

Introduction & How to ask questions in political science

Polisci 209 - fall 2017

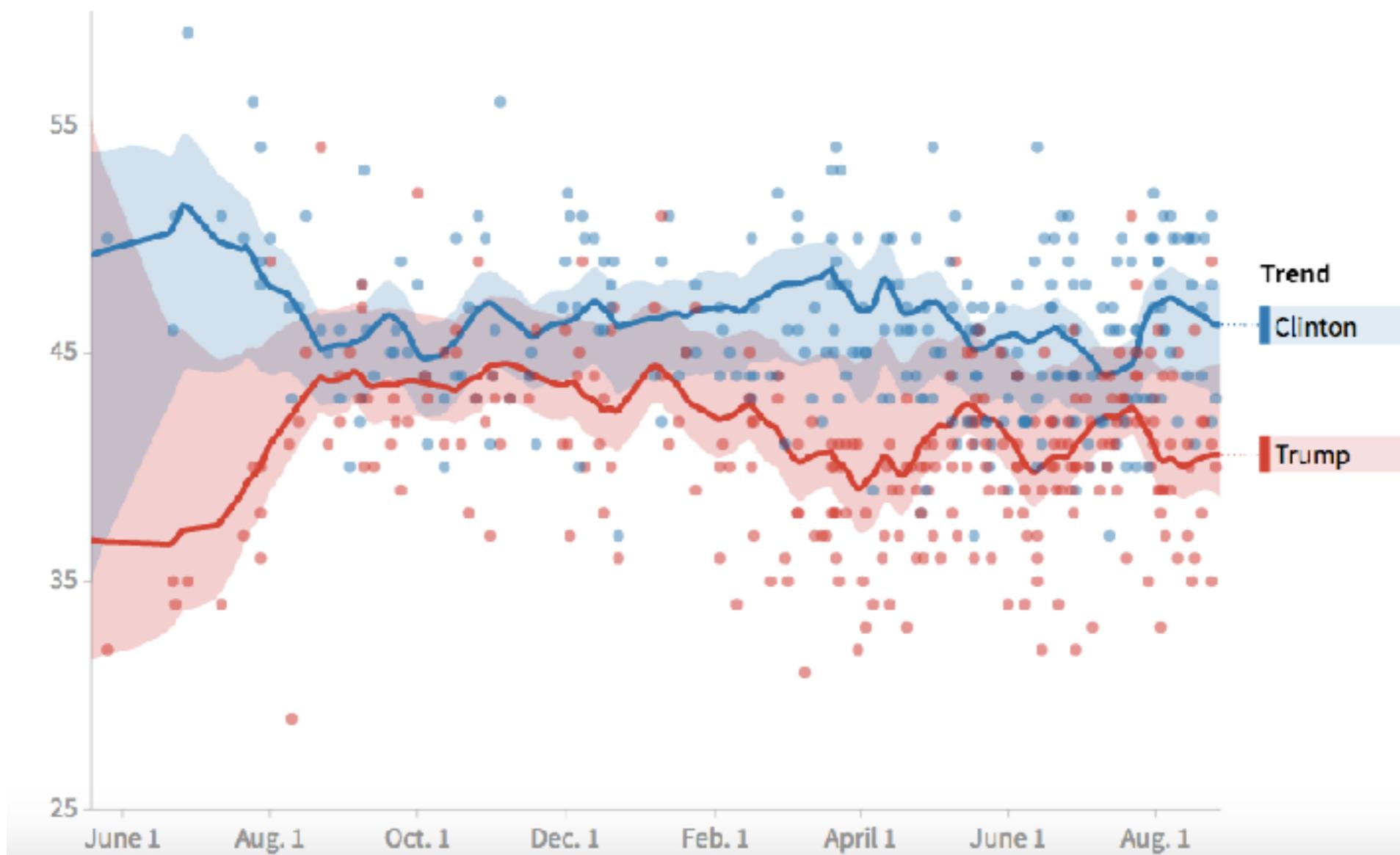
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- PhD in Political Science from Duke University
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**What do you think
this is class about?**

What is this class about?

- How to do (political) science
- How to read and understand (political) science
- Programming in R
- How does science work
- Understand the world around you!



Trend

Clinton

Trump



“Without data
you’re just
another person
with an opinion.”

- W. Edwards Deming,
Data Scientist

Two transformative technological changes have driven this rapid growth of quantitative social science. First, the Internet has greatly facilitated data revolution, a spike in the amount and diversity of available data, through information sharing, making it possible for researchers and organizations to disseminate numerous data sets in digital form. Second, the computational revolution, in terms of both software and hardware, means that essentially anyone can conduct data analysis using their personal computer and favorite data analysis software without needing to access expensive computational facilities.

- *Kosuke Imai, Department of Political Science, Princeton University*

I USED TO THINK
CORRELATION IMPLIED
CAUSATION.



THEN I TOOK A
STATISTICS CLASS.
NOW I DON'T.



SOUNDS LIKE THE
CLASS HELPED.
WELL, MAYBE.



Class Website

- https://fhollenbach.github.io/polisci209_fall2017/
- Syllabus: https://fhollenbach.github.io/polisci209_fall2017/pages/syllabus.html
- Notes, Homework, etc

**[https://fhollenbach.github.io/
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syllabus.html](https://fhollenbach.github.io/polisci209_fall2017/pages/syllabus.html)**

Questions

- Name
- Where are you from? City, State, (Country)
- How many people live where you are from?
- What do you currently like to do?
- How can I help you learn better?

Pause button

- Knock on the table: pause class for 30 sec
- Use responsibly
- Ask questions or catch up on notes

What is Political Science

- The study of politics
- “scientific study of political phenomena”
- Answer general phenomenon, not particular situations

WHY DO WHALES JUMP
WHY ARE WITCHES GREEN
WHY ARE THERE MIRRORS ABOVE BEDS
WHY DO I SAY UH
WHY IS SEA SALT BETTER
WHY ARE THERE TREES IN THE MIDDLE OF FIELDS
WHY IS THERE NOT A POKEMON MMO
WHY IS THERE LAUGHING IN TV SHOWS
WHY ARE THERE DOORS ON THE FREEWAY
WHY ARE THERE SO MANY SACHDOST.EXE RUNNING
WHY AREN'T THERE ANY COUNTRIES IN ANTARCTICA
WHY ARE THERE SCARY SOUNDS IN MINECRAFT
WHY IS THERE KICKING IN MY STOMACH
WHY ARE THERE TWO SLASHES AFTER HTTP
WHY ARE THERE CELEBRITIES
WHY DO SNAKES EXIST
WHY DO OYSTERS HAVE PEARLS
WHY ARE DUCKS CALLED DUCKS
WHY DO THEY CALL IT THE CLAP
WHY ARE KYLE AND CARTMAN FRIENDS
WHY IS THERE AN ARROW ON AANG'S HEAD
WHY ARE TEXT MESSAGES BLUE
WHY ARE THERE MUSTACHES ON CLOTHES
WHY ARE THERE MUSTACHES ON CARS
WHY ARE THERE MUSTACHES EVERYWHERE
WHY ARE THERE SO MANY BIRDS IN OHIO
WHY IS THERE SO MUCH RAIN IN OHIO
WHY IS OHIO WEATHER SO WEIRD
WHY ARE THERE MALE AND FEMALE BIKES
WHY ARE THERE BRIDESMAIDS
WHY DO DYING PEOPLE REACH UP
WHY AREN'T THERE WIDOWS FRIENDS
WHY ARE OLD KINGDOMS DIFFERENT
WHY ARE THERE SQUIRRELS

WHY DO TESTICLES MOVE
WHY ARE THERE PSYCHICS
WHY ARE HATS SO EXPENSIVE
WHY IS THERE CAFFEINE IN MY SHAMPOO
WHY DO YOUR BOOBS HURT
WHY AREN'T ECONOMISTS RICH
WHY DO AMERICANS CALL IT SOCCER
WHY ARE MY EARS RINGING
WHY ARE THERE SO MANY AVENGERS
WHY ARE THE AVENGERS FIGHTING THE X MEN
WHY IS WOLVERINE NOT IN THE AVENGERS
WHY ARE THERE ANTS IN MY LAPTOP
WHY IS EARTH TILTED
WHY IS SPACE BLACK
WHY IS OUTER SPACE SO COLD
WHY ARE THERE PYRAMIDS ON THE MOON
WHY IS NASA SHUTTING DOWN
WHY ARE THERE TINY SPIDERS IN MY HOUSE
WHY DO SPIDERS COME INSIDE
WHY ARE THERE HUGE SPIDERS IN MY HOUSE
WHY ARE THERE LOTS OF SPIDERS IN MY HOUSE
WHY ARE THERE SPIDERS IN MY ROOM
WHY ARE THERE SO MANY SPIDERS IN MY ROOM
WHY DO SPIDER BITES ITCH
WHY IS DYING SO SCARY
WHY IS THERE NO GPS IN LAPTOPS
WHY DO KNEES CLICK
WHY AREN'T THERE E GRADES
WHY IS ISOLATION BAD
WHY DO BOYS LIKE ME
WHY DON'T BOYS LIKE ME
WHY IS THERE ALWAYS A JAWA UPDATE
WHY ARE THERE RED DOTS ON MY TIGHTS
WHY IS LYING GOOD

WHY ARE THERE SLAVES IN THE BIBLE
WHY DO TWINS HAVE DIFFERENT FINGERPRINTS
WHY ARE AMERICANS AFRAID OF DRAGONS
WHY IS HTTPS CROSSED OUT IN RED
WHY IS THERE A LINE THROUGH HTTPS
WHY IS THERE A RED LINE THROUGH HTTPS ON FACEBOOK
WHY IS HTTPS IMPORTANT
WHY AREN'T MY ARMS GROWING
WHY ARE THERE WEEDS
WHY DO I FEEL DIZZY
WHY ARE THERE SO MANY CROWS IN ROCHESTER
WHY IS PSYCHIC WEAK TO BUG
WHY DO CHILDREN GET CANCER
WHY IS POSEIDON ANGRY WITH ODYSSEUS
WHY IS THERE ICE IN SPACE
WHY ARE THERE DOGS AFRAID OF FIREWORKS
WHY IS THERE AN OWL IN MY BACKYARD
WHY IS THERE AN OWL OUTSIDE MY WINDOW
WHY IS THERE AN OWL ON THE DOLLAR BILL
WHY DO OWLS ATTACK PEOPLE
WHY ARE AK 47s SO EXPENSIVE
WHY ARE THERE HELICOPTERS CIRCLING MY HOUSE
WHY ARE THERE GODS
WHY ARE THERE TWO SPOCKS
WHY IS MT VESUVIUS THERE
WHY DO THEY SAY T MINUS
WHY ARE THERE OBELISKS
WHY ARE WRESTLERS ALWAYS WET
WHY ARE OCEANS BECOMING MORE ACIDIC
WHY IS ARWEN DYING
WHY AREN'T MY QUAIL LAYING EGGS
WHY AREN'T MY QUAIL EGGS HATCHING
WHY AREN'T THERE ANY FOREIGN MILITARY BASES IN AMERICA
WHY AREN'T THERE GUNS IN HARRY POTTER
WHY ARE ULTRASOUNDS IMPORTANT
WHY ARE ULTRASOUND MACHINES EXPENSIVE
WHY IS STEALING WRONG

WHY ARE THERE GHOSTS


WHY AREN'T MY ARMS GROWING


WHY ARE THERE TINY SPIDERS IN MY HOUSE


WHY IS SEX SO IMPORTANT


WHY AREN'T THERE GUNS IN HARRY POTTER


WHY ARE THERE WEEDS
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WHY AREN'T THERE ANY FOREIGN MILITARY BASES IN AMERICA

QUESTIONS
FOUND IN GOOGLE AUTOCOMPLETE

**Can you think of some
questions political scientists
might try to answer?**

Questions in polisci

- What are the **causes** of war?
- What **causes** countries to democratize?
- Are religious people more likely to vote?
- What is the level of income inequality in a given country?
- **Why** are some countries rich and other poor?

- Normative questions
- Descriptive questions
- Causal Questions

Questions for this class

- In **empirical** political science we try to answer descriptive or (mostly) causal questions
- Answering questions based on objective data analysis vs. normative statements
- Don't tell your hairdresser if you are a political scientist!

How Censorship in China Allows Government Criticism but Silences Collective Expression — Gary King, Jennifer Pan and Margaret E. Roberts

We offer the first large scale, multiple source analysis of the outcome of what may be the most extensive effort to selectively censor human expression ever implemented. To do this, we have devised a system to locate, download, and analyze the content of millions of social media posts originating from nearly 1,400 different social media services all over China before the Chinese government is able to find, evaluate, and censor (i.e., remove from the Internet) the subset they deem objectionable. **Using modern computer-assisted text analytic methods that we adapt to and validate in the Chinese language, we compare the substantive content of posts censored to those not censored over time in each of 85 topic areas.** Contrary to previous understandings, **posts with negative, even vitriolic, criticism of the state, its leaders, and its policies are not more likely to be censored. Instead, we show that the censorship program is aimed at curtailing collective action by silencing comments that represent, reinforce, or spur social mobilization, regardless of content.** Censorship is oriented toward attempting to forestall collective activities that are occurring now or may occur in the future—and, as such, seem to clearly expose government intent.

Ethnicity, Insurgency, and Civil War — James Fearon and David Laitin — American Political Science Review

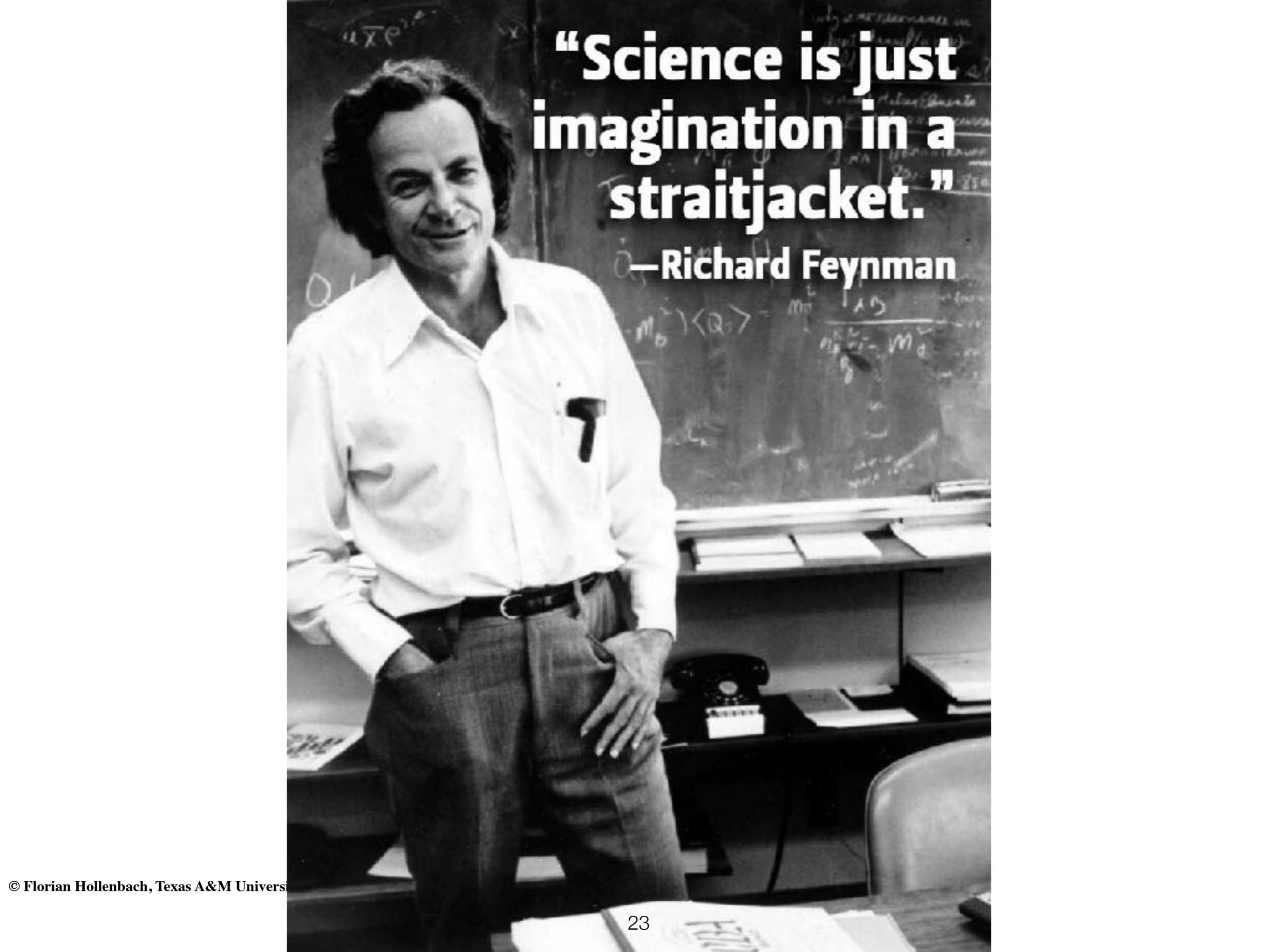
An influential conventional wisdom holds that civil wars proliferated rapidly with the end of the Cold War and that the root cause of many or most of these has been ethnic and religious antagonisms. We show that the current prevalence of internal war is mainly the result of a steady accumulation of protracted conflicts since the 1950s and 1960s rather than a sudden change associated with a new, post-Cold War international system. **We also find that after controlling for per capita income, more ethnically or religiously diverse countries have been no more likely to experience significant civil violence in this period.** We argue for understanding civil war in this period in terms of insurgency or rural guerrilla warfare, a particular form of military practice that can be harnessed to diverse political agendas. **The factors that explain which countries have been at risk for civil war are not their ethnic or religious characteristics but rather the conditions that favor insurgency. These include poverty—which marks financially and bureaucratically weak states and also favors rebel recruitment—political instability, rough terrain, and large populations.**

Questions

- Should be interesting
- Politics?
- We need variation in the outcome
- Can we possibly answer it?

Review from Wednesday

- What are normative questions?
- What are descriptive questions?
- What are causal questions?

A black and white photograph of Richard Feynman standing in a classroom. He is wearing a white button-down shirt and dark trousers, with his hands in his pockets. Behind him is a chalkboard filled with mathematical equations and diagrams. The quote is overlaid on the right side of the image.

**“Science is just
imagination in a
straitjacket.”**

—Richard Feynman

scientific process (the strict view)

1. Come of with interesting questions (need variation)
2. Develop (causal) theoretical argument
3. Derive testable hypothesis
4. Collection of Data
5. Test of hypothesis
6. Evaluation of theory

Feynman on the scientific method:
<https://youtu.be/OL6-x0modwY>

More fun way of thinking about science:

- Observe puzzle - science is really about feeding our hunger for knowledge/explanation
- Humans (and animals) are naturally curious about how things work



“Science is not a bunch of facts. Scientists are not people trying to be prescriptive or authoritative. Science is simply the word we use to describe a method of organising our **curiosity**” (Tim Minchin - Australian comedian, actor, writer, musician and director)

Puzzles + Ideas

- Once we have identified a puzzle, we want to think about an **explanation**
- Why does rubbing two sticks together very fast produce fire?
- This is where **creativity** comes into play
- Develop a model (idea, speculation), for why x (rubbing sticks together) causes y (fire)

Feynman on guessing in science/as scientists:

<https://www.youtube.com/watch?v=-2NnquxdWFk&t=37m21s>

Models/Theories of Explanation

- Models or theories are just attempts at explaining the puzzle or observed phenomenon
- Causal arguments that explain the world around us

Example 1

- Why do people vote?
- $EU = p^*B - C \rightarrow$ almost certainly: $EU < 0$
- Or $EU = p^*B - C + D$

Example 2

- David Mayhew (1974). Congress: The electoral connection
- Members of Congress are single-minded seekers of reelections

- Theories/Models have to be clear and precise
- Should invoke precise concepts that are measurable
- Some concepts are easier to measure than others, e.g. income vs. democracy

How should we measure democracy

- Groups of 4
- Define what the concept of democracy means
- How would you measure that concept?

Testable Implications

- Once we have a theory/model, think about testable implications of the argument
- What are things we should observe if the model is correct?

Example Mayhew

- David Mayhew (1974). Congress: The electoral connection
- Members of Congress are single-minded seekers of reelections
- Implications: members of congress should devote majority of time to 3 activities: *Advertising, credit claiming, position taking*

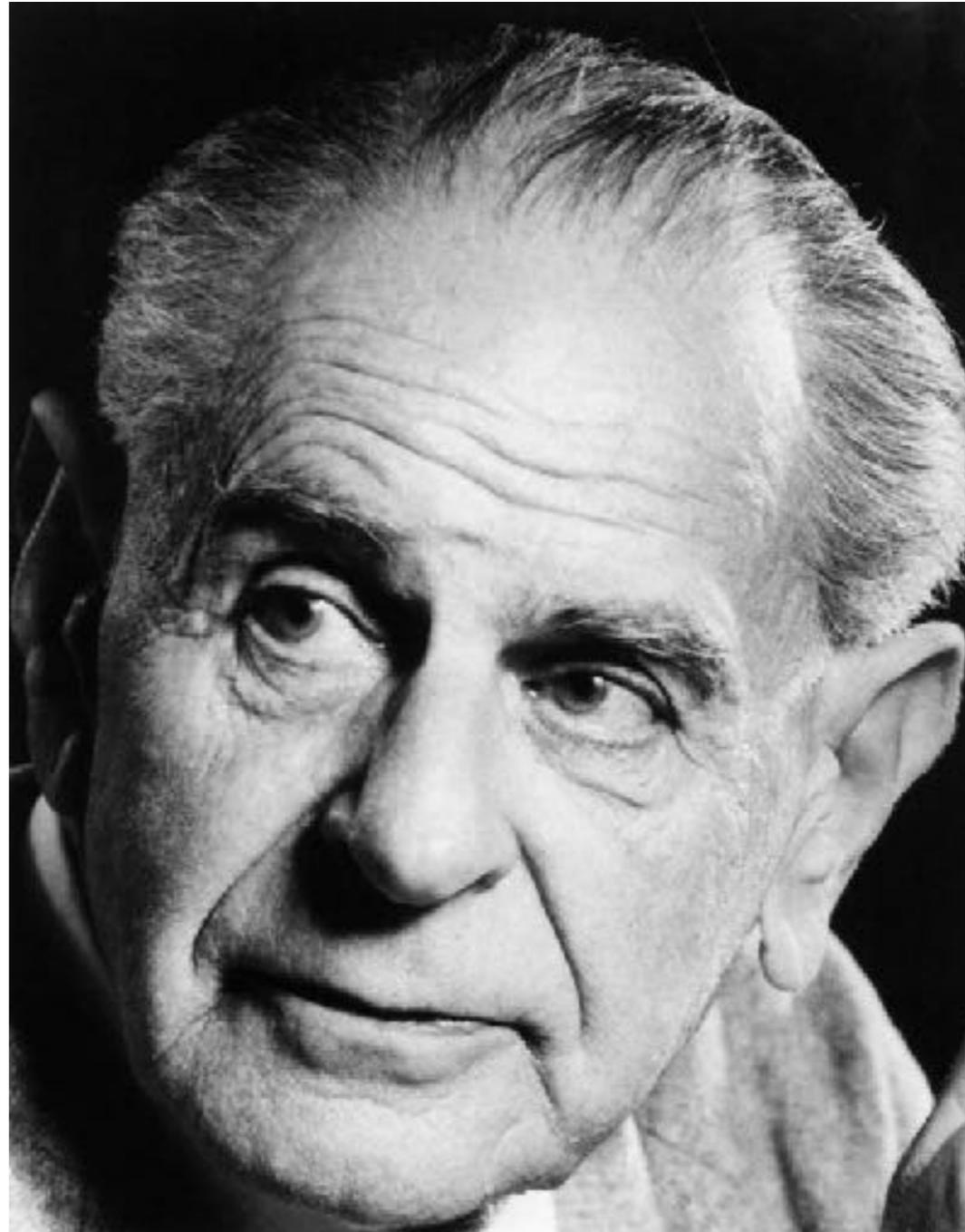
- Once we have implications, we use data to see whether the implications represented in the data
- Is there evidence that our model is correct?
- We like implications that would be true if our model is correct, but not if other models are the correct ones
- Need implications that let us discriminate between theories

Data Analysis

- What is the most rigorous test we can conduct?
- Can never prove a theory to be true!

Karl Popper

(28 July 1902 – 17 September 1994)



How do we make scientific process?

- Continuously building on work that comes before us -- theories and accepted assumptions
- Incremental progress
- Paradigms and paradigm shifts (maybe not yet in political science)