Seminar in Political Behavior

W3: Introduction, Dissecting Articles, and Reading Regression Tables

Max Y. Chen

National Taiwan University

Plan for Today

Introduction

- A little bit embarassing part.
  - Your name?
  - Your year?
  - Why are you here?
  - A fun fact about you?

- The seminar will work based on this structure:
  - Introduce you some basic knowledge (median voter theorem, representation, etc.).
  - Go through two articles.
    - I will explain it later.

The content for next two sections is significantly based on Prof. Jonathan Homola's slides in POL SCI 191D (Spring 2025) in UCLA.

Dissecting Articles

Reading journal articles can be challenging....

- But there are some tricks to make it easy (and maybe enjoyable?)
- Most of them have a common structure.
    - Especially for those articles using quantitative methods!

- Abstract
    - Gives you a very brief sense of the article
- Introduction
    - A slightly more detailed overview of the article
    - Clearly state a specific research question
    - A preview of the remaining parts
- Literature review / theory / argument / hypotheses / expectations
    - Summarizing previous works on the topic
    - Formulate theory/theoretical arguments and hypotheses/expectations based on these works

- Data & method
  - Telling you the specific details of the data and method used in the article
    - Data: Observational/Experimental data
    - Method: Basic regression/causal inference/experimental methods/text-as-data/image-as-data/...
- Result
  - Present the result of empirical analysis
  - Interpret the result
- Conclusion/Discussion
  - A recap of the article
  - Discuss the limitations and implications
  - Point out questions for future research

- Always read the abstract first:

How Lasting Is Voter Gratitude? An Analysis of the Short- and Long-Term Electoral Returns to Beneficial Policy

Michael M. Bechtel   ETH Zurich
Jens Hainmueller   Massachusetts Institute of Technology

Dominant theories of electoral behavior emphasize that voters myopically evaluate policy performance and that this shortsightedness may obstruct the welfare-improving effect of democratic accountability. However, we know little about how long governments receive electoral credit for beneficial policies. We exploit the massive policy response to a major natural disaster, the 2002 Elbe flooding in Germany, to provide an upper bound for the short- and long-term electoral returns to targeted policy benefits. We estimate that the flood response increased vote shares for the incumbent party by 7 percentage points in affected areas in the 2002 election. Twenty-five percent of this short-term reward carried over to the 2005 election before the gains vanished in the 2009 election. We conclude that, given favorable circumstances, policy makers can generate voter gratitude that persists longer than scholarship has acknowledged so far, and elaborate on the implications for theories of electoral behavior, democratic accountability, and public policy.

Reading Regression Tables

What Are Hypotheses?

- most researches in political science include quantitative analyses.
  - Why?
  - The reason to use quantitative methods is that we try to answer some theoretical-driven questions (with data).
  - Then we turn these theoretical-driven questions into testable hypotheses
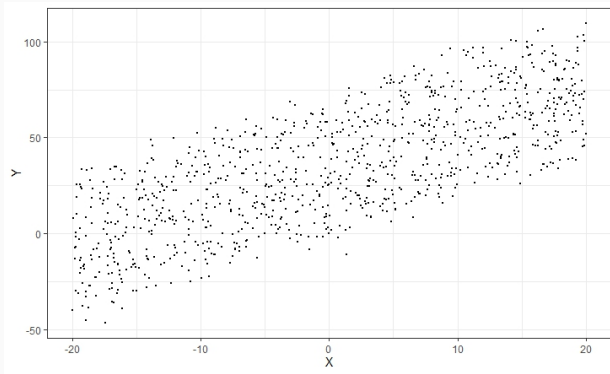 - What are hypotheses?

Hypothesis

An increase in X (independent variable, **cause**) leads to an increase in Y (dependent variable, **effect**).

- Any example?
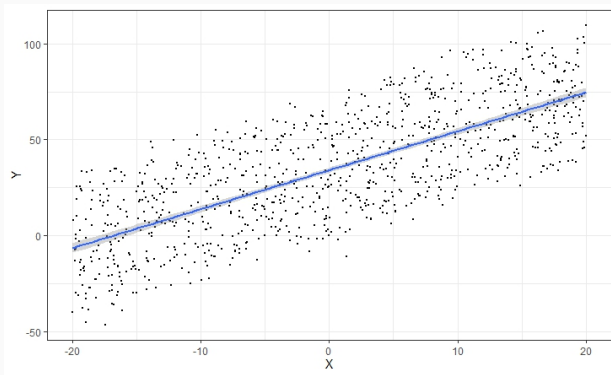- Let's find relationship between variables....

- Seems like there's a relationship between X and Y....

- Yes, there is a relationship.

- But, how strong is this relationship?
  - We use **regression** to answer this question!

Table 1: Regression Result of Our Hypothetical Data

	Dependent variable:
	Y
X	2.029***
	(0.056)
Constant	34.102***
	(0.653)
Observations	1,000
R^2	0.566
Adjusted R^2	0.566
Residual Std. Error	20.644 (df = 998)
F Statistic	1,301.440*** (df = 1; 998)
Note:	*p<0.1; **p<0.05; ***p<0.01

- Two crucial elements:
    - **Coefficient**: The **slope** of the relationship between some independent variable, X, and the dependent variable, Y.
    - **Standard error**: A **measure of uncertainty** and gives us a sense of how sure we are that the regression line we find in our data reflects a more general relationship between X and Y.

TABLE 2. Women's Representation and Pink Tax on Apparel Imports

	(1) No controls	(2) Basic controls	(3) Political variables	(4) Tariff dispersion	(5) Demand & FE	(6) Oil wealth
Log seat share women	-0.013*** (0.005)	-0.044*** (0.012)	-0.048*** (0.012)	-0.048*** (0.013)	-0.047*** (0.014)	-0.043*** (0.012)
GDP growth		-0.00020 (0.001)	-0.00011 (0.001)	-0.00023 (0.001)	0.000054 (0.001)	-0.0002 (0.001)
GDP per capita		3.70*** (0.622)	2.89*** (0.655)	3.80*** (0.629)	4.42*** (0.678)	3.81*** (0.628)
Economic complexity		-0.035*** (0.012)	-0.042*** (0.014)	-0.029** (0.012)	-0.051*** (0.014)	-0.037*** (0.012)
Women's labor participation		-0.0012* (0.001)	-0.00096 (0.001)	-0.0017** (0.001)	-0.0015* (0.001)	-0.001* (0.001)
Presidential system			-0.064*** (0.024)			
Left executive			0.053*** (0.014)			
Proportional representation			-0.005 (0.026)			
Tariff dispersion				-0.005*** (0.001)		
Difference elasticity					0.026 (0.019)	
Oil wealth						-0.004** (0.002)
Constant	0.023** (0.011)	0.12*** (0.047)	0.15*** (0.049)	0.21*** (0.054)	-0.063 (0.115)	0.121*** (0.047)
Product-pair FE	no	no	no	no	yes	no
Number Obs.	103,667	73,954	71,826	66,039	49,358	73,954

Note: Linear regression coefficients with standard errors in parentheses. ***$p < 0.01$, **$p < 0.05$, and *$p < 0.10$, respectively. The SEs are clustered by country-product pair. DV: difference in tariff rates between women's and men's apparel products, inverse hyperbolic sine transformation.

- FYI: the outcome variable is **pink tax**, which refers to the tendency for products marketed specifically toward women to be more expensive than those marketed toward men.
- Explain Model 1
- Explain Model 3

Practice 2: Pérez and Tavits (2018)

Table 3. Effect of Genderless Language on Opinions toward Gender Equality, World Values Survey, 1995–2014 (Study 3)

	Women Political Leaders		University for Girls		Women Business Executives		Women Jobs	
	Model 1 (OLS)	Model 2 (OLS)	Model 1 (OLS)	Model 2 (OLS)	Model 1 (OLS)	Model 2 (OLS)	Model 1 (Logit)	Model 2 (Logit)
Genderless language	.204***	.178***	.324***	.263***	.149**	.119**	.611***	.468***
	(.046)	(.057)	(.111)	(.092)	(.057)	(.054)	(.071)	(.093)
Sex		.279***		.233***		.325***		.549***
		(.014)		(.018)		(.022)		(.041)
Age		−.002***		−.002***		−.002***		−.007***
		(.000)		(.001)		(.000)		(.001)
Unemployed		.020*		−.027***		.013		−.077**
		(.011)		(.009)		(.014)		(.035)
Married		−.026***		−.009		−.015		−.154***
		(.008)		(.008)		(.010)		(.031)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education		Yes		Yes		Yes		Yes
Income		Yes		Yes		Yes		Yes
Constant	2.173***	1.973***	2.656***	2.480***	2.506***	2.285***	−.635***	−.873***
	(.041)	(.053)	(.067)	(.082)	(.037)	(.051)	(.080)	(.133)
N	168,903	140,677	172,828	143,680	100,373	84,724	176,939	146,597
N (countries)	90	90	90	90	75	74	90	89
R^2	.004	.041	.005	.040	.001	.049		

Note. Dependent variables are indicated in column headings. Robust country-clustered standard errors in parentheses. OLS = ordinary least squares; FE = fixed effects.
* $p < .1$.
** $p < .05$.
*** $p < .01$.

- Explain Model 1 for *Women Political Leader*
- Explain Model 2 for *Women Business Executives*

When Contact Changes Minds
(LaCour and Green 2014)

LaCour, Michael J., and Donald P. Green. 2014. "When contact changes minds: An experiment on transmission of support for gay equality." *Science* 346: 1366-1369. https://doi.org/science.1256151

- Question: Is it possible to effectively persuade people to change their minds?
  - (Conventional wisdom: VERY difficult!)
- Contact hypothesis (Allport 1954): outgroup hostility diminishes when people from different groups interact with one another.
- The basis of the study:
  - *Contact + Canvassing = Persuasion*(?)
  - How do you think?

Experimental Design

- 7 waves (baseline + 6) of panel survey with two samples of registered voters in Los Angeles.
  - Measuring respondents' attitudes on gay marriage.
- A 2×2 matrix design + pure control.
  - Pure control ($\mathbb{E}[Y_{0,t}]$): No canvassing.
  - 2×2 matrix design

	Gay Marriage Script	Recycling Script
Gay	$\mathbb{E}[Y_{1,t}]$	$\mathbb{E}[Y_{2,t}]$
Straight	$\mathbb{E}[Y_{3,t}]$	$\mathbb{E}[Y_{4,t}]$

- Outcome:
  - $\mathbb{E}[Y_{1,t}] - \mathbb{E}[Y_{0,t}]$ (The one we concern)
  - $\mathbb{E}[Y_{2,t}] - \mathbb{E}[Y_{0,t}]$
  - $\mathbb{E}[Y_{3,t}] - \mathbb{E}[Y_{0,t}]$
  - $\mathbb{E}[Y_{4,t}] - \mathbb{E}[Y_{0,t}]$
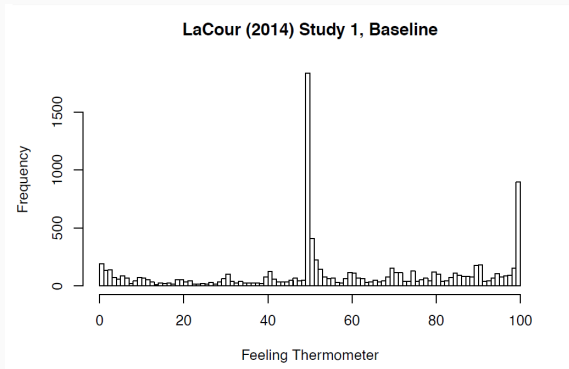
Result: Big and Lasting Effect
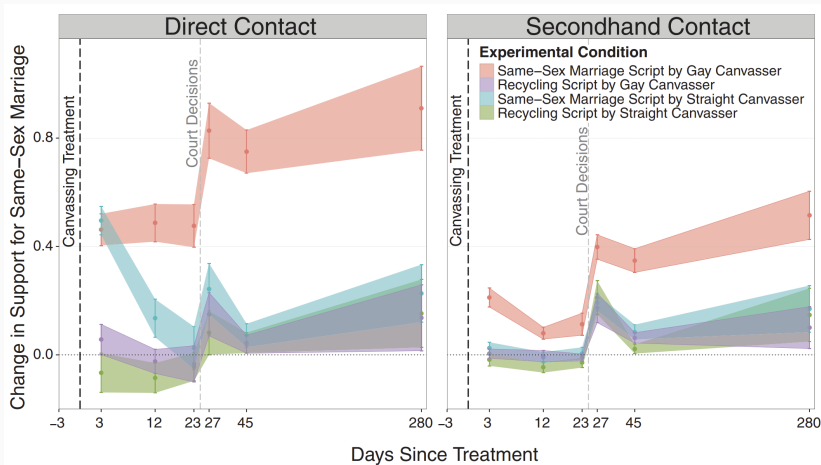
- The result matches their theoretical expectation.
- The article was published on *Science*.
- Contact + Canvassing = Persuasion ✓
- Michael LaCour got a job at Princeton University.

- Broockman, David, Joushua Kalla, and Peter Aronow. 2015. "Irregularities in LaCour(2014)"
  - David Broockman and Joshua Kalla were two graduate students at UC Berkeley back then.
  - They got impressed by the result, and tried to push this research further.
  - They conducted a pilot test first. However, the response rate was far lower than that in LaCour and Green (2014).
  - They enlisted Peter Aronow (Assistant Prof. Yale) to try to match the response rate in LaCour and Green (2014). But what they found were some **statistical irregularities**.
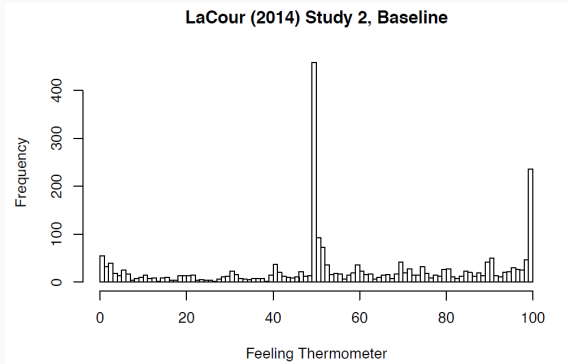
- The distribution of the gay thermometer.

LaCour (2014) Study 1, Baseline

- The distribution of the gay thermometer.

LaCour (2014) Study 2, Baseline
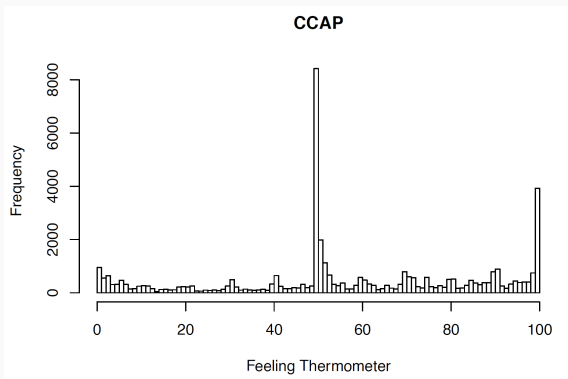
- So far, what are the irregularities?

- A national survey called "CCAP" (Cooperative Campaign Analysis Project) also contains the questions about view on LGBTQ.
  - Actually, the wording of the questions in LaCour and Green (2014) followed this survey.
- Note that there are NAs in CCAP.
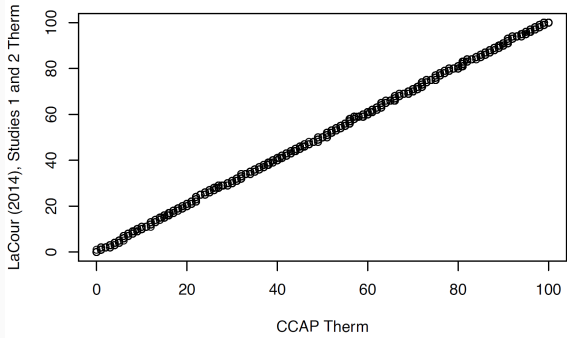 - But, if we recode them as 50....

- The distribution of the gay thermometer in CCAP.

- Looks almost identical as two studies in LaCour and Green (2014).
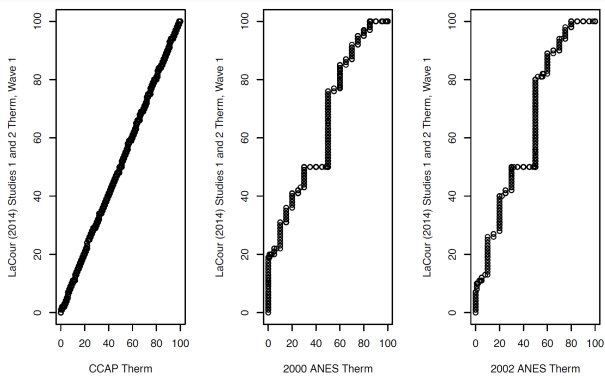
Combine together

- Quantile-quantile plot (QQ plot)
  - It is used to comparing the distributions of two variables.

- Looks weirdly perfect.

- Of course there are other irregularities (For details, see Broockman, Kalla, and Aronow (2015)).
  - But so far, the evidence we had looks suspicious.
- So what's happened?

- Background
  - LaCour met Green at University of Michigan in 2012.
  - LaCour proposed this research design to Green to see a chance of collaboration.
    - Green accepted it.
  - In 2013, LaCour claimed that he had conducted the experiment, and the result looked promising.
    - Green was skeptical about this result, and asked LaCour to conduct another study.
  - After the second round of study, LaCour told Green "the magic happened again."
    - Then they worked on this project together, and next year the article was published.

- Green came to ask Lynn Varveck, LaCour's dissertation advisor, to demand the raw survey data.
- LaCour told Varveck that the data was accidentally deleted.
- Then the UCLA department of political science called Qualtrics.
  - They (Qualtrics) said that they could find no evidence of deletion.
- So what's happened?

- Green requested a retraction of the article.
- LaCour lost his job at Princeton
- No one knows where LaCour goes.
    - Rumor: Some people said he changed his name and left the academics.

- Sometimes data can cheat us.
- Be cautious about others' claims.
- Even the article on top journals can have problems.
    - But most of the time they are still better sources than Wikipedia, ChatGPT, etc.

Tips for Next Time

Tips for Next Time

- Ezrow, Lawrence, Jonathan Homola, and Margit Tavits. 2014. "When Extremism Pays: Policy Positions, Voter Certainty, and Party Support in Postcommunist Europe." *The Journal of Politics* 76(2): 535-547
  - A relatively easy one. The method used for this article is just basic OLS regression.
  - But be aware of how the authors measure the variables!
- Abou-Chadi, Tarik, and Werner Krause. 2020. "The causal effect of radical right success on mainstream parties' policy positions: A regression discontinuity approach." *British Journal of Political Science* 50: 829-847.
  - A challenging one. Focus more on the literature and theory parts.
  - On the RDD (Regression Discontinuity Design) part, try to figure out the **intuition** of RDD. No need for understanding the details.
    - If you want to have a more comprehensive idea about RDD, Ch. 6 of the book *Causal Inference: The Mixtape* will be beneficial. Check "Some Helpful Resources" part in the full reading material list.

Thanks for Today!

- I need your feedback!