52</td>
<td>45</td>
<td>2</td>
<td></td>
<td>Trump +2</td>
</tr>
<tr>
<td>Georgia: Trump vs. Clinton</td>
<td>Landmark/Rosetta Stone</td>
<td>49</td>
<td>46</td>
<td></td>
<td></td>
<td>Trump +3</td>
</tr>
<tr>
<td>Virginia: Trump vs. Clinton vs. Johnson vs. Stein</td>
<td>Gravis</td>
<td>47</td>
<td>42</td>
<td>4</td>
<td>1</td>
<td>Clinton +4</td>
</tr>
<tr>
<td>Virginia: Trump vs. Clinton</td>
<td>Hampton University</td>
<td>45</td>
<td>41</td>
<td></td>
<td></td>
<td>Clinton +4</td>
</tr>
<tr>
<td>Missouri: Trump vs. Clinton vs. Johnson vs. Stein</td>
<td>Emerson</td>
<td>47</td>
<td>41</td>
<td>7</td>
<td>2</td>
<td>Trump +6</td>
</tr>
<tr>
<td>Michigan: Trump vs. Clinton vs. Johnson vs. Stein</td>
<td>Gravis</td>
<td>46</td>
<td>41</td>
<td>3</td>
<td>3</td>
<td>Clinton +3</td>
</tr>
<tr>
<td>New Hampshire: Trump vs. Clinton vs. Johnson vs. Stein</td>
<td>WMUR/UNH</td>
<td>49</td>
<td>38</td>
<td>6</td>
<td>1</td>
<td>Clinton +13</td>
</tr>
<tr>
<td>New Hampshire: Trump vs. Clinton vs. Johnson</td>
<td>Emerson</td>
<td>45</td>
<td>44</td>
<td>5</td>
<td>3</td>
<td>Clinton +2</td>
</tr>
<tr>
<td>New Mexico: Trump vs. Clinton vs. Johnson vs. Stein</td>
<td>Gravis</td>
<td>45</td>
<td>37</td>
<td>11</td>
<td>3</td>
<td>Clinton +86</td>
</tr>
<tr>
<td>New Mexico: Trump vs. Clinton vs. Johnson</td>
<td>Zia Poll</td>
<td>46</td>
<td>44</td>
<td>6</td>
<td>1</td>
<td>Clinton +2</td>
</tr>
<tr>
<td>Nevada: Trump vs. Clinton vs. Johnson vs. Stein</td>
<td>Gravis</td>
<td>43</td>
<td>41</td>
<td>7</td>
<td>2</td>
<td>Trump +2</td>
</tr>
<tr>
<td>Florida: Trump vs. Clinton vs. Johnson vs. Stein</td>
<td>Trafalgar Group (R)</td>
<td>50</td>
<td>46</td>
<td>2</td>
<td>1</td>
<td>Trump +2</td>
</tr>
<tr>
<td>Florida: Trump vs. Clinton vs. Johnson</td>
<td>Gravis</td>
<td>45</td>
<td>46</td>
<td>4</td>
<td>0</td>
<td>Clinton +2</td>
</tr>
</tbody>
</table>

### General Election: Trump vs. Clinton vs. Johnson vs. Stein

<table>
<thead>
<tr>
<th>Poll Aggregator</th>
<th>Trump</th>
<th>Clinton</th>
<th>Johnson</th>
<th>Stein</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rasmussen Reports</td>
<td>45</td>
<td>43</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Monmouth</td>
<td>50</td>
<td>44</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>ABC/Washington Post Tracking</td>
<td>47</td>
<td>43</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Fox News</td>
<td>48</td>
<td>44</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>CBS News</td>
<td>45</td>
<td>41</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>IBD/TIPP Tracking</td>
<td>41</td>
<td>43</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Bloomberg</td>
<td>44</td>
<td>41</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

### Predicting outcome of the election:

- **Electoral college – state level polls**
  - State level polls tend to be smaller and less well-funded
  - State level polls also tended to show support for Clinton in key states

- **Poll aggregators**: (e.g., RealClearPolitics, Nate Silver, Sam Wang)
  - Aggregate at the national level to predict popular vote
  - Reduces error by increasing sample size
  - Combining across methodologies reduces methodological effects
  - Aggregate state level polling data to predict electoral college
  - Smaller sample sizes
  - Less frequent
  - Less well-funded

- **Aggregators don’t just average polls**:
  - Weighting by pollster rating or quality
  - Weight by timing of poll (more recent more heavily)
  - Incorporate additional data like historical results or contextual data (e.g., unemployment rate)

- **Aggregators also showed Clinton with advantage**
  - Day before the election predictions of 73% to 98% for Clinton to win
  - Silver excoriated by Huffington Post for predicting Trump with a 27% probability of winning
Were pre-election polls wrong about the 2016 election?

- National polls – Clinton winning by 3-4%
- Popular vote returns:
  - Current numbers have Clinton winning by 2.1%
  - Simple average of 21 November 7 polls from RCP: Clinton up by 3.3%
  - 2.1% is well within the margin of error for most individual polls, but bigger than one would expect across the large number of polls – systematically in one direction
- Many state-level polls showed races within the margin of error, but aggregated models gave Clinton the advantage in many states
  - Underestimated support for Trump in key states

<table>
<thead>
<tr>
<th>Actual result of election:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinton (D)</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Number of votes*</td>
</tr>
<tr>
<td>Percent of Vote*</td>
</tr>
<tr>
<td>Electors</td>
</tr>
</tbody>
</table>


Margin of Error: MOE

- What is the margin of error:
  - Estimate of the error in support for a candidate introduced by sampling
  - MOE decreases as sample sizes increase, but...
  - Diminishing returns
  - Only for probability samples (Literary Digest – 1936, 2.4 million respondents?)
  - If you conducted the poll 100 times with independent samples of the same size, 95 of them would find a result within the estimate ± margin of error
  - The MOE for difference between candidates is typically approximately twice the margin for the estimate of support for a single candidate
  - MOE is bigger when looking at subgroups
  - MOE is also increased by weighting and it's important that MOE accounts for this by adjusting for the “design effect”
  - Strictly speaking, MOE cannot be estimated for data collected using nonprobability samples
  - The theory underlying MOE assumes a response rate of 100%

Why were pre-election polls wrong about the 2016 election?

- Short answer: we don’t know yet.
- Analysis of pre-election polling:
  - Disclosure
  - Organizations like RealClearPolitics and 538 have and will continue to analyze their models/predictions and polling data.
- Longer answer: Several likely possibilities.

Media, pundits, and interpretation:

- Reporting and interpretation of pre-election survey results
  - Over-estimate accuracy of surveys
  - Over-interpret differences and change
  - Lack of understanding of MOE and survey methodology
  - Lack of understanding of probability (aggregators predictions)
  - Motivated reasoning?
- Coverage of election outcome
  - Counterfactual: What would coverage have looked like if polls had underestimated support for Clinton by the same margin?
  - Polls at national level actually closer in 2016 than in 2012
  - consistently underestimated support for Obama
  - if polls had overestimated support for Obama in 2012 by as much as they underestimated it, Romney would have won

What are some possible explanations

- Late change in vote preferences not detected by polls?
  - Perhaps because of Clinton e-mail investigation?
  - Isn’t supported by trend data (e.g., 538 actually reported support for Clinton was on the rise)
- Undecided voters
  - Polls report results of respondents who have decided who they’re voting for
  - More undecided voters in 2016 than in many recent elections
  - Not evenly spread across states
  - The votes of undecided voters (or those who decide late in the election cycle) are notoriously difficult to predict
- Likely voter models?
  - Level of turnout
  - Who turns out
  - “Enthusiasm” variable may have been particularly problematic
    - Relatively low levels of enthusiasm (and high levels of negativity) made the election different from noisy
  - E.g., Minnesota’s election of Jessie Ventura
Why were pre-election polls wrong about the 2016 election? (cont.)

- “Nonsampling error”
  - Nonresponse bias
  - Socially desirable responding

Nonresponse error:

- Response rate vs. nonresponse error
- Trump voters less willing to participate in surveys than Clinton supporters? (anti-government)
- Weighting is supposed to adjust for nonresponse bias
  - Adjusts for demographic characteristics
  - Assumes that respondents who have particular characteristics (e.g., male Latinos with a 4-year college degree) who are not surveyed would answer the same way as those who are surveyed
  - Potential pitfalls of weighting small subsamples, particularly under-represented ones
  - Bigger ranges of weights may indicate potential problems
  - Weighting may not fully adjust for nonresponse error
Shy Trump – Social Desirability Response Bias

- Mode experiment – telephone v. Web
- Nov. 16; FiveThirtyEight:
  - Trump underpolled most in most Republican states (not states where strongest norms against voting for him existed)
  - Republican Senate candidates also outperformed their polls

So to summarize:

- Late change in voter preferences.
- Not predicting vote choice of undecided voters.
- Not predicting turnout accurately.
- Nonresponse error.
- Social desirability response bias.

Final Points:

- Survey methodology is constantly needing to change to respond to changes in culture and technology:
  - Telephones; Cell phones; Internet; Smart phones
  - Changing terminology: Negroes, Blacks, African-Americans
  - Changing meaning in terminology: welfare versus aid for poor people
- Surveys rely on members of the public to participate
  - Paradox – “My opinion isn’t represented in surveys.” and “I don’t participate in surveys.”
- Reporting of surveys and public understanding of surveys
- Surveys are not perfect, but they are one of the best tools for answering many social science questions

Historic view of error in estimates of Presidential candidate support:

Final points

- Webinar evaluation will be sent out.
- Upcoming Spring, 2016 Webinars:
  - Ethics in Survey Research – March 8
  - Introduction to Survey Sample Weighting – March 15
Thank you!
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