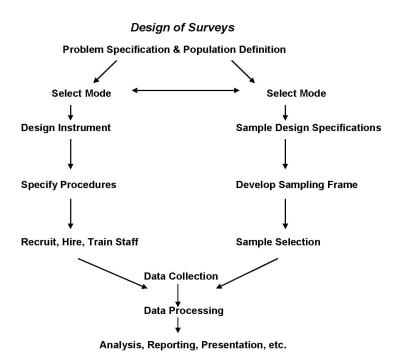
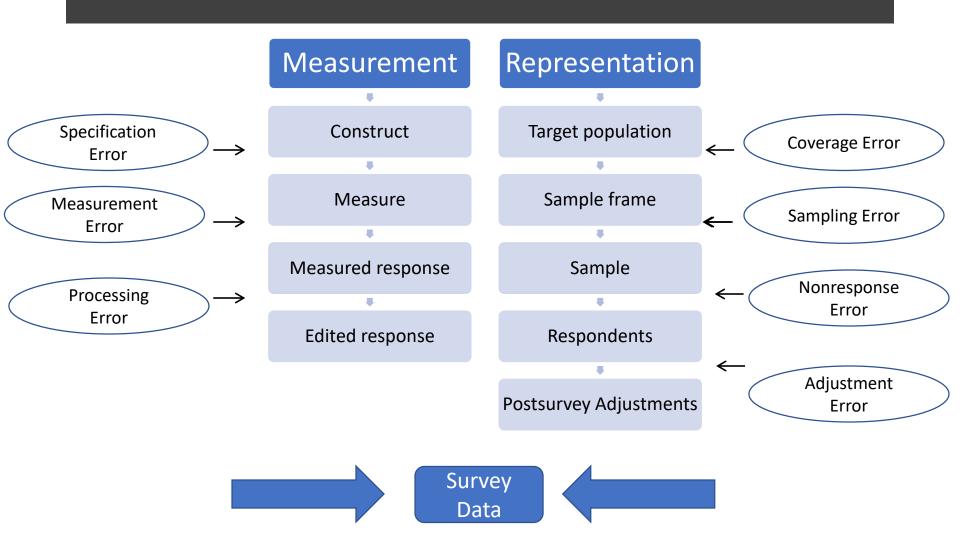
# GOV 1010: Survey Research Methods The Research Process

## Survey Design Perspective

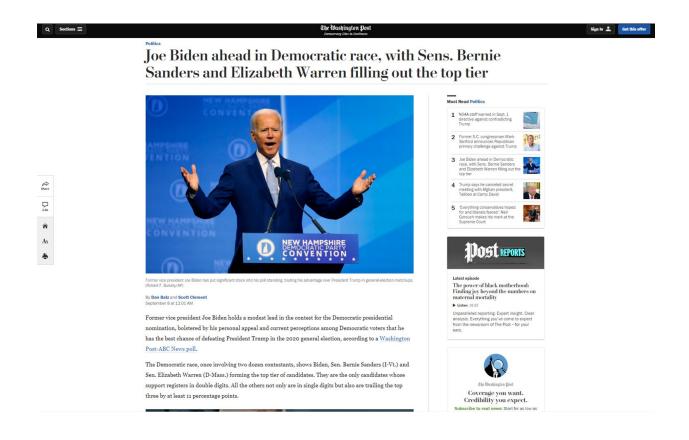


Note: Adapted from Groves (1989)

## Survey Error Perspective



## In Yesterday's Washington Post



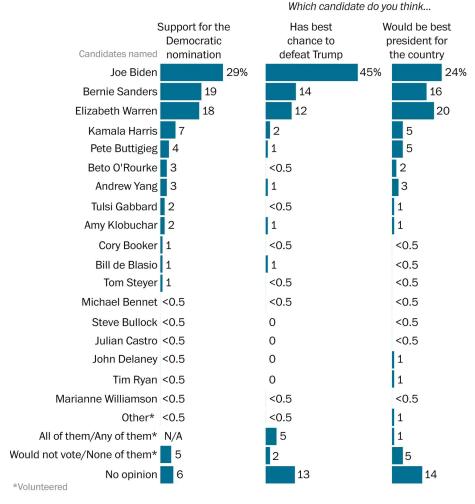
Former vice president Joe Biden holds a modest lead in the contest for the Democratic presidential nomination, bolstered by his personal appeal and current perceptions among Democratic voters that he has the best chance of defeating President Trump in the 2020 general election, according to a <u>Washington Post-ABC News poll</u>.

The Democratic race, once involving two dozen contestants, shows Biden, Sen. Bernie Sanders (I-Vt.) and Sen. Elizabeth Warren (D-Mass.) forming the top tier of candidates. They are the only candidates whose support registers in double digits. All the others not only are in single digits but also are trailing the top three by at least 11 percentage points....

The survey is a snapshot of the still-early Democratic race, with five months of campaigning before the first votes are cast in Iowa, followed by contests in New Hampshire, Nevada and South Carolina. Nearly 6 in 10 Democratic-leaning voters say they would consider switching to support another candidate for the party's nomination or that they still don't have a preference.

## Biden has advantage in overall support and electability over Sanders and Warren but has little advantage on being best for the country

Among Democrats and Democratic-leaning registered voters



Source: Sept. 2-5 Washington Post-ABC News poll of 391 Democrats and Democratic-leaning independent registered voters with an error margin of +/- 6 percentage points.

## How to really analyze a poll.....

• Read the story...

https://www.washingtonpost.com/politics/joe-biden-ahead-in-democratic-race-with-sens-bernie-sanders-and-elizabeth-warren-also-forming-the-top-tier/2019/09/07/0bdba9fa-d0cc-11e9-87fa-8501a456c003 story.html



• Dig for the methodology

https://www.washingtonpost.com/context/sept-2-5-2019-washington-post-abc-newspoll/d4e18b36-79bf-492d-91e3-d1c7a49d37e2/ This Washington Post-ABC News poll was conducted by telephone September 2-5, 2019, among a random national sample of 1,003 adults, with 65 percent reached on cell phones and 35 percent on landlines. Results have an error margin of plus or minus 3.5 percentage points for the full sample, including design effects due to weighting. Sampling, field work and data processing by Abt Associates of Rockville, MD.

\*= less than 0.5 percent

(Full methodological details appended at the end.)

Questions 1-7 held for release.

8. (ASK IF LEANED DEMOCRAT) Now I'll read a list of candidates for the Democratic nomination for president in 2020. After I've read the full list, please tell me whom you'd vote for in the primary or caucus in your state. (IF NONE OR DK/REF) Which candidate would you lean towards?

	9/5/19		7/1/19	
	All	Reg voters	All	Reg voters
Joe Biden	27	29	29	30
Bernie Sanders	19	19	23	19
Elizabeth Warren	17	18	11	12
Kamala Harris	7	7	11	13
Pete Buttigieg	4	4	4	4
	~	~	~	^

#### METHODOLOGICAL DETAILS

This poll was jointly sponsored and funded by The Washington Post and ABC News. The poll is a random sample of adults in the United States, with interviews in English and Spanish.

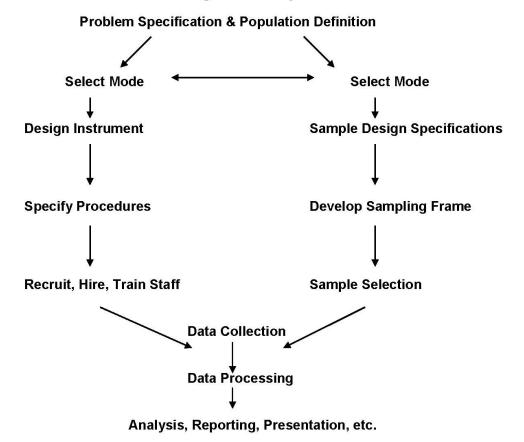
This questionnaire was administered with the exact questions in the exact order as they appear in this document. Demographic questions are not shown. If a question was asked of a reduced base of the sample, a parenthetical preceding the question identifies the group asked. Phrases surrounded by parentheticals within questions indicate clauses that were randomly rotated for respondents.

A dual frame landline and cell phone telephone sample was generated using Random Digit Dialing procedures by Survey Sampling International (SSI). Interviewers called landlines and cellular phone numbers, first requesting to speak with the youngest adult male or female at home. The final sample included 351 interviews completed on landlines and 652 interviews completed via cellular phones, including 430 interviews with adults in cell phone-only households.

This survey uses statistical weighting procedures to account for deviations in the survey sample from known population characteristics, which helps correct for differential survey participation and random variation in samples. The overall adult sample is weighted to correct for differential probabilities of selection among individuals who are landline-only, cell phone-only or dual users. Results are also weighted match the demographic makeup of the population by sex, region, age, education and race/ethnicity according to the latest Current Population Survey Social and Economic Supplement.

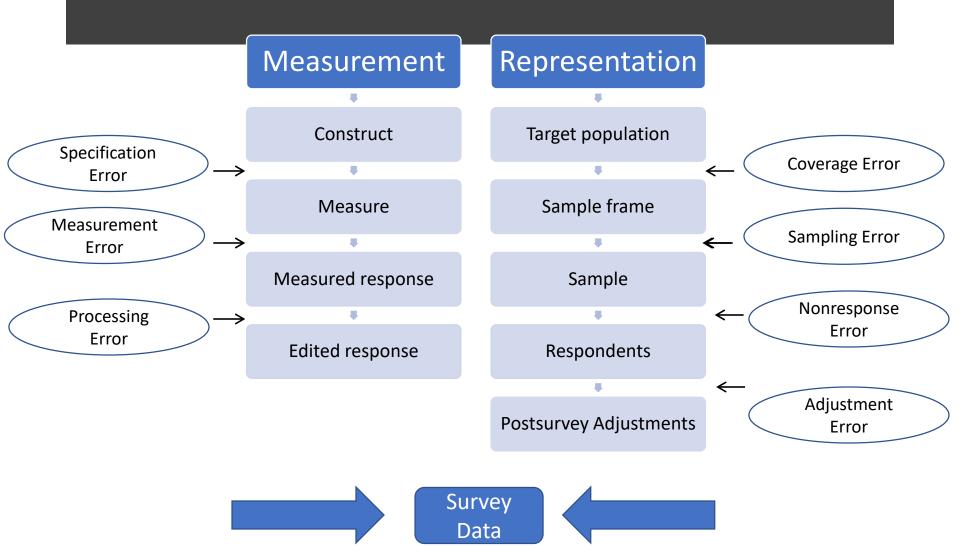
All error margins have been adjusted to account for the survey's design effect, which is 1.4 for this survey. The design effect is a factor representing the survey's deviation from a simple random sample and takes into account decreases in precision due to sample design and weighting procedures. Surveys that do not incorporate a design effect overstate their precision.

#### Design of Surveys



Note: Adapted from Groves (1989)

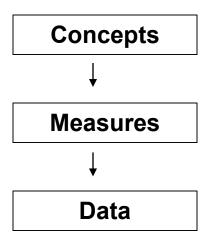
## Survey Error Perspective



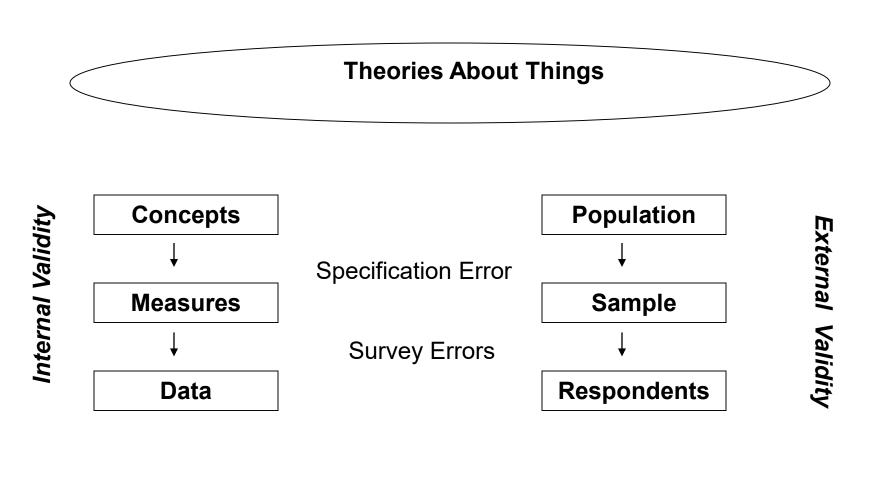
## Theories and Surveys

- Concepts (Theoretical Ideas)
- Measures (Questions or Scales)
- Statistics (i.e. Data)

## Moving from Theories to Data



#### **Integrated Example: Surveys and the Research Process**



Relationships Between Things

## Concepts and Measures

- Objective Phenomena
  - Facts
  - Need to be clearly specified and bounded
- Subjective Phenomena
  - Values, attitudes or opinions
  - May use scales or single items

#### **FiveThirtyEight**

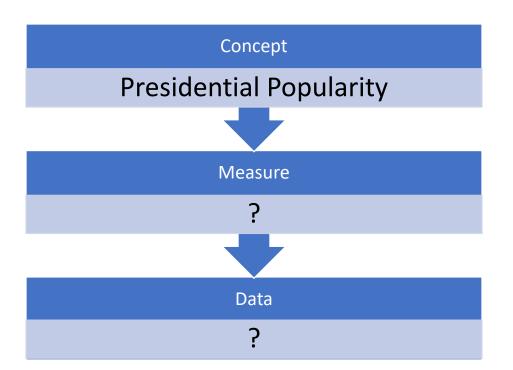


UPDATED SEP. 7, 2019 AT 9:35 AM

### **How popular is Donald Trump?**

An updating calculation of the president's approval rating, accounting for each poll's quality, recency, sample size and partisan lean. How this works »







" Do you approve or disapprove of the way Donald Trump is handling his job as president?"

"How good a job do you think Donald Trump is doing as President? Excellent, very good, good, only fair, or poor"

"Do you want Donald Trump to run for re-election in 2020?"

"Is your opinion of Donald Trump favorable, unfavorable, or haven't you heard enough about him?"

"Do you have a favorable or unfavorable impression of Trump as a person?"

"Regardless of whether you agree with him, do you like or dislike Donald Trump as a person?"

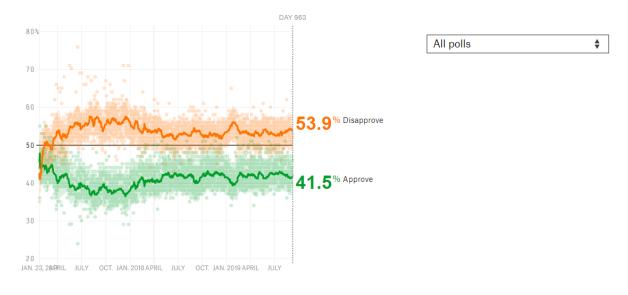
"Which of these words would you use to describe Donald Trump, and which of these words would you definitely not use to describe Donald Trump? Popular" FiveThirtyEight

**y** 1

UPDATED SEP. 9, 2019 AT 9:42 AM

#### **How popular is Donald Trump?**

An updating calculation of the president's approval rating, accounting for each poll's quality, recency, sample size and partisan lean. How this works »



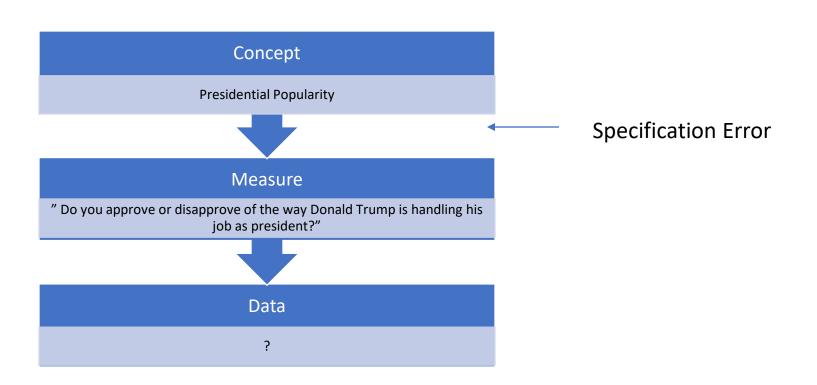
PROJECTION

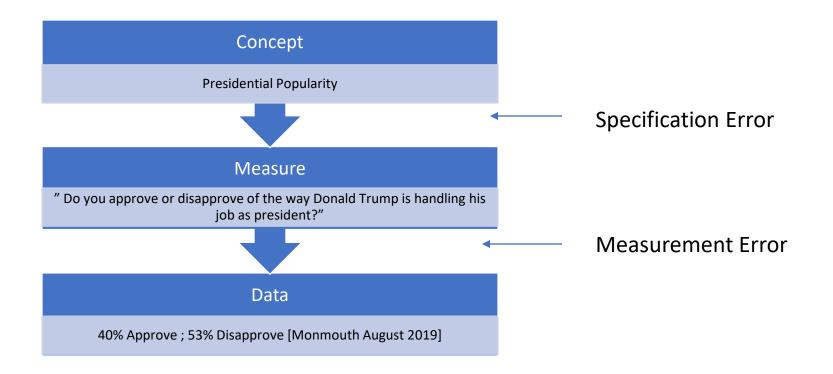
90% OF POLLS PROJECTED

TO FAIL IN THIS PANCE

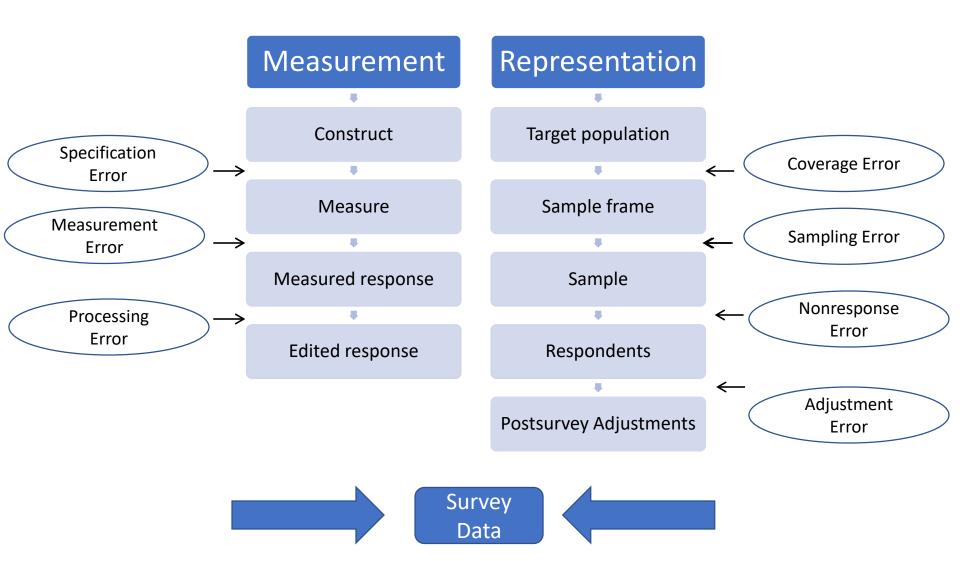
Today

4 years





## Survey Error Perspective





Research Design

## Overview of Survey Process

Research Theories

Survey Methods Reporting and Analysis

### The Three R's of Research

#### Realism

- to realistically describe or understand
  - Qualitative or in-depth interviews excel at this

#### Randomization

- Aim is to isolate variables to determine causal relationships
  - Experiments can be included in surveys
  - Surveys can be included in experiments

#### Representation

- Aim is to understand matters pertaining to a larger population
  - Surveys are strong at this
    - Leslie Kish: Statistical Design for Research

• Descriptive Surveys

Types of Surveys

• Aim is to *Describe* something

Analytic Surveys

• Goal is to understand *Relationships* 

### Descriptive Surveys

- Attempt to make a population estimate or otherwise enumerate something.
- Principal goal is to count something
- What proportion of a population have a characteristic?
- How often do two things occur at the same time?

#### Examples:

- US Census to enumerate the population of the US
- Survey to estimate the proportion of voters who are college students
- Pre-election survey to estimate which voters may be likely to change their minds
- Exit Poll to determine who voted for which candidate and why

## Analytic Surveys

• Attempt to study the relationships and associations between variables

#### • Examples:

- Survey to test which type of pre-election contacts make voters more likely to turn-out to vote
- Survey to test whether advertising campaign increases voter support for candidate
- Survey to test whether presidential debates made viewers more or less favorable toward candidates
- Survey to test which likely voter questions do the best job of predicting electoral turnout

## Survey Experiments

- Designed to provide strong test of a narrow thing (A "treatment")
  - Respondents are randomly assigned to treatment and control groups
  - Random assignment insures that only difference between treatment and control group is TREATMENT
- Examples:
  - Frames
  - Primes
- Uses:
  - Determine differences in survey designs
  - Message differences
  - Purchase differences (A | B Testimg)
  - Substantive differences where treatments helps understand causation

## An example from 1940

Do you think the US should do more now than it is to help England and France?

Do you think the US should do more now than it is to help England and France in the fight against Hitler?

- Yes
- No

- Yes
- No

## An example from 1940

Do you think the US should do more now than it is to help England and France?

• Yes 13%

• No

DK

Do you think the US should do more now than it is to help England and France in the fight against Hitler?

• Yes 22%

• No

DK

Understanding Hypotheses

## Hypotheses

• : a tentative assumption made in order to draw out and test its logical or <a href="mailto:empirical">empirical</a> consequences

• [From Merriam-Webster Dictionary]

## Relationships Between Variables

- Directional Relationships
  - Related, but we don't know what direction
  - Positive [An increase in A leads to an increase in B]
  - Negative [An increase in A leads to a decrease in B]
- Not related
- Causation vs Correlation

## More Specifically

- Falsifiable.
- Hypotheses must be internally consistent, that is that they must be proving what they claim to be proving and must not contain any logical or analytical contradiction
- Hypotheses must have **clearly defined outcomes** (dependent variables) that are both dependent and vary based on the dependent variable.
- Hypotheses must be general and should aim to explain as much as possible with as little as possible. As such, hypotheses should have as few exceptions as possible and should not rely on amorphous concepts like 'national interest.'
- Hypotheses must be empirical statements that are propositions about relationships that exist in the real world.
- Hypotheses must be plausible (there must be a logical reason why they
  might be true) and should be specific (the relationship between variables
  must be expressed as explicitly as possible) and directional.

## Hypothesis Testing in Research

- We develop hypotheses because they are plausible, and usually based on previous research.
- We don't believe, or accept hypotheses, until there is strong evidence that it is true
  - This is analogous to the US legal system:
    - Presumption of innocence
    - Need to be convinced beyond reasonable doubt

What does it mean to not accept a hypothesis?

## The Null Hypothesis

- We specifically design a null hypothesis to contrast with our "working" or "research" hypothesis.
- Null hypothesis: Generally "no difference" or the opposite of what we are trying to prove.

Looking Forward.....