2016-07-15

Data Literacy and Voting

Stuit, Martha

http://hdl.handle.net/2027.42/146732
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. 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>
</tr>
</tbody>
</table>

“The Modern News Consumer”
PEW RESEARCH CENTER

*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
1. Know how polling works.

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
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

Notes: Based on registered voters. Q23, THOUGHT, CAMPNII & Q5. Other/Don’t know responses not shown.
*Results from June surveys except for 1992 & 1996 interest in campaign news, from July.
Source: Survey conducted June 15-26, 2016.

Pew Research Center
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

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.

**Categories**

- Visualization
  - Seeing data
- Statistics
  - Analyzing data
- Maps
- Software

http://flowingdata.com/
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!
ECONOMIC VIEW

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.

12h ago - By SUSAN DYNARIKI
DAILY COMMENT

OBAMA AND TRUMP AFTER DALLAS
BY DAVID REMNICK

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/ ROPER</th>
<th>POLLS ANALYZED</th>
<th>SIMPLE AVERAGE ERROR</th>
<th>RACE CALLED CORRECTLY</th>
<th>ADVANCED +/-</th>
<th>PREDICTIVE +/-</th>
<th>538 GRADE</th>
<th>BANNED BY 538</th>
<th>MEAN-REVERTED BIAS</th>
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<td>SurveyUSA</td>
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<td></td>
<td>763</td>
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<td>D+0.1</td>
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<td>707</td>
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<td>-0.3</td>
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<td>657</td>
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<td>+0.7</td>
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<td>+1.2</td>
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<td>F</td>
<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.

Featured Charts

- **2016 General Election: Trump vs. Clinton**
  - 46% Hillary Clinton
  - 54% Donald Trump
  - 40% Donald Trump

- **2016 National Republican Primary**
  - 56% Donald Trump
  - 23% Ted Cruz

- **2016 National Democratic Primary**
  - 54% Hillary Clinton
  - 39% Bernie Sanders

- **Hillary Clinton Favorable Rating**
  - 41% Favorable
  - 56% Unfavorable

Latest Polling Stories

- **Guns And Immigration: Critical Wedge Issues Of 2016**
  - July 8, 2016
  - Throughout the campaign, since January, we have been and will be polling Americans on their policy preferences. We want to know: Which candidate’s platform...

- **THE WILDCATTERS: #Brexit, #Text, and U.S. Public Opinion Toward State Secession**
  - July 4, 2016
  - When Great Britain surprisingly voted to leave the European Union, the eyes of the nation quickly turned to Texas. With its unique history as an...

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

Latest Polls

**Saturday, July 9**

<table>
<thead>
<tr>
<th>Race/Topic</th>
<th>Poll</th>
<th>Results</th>
<th>Spread</th>
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<tr>
<td>President Obama Job Approval</td>
<td>Gallup</td>
<td>Approve 51, Disapprove 45</td>
<td>Approve +6</td>
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</tbody>
</table>

**Friday, July 8**

<table>
<thead>
<tr>
<th>Race/Topic</th>
<th>Poll</th>
<th>Results</th>
<th>Spread</th>
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<tbody>
<tr>
<td>General Election: Trump vs. Clinton vs. Johnson</td>
<td>Rasmussen Reports</td>
<td>Clinton 38, Trump 40, Johnson 9</td>
<td>Trump +2</td>
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<tr>
<td>California Senate - Harris vs. Sanchez</td>
<td>Field</td>
<td>Harris 39, Sanchez 24</td>
<td>Harris +15</td>
</tr>
<tr>
<td>President Obama Job Approval</td>
<td>Rasmussen Reports</td>
<td>Approve 49, Disapprove 50</td>
<td>Disapprove +1</td>
</tr>
</tbody>
</table>

28.9k Shares

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


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
Recap:

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2. Apply statistical skills.
3. Apply data visualization skills.
4. Look at multiple sources.

Questions?

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Evaluation: