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Data Literacy and Voting

Stuit, Martha

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Data Literacy and Voting

Martha Stuit
University of Michigan

Friday, July 15, 2016, 1:15 p.m. - 2:15 p.m.

Image: “Voting United States.jpg” by Tom Arthur, on [Wikimedia Commons](https://commons.wikimedia.org), CC BY-SA 2.0.
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Martha Stuit
Presenter
What Do You Teach?

- HS Language Arts
- HS Social Studies
- HS Science
- HS Math or CS
- HS Other Subjects
- HS Librarian
- Administrator
- Higher Ed Faculty
- Higher Ed Librarian
- Other
Agenda

1. News media
2. 2016 Presidential election overview
3. Rules of thumb for data literacy and voting
4. Sources of election information
5. Questions/discussion
News Media
Americans overwhelmingly think that news media are one-sided

<table>
<thead>
<tr>
<th>Deal fairly with all sides</th>
<th>Tend to favor one side</th>
</tr>
</thead>
<tbody>
<tr>
<td>24%</td>
<td>74%</td>
</tr>
</tbody>
</table>

But more are divided in whether they think this about news they get online from friends and family

<table>
<thead>
<tr>
<th>Represents more than one side</th>
<th>Represents just one side</th>
<th>They don't get this news from friends &amp; family online</th>
</tr>
</thead>
<tbody>
<tr>
<td>31%</td>
<td>35%</td>
<td>33%</td>
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</tbody>
</table>


*See end of presentation for a list of resources used in this webinar.*
2016 Presidential Election
2016 Presidential Election

- **February 1 to June 14**: Primaries
- **May 3**: Donald Trump became the presumptive Republican nominee
- **June 6**: Hillary Clinton became the presumptive Democratic nominee
  - Bernie Sanders is still active
- National conventions to determine the parties’ nominees for president and vice president:
  - **July 18-21**: Republican National Convention
  - **July 25-28**: Democratic National Convention
- **November 8**: Election

Rules of Thumb for Data Literacy and Voting
What is polling? How do they get those numbers?

As Charles Wheelan writes:

“...one might reasonably ask, How do we know all this? How can we draw such sweeping conclusions about the attitudes of hundreds of millions of adults? And how do we know whether those sweeping conclusions are accurate?” (170)
Definition, from Wheelan:

“A poll (or survey) is an inference about the opinions of some population that is based on the views expressed by some sample drawn from that population.” (170)

*A “poll” is also the place where voters cast their votes.*
Ways that polls trip us up:

• Polls are formed from **samples** of a **population**.
  - *Is the sample representative of the population?*

• Types of bias:
  - **Nonresponse bias**: who chose *not* to participate in the poll
  - **Selection bias**: who participated in the poll

• Question **wording** and **order**
  - *How might respondents respond?*
There are different types of polls:

- **Interactive polls**: an interviewer speaks with a respondent.

- **Automated polls**: a robo-call to respondents. Respondents use their phone keypad to respond.

- **Online polls**: polls completed online, which are questionable because not all people have Internet access, and they have issues with bias.
**Indications of a good poll:**

- **Transparency** - Participates with these organizations:
  - American Association for Public Opinion Research (AAPOR)
  - National Council on Public Polls (NCPP)
    - Includes article called “20 Questions A Journalist Should Ask About Polls Results”
  - Roper Center’s Polling Data

  - *Tip*: Check out FiveThirtyEight’s Pollster Ratings! (You can delve even deeper by clicking on “How this works.”)

- **Methodology**
  - Representative of population
  - Type of poll
March 2016
Franklin & Marshall
College Poll

SUMMARY OF FINDINGS

Prepared by:
Center for Opinion Research
Floyd Institute for Public Policy
Franklin & Marshall College

RACE. Which of the following categories best describes your racial background?

93% White
8% Non-white
Example: Pew Research Center report

- **Sample:** 2,245 adults, who are 18 and older, in the United States.
- **Methodology:** telephone interviews
  - 559 contacted by landlines
  - 1,686 contacted by cell phones
2. Apply statistical skills.

• Questions to ask:
  – What is the sample, and is it representative?
  – What kind of average is it?
    • Mean, median, or mode
  – What is the inverse of the statistic?
  – What is the margin of error?
    • + or - percentage points
3. Apply data visualization skills.

- **Type of chart or graph**
  - Is it the right one?
  - Is it used correctly?
  - Is it misleading?

- **Colors**
  - What are the colors supposed to indicate?
  - Do they make the data seem dramatic?
Example: Venn diagram by Hillary Clinton

90% of Americans
Support universal background checks
83% of gun owners

Dear Congress,

Let's get this done.

Thanks,

The vast majority of Americans

12:21 PM - 20 May 2016
Example: Revised visualization
Each dot is an opinion poll, and the lines indicate trends generated by HuffPost Pollster’s poll-tracking model. This chart is as of July 8, 2016.
It's all about the 538 Electoral College votes

Here's a map of the country, with each state sized by its number of electoral votes and shaded by the leading candidate's chance of winning it.
4. Look at multiple sources.

• We often talk about unbiased sources or reporting, which do not exist. Good methodology and bad methodology do exist.
• To combat that, look for multiple sources to understand an issue. Also, apply the statistics and data visualization skills that you have learned from other webinars.
• Making good, informed decisions about the sources of information that you read and cite is key.
• How?
  – Look for counterarguments on the issue.
  – Peruse a variety of sources, including ones that lean left and ones that lean right.
Sources for Election Information
The Dallas Shooting Was Among The Deadliest For Police In U.S. History

By Carl Bialik, Ritchie King and Andrew Flowers
Recent

History lesson on data visualization
Clive Thompson for Smithsonian Magazine gives a quick history lesson on infographics. Data visualization was rare because data was rare.

Making the Seinfeld theme song with Bieber, Diplo, and Skrillex
Last year the New York Times interviewed Justin Bieber, Diplo, and Skrillex about how they put together their song Where.

Moving drought boundaries
Drought continues to trudge along. My grass is just about dead, save a few hearty patches clinging on to the...

Features

Shifting Incomes for American Jobs
For various occupations, the difference between the person who makes the most and the one who makes the least can be significant.

Who Still Smokes?
Two decades out from the first statewide ban on smoking in enclosed workplaces, here’s who still smokes.

Become a member.
Learn to visualize your data. From beginner to advanced.

http://flowingdata.com/
League of Women Voters

http://lwv.org/
Enter your address to find your polling place, build your ballot with our online voters' guide and much more! With our voters' guide you can see the races on your ballot, compare candidates' positions side-by-side, and print out a "ballot" indicating your preferences as a reminder and take it with you to the polls on Election Day. Check out our resources for military and overseas voters!

http://www.vote411.org/
America Can Fix Its Student Loan Crisis. Just Ask Australia.

Other countries offer plans that give students more time to repay loans or that make provisions for fluctuating earnings, so fewer borrowers default.

http://www.nytimes.com/section/upshot
A President can be judged on his ability to explain, to console, and to frame tragedy in the realm of both politics and emotion.
You can look many of these sources up on FiveThirtyEight’s Pollster ratings (next slide). For instance, Pew gets a B+.

http://www.pewresearch.org/
Aggregators of Polls: FiveThirtyEight

FiveThirtyEight’s Pollster Ratings

By Nate Silver

FiveThirtyEight’s pollster ratings are calculated by analyzing the historical accuracy and the methodology of each firm’s polls. Accuracy scores account for the type of election, a poll’s sample size, the performance of other polls surveying the same race and other factors. We also calculate measures of statistical bias in the polls.

See more: The State Of The Polls, 2016 | How this works | Download the data

<table>
<thead>
<tr>
<th>POLLSTER</th>
<th>LIVE CALLER WITH CELLPHONES</th>
<th>INTERNET</th>
<th>NCPP/ AAPOR/ ROOPER</th>
<th>POLLS ANALYZED</th>
<th>SIMPLE AVERAGE ERROR</th>
<th>RACES CALLED CORRECTLY</th>
<th>ADVANCED +/-</th>
<th>PREDICTIVE +/-</th>
<th>538 GRADE</th>
<th>BANNED BY 538</th>
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<td>-0.3</td>
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<td>657</td>
<td>5.3</td>
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<td>D+1.4</td>
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Aggregators of Polls: HuffPost Pollster

HuffPost Pollster tracks thousands of public polls to give you the latest data on elections, political opinions and more. Read our FAQ.

http://elections.huffingtonpost.com/pollster
Aggregators of Polls: RealClearPolitics

http://www.realclearpolitics.com/
What are your favorites?
Resources


http://projects.fivethirtyeight.com/pollster-ratings/.


Recap:

1. Know how polling works.
2. Apply statistical skills.
3. Apply data visualization skills.
4. Look at multiple sources.

Questions?

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Martha Stuit

Email: stuitm@umich.edu
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Evaluation: