Concepts, Measurement, and Description

Justin Grimmer

Government 2010

February 3, 2010

An Overview of the Process of Research

Three broad steps to discovery

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    1) Conceptualization

An Overview of the Process of Research

Three broad steps to discovery   Example

1) Conceptualization

An Overview of the Process of Research

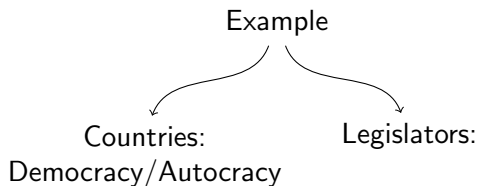Three broad steps to discovery

Example

Countries:

1) Conceptualization

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Countries:
Democracy/Autocracy

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Countries: Legislators:
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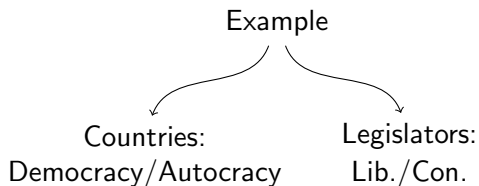
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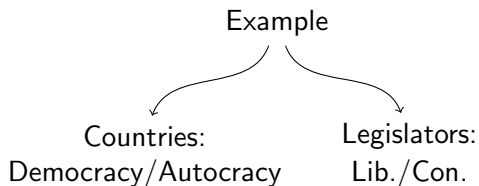
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Polity Scores

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Democratic Peace

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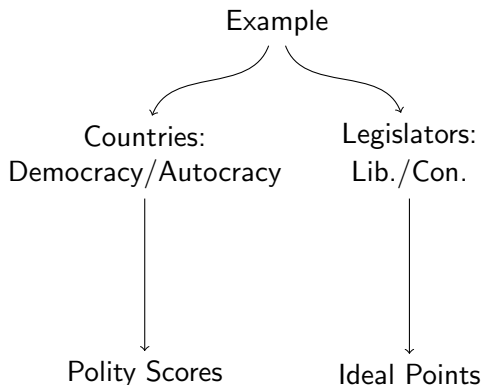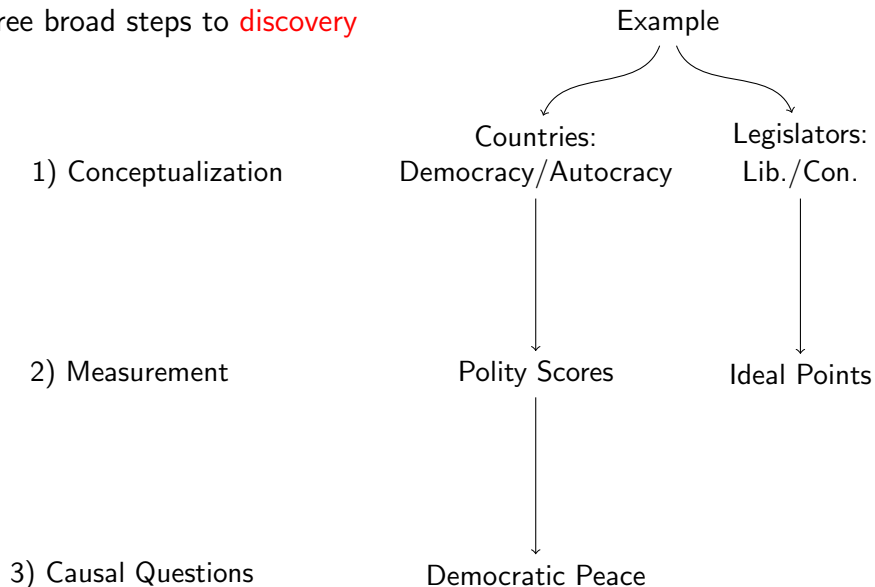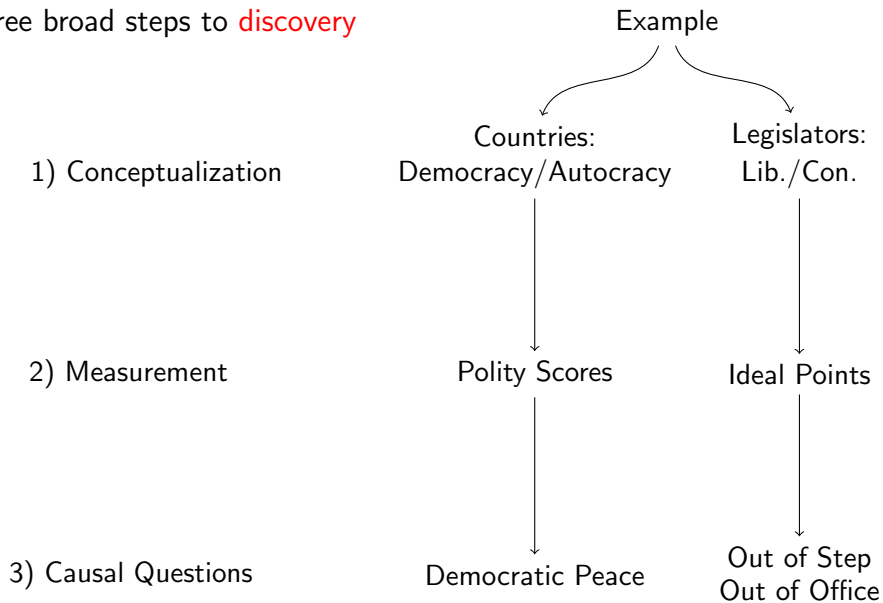# An Overview of the Process of Research

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Quantitative Methods

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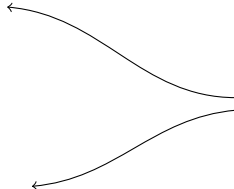Three broad steps to discovery

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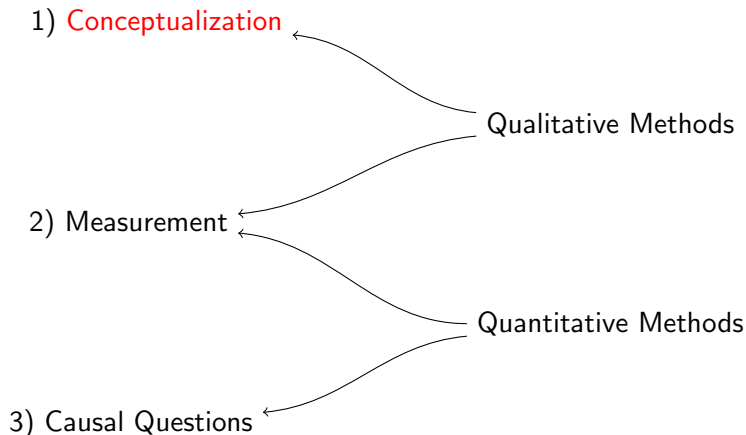   Unavoidable and Essential

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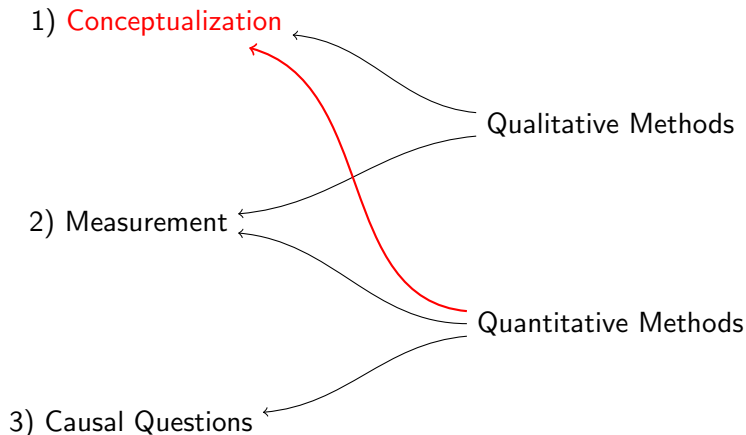
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Let's work from Examples–

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What Is a Concept?

A Definition of Concepts

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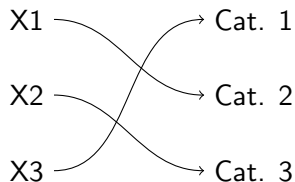1) A set of categories (or a continuous scale)
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    - Aldrich and Rohde 1991; Cox and McCubbins 1995 ;(Almost) every other Congress book or paper

Revisiting A Definition of Concepts

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"A single constituency is said to be substantively represented by an elected official if this individual either adopts or simply acts upon policy preferences that are roughly similar to those of his or her constituents." Bafumi and Herron (2007).

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- Sociology and data readiness $\Rightarrow$ vast majority of studies adopt narrow conceptualization
  - Poor measures of legislator responsiveness (Pitkin 1967)
  - Problems with Causal Inferences (Out of step, out of office?)

Where Do Concepts Come From?

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Why does every concept have (approximately) three categories?

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Computers need humans to introduce substantive knowledge

Computer-Assisted Conceptualization

Solution: merge human and computers, exploit strength of both

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Developing concepts: to do it well, both thought and computing

Evaluating New Concepts

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- Example Discovery (Gerring's 1, 2,3, 4, 5, and 7) $\Rightarrow$ Allow audience to be the judge

Operationalizing Gerring's Criteria: Coherence and Differentiation

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Sample texts: 200 press releases from Frank Lautenberg (D-NJ)

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- Concept Quality $= \underbrace{\text{mean(within cluster)}}_{\text{Coherence}} - \underbrace{\text{mean(between clusters)}}_{\text{Differentiation}}$

Evaluation: Comparing Cluster Quality

(Our Method) − (Human Coders)
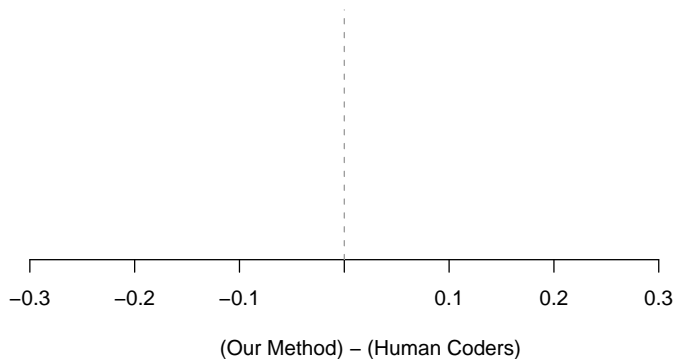
Evaluation: Comparing Cluster Quality
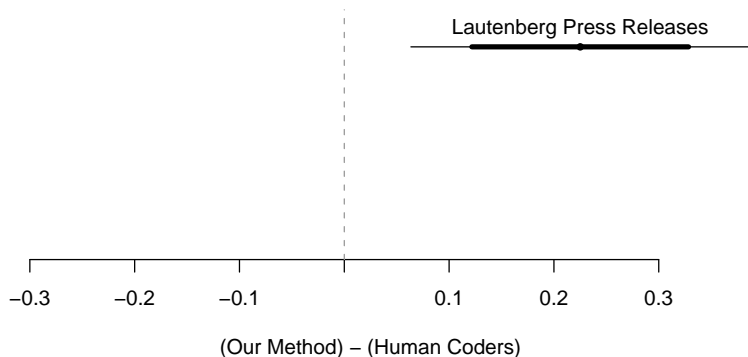
Lautenberg: 200 Senate Press Releases (appropriations, economy, education, tax, veterans, . . .)

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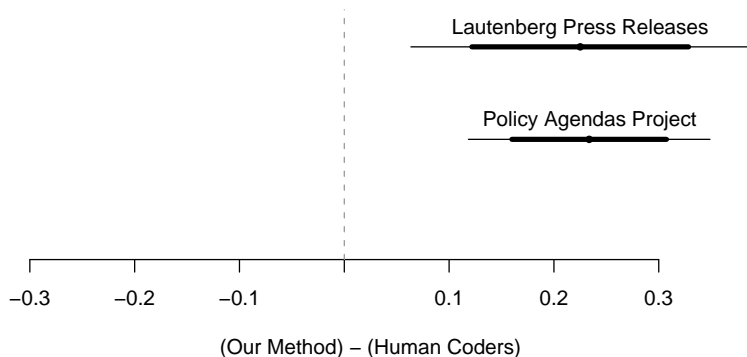
Policy Agendas: 213 quasi-sentences from Bush's State of the Union (agriculture, banking & commerce, civil rights/liberties, defense, ...)

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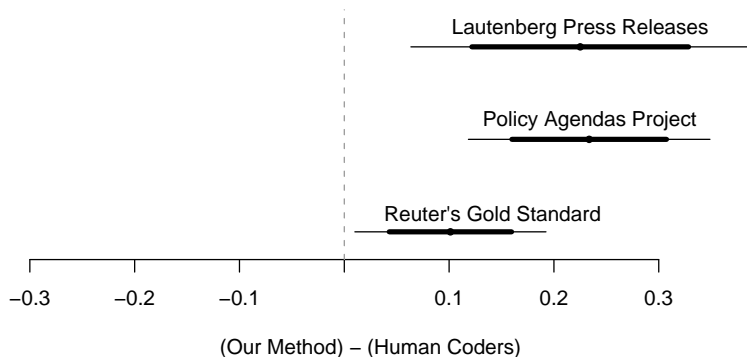
Reuters: financial news (trade, earnings, copper, gold, coffee, . . .); "gold standard" for supervised learning studies

Evaluation (New Conceptualization): What Do Members of Congress Do?

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New Concept: Partisan Taunting

In Sample Illustration of Partisan Taunting
Evaluate Familiarity (1) and Resonance (2)
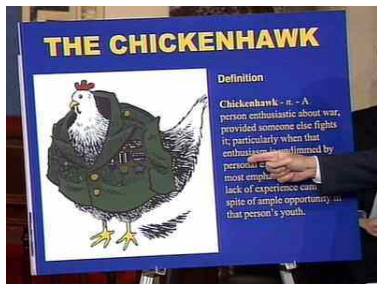
Sen. Lautenberg
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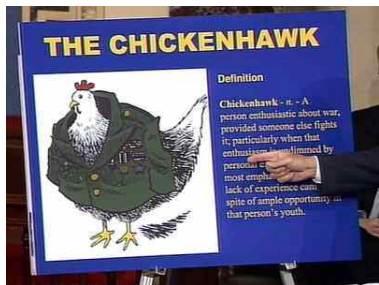Evaluate Familiarity (1) and Resonance (2)

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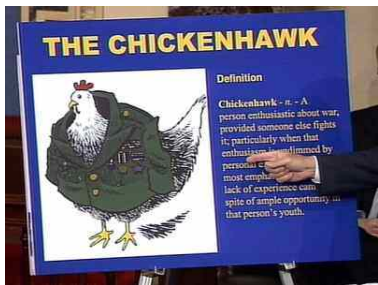

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Taunting ruins deliberation

THE CHICKENHAWK

Definition

Chickenhawk - *n.* - A person enthusiastic about war, provided someone else fights it; particularly when that enthusiasm is dimmed by personal ... most emphasis ... lack of experience ... spite of ample opportunity in that person's youth.

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Interactive Congressional Speech

Coherence (4) and Differentiation (5)

"Senate Republicans blocked raising the minimum wage" Democratic caucus 6/27/2007

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    - Explain why legislation is not enacted (Claiming credit for legislation not passed)

Interactive Congressional Speech

Coherence (4) and Differentiation (5)

"Senator Lautenberg's amendment would change the name of the measure to 'More Tax Breaks for the Rich and More Debt for Our Grandchildren Deficit Expansion Reconciliation Act of 2006.' " Lautenberg press release 2/2/2006

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" Senator Lautenberg Expressed Shock Over President Bush's Mock
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Theoretical Utility: Part 1

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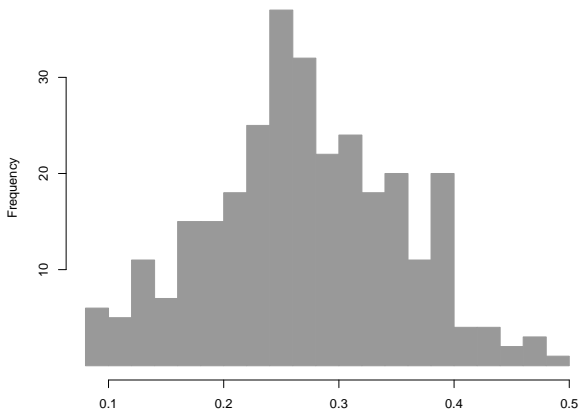
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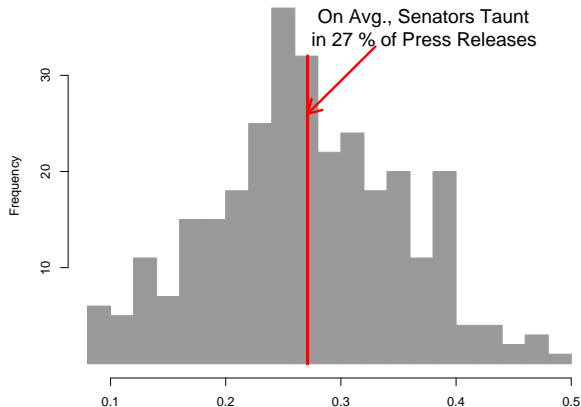
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A hypothesis about who is more likely to taunt.

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- Deliberation and Reflection: empirically competing values

Some Very Rough Evidence (More on this Later)
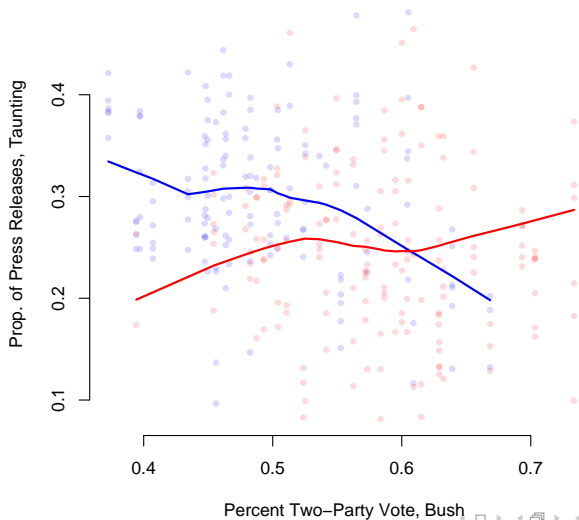
Applying Concepts: Measurement and Stretching

Assessing Measurement: Reliability and Validity

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- Need validations to convince anyone press releases and statistical model capture "real" behavior (at the heart of validity)

Comparing Committee Leaders to Other Senators
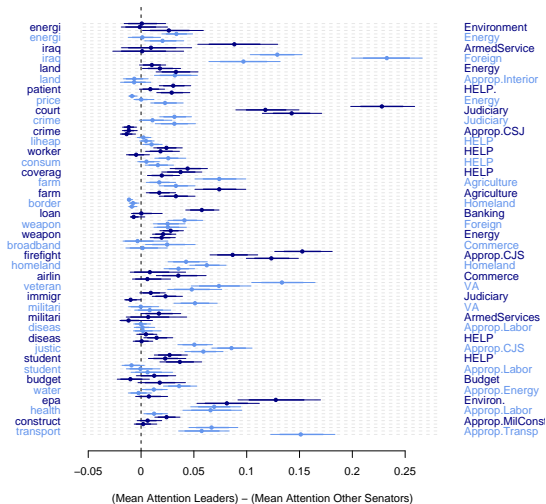
(Mean Attention Leaders) – (Mean Attention Other Senators)

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- We bring old concepts into new contexts regularly
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    - Representation in bureaucracies (Meier 1993)
- To ensure reference to the same concept, we can use "broader" categories with less coherence

Foreshadowing Next Week: Causal Inference

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Foreshadowing Next Week: Causal Inference

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- Formulate a testable, causal hypothesis
- How do we identify a causal relationship?

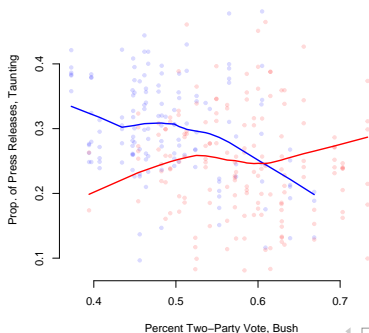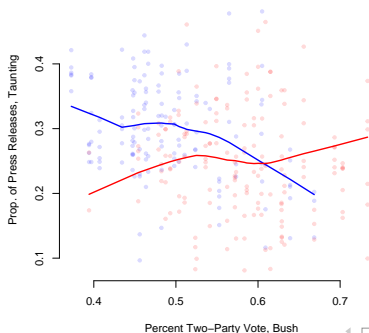# Revisiting Taunting

- Hypothesis: Pressure from constituents causes Democrats in blue states to taunt Republicans more than Democrats in Red States
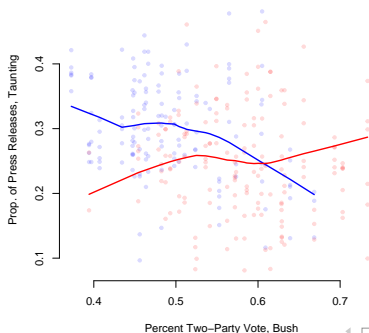
Revisiting Taunting

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- What is a cause?
- What are threats to valid causal inference?
- How can we improve our research designs to make valid causal inferences?
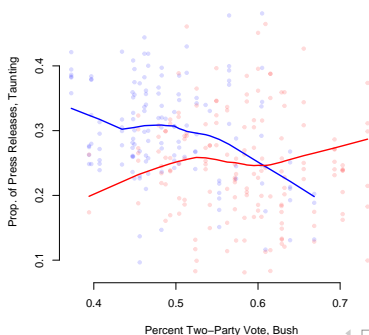
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- Usually: a theory or standard defines our conceptualizations
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- Evaluation requires experiments with experienced scholars and diverse audiences