

# ELECTIONS AND ELECTORAL SYSTEMS

*Comparative Politics*

Guillermo Toral

IE University

# This is our last topic before the midterm

1. Introductions
- 2-3. Approach and method of comparative politics
- 4-5. The nature, formation, and development of states
- 6-7. Authoritarianism
- 8-9. Democracy
- 10-11. Parliamentarism and presidentialism
- 12-13. **Elections and electoral systems (today)**

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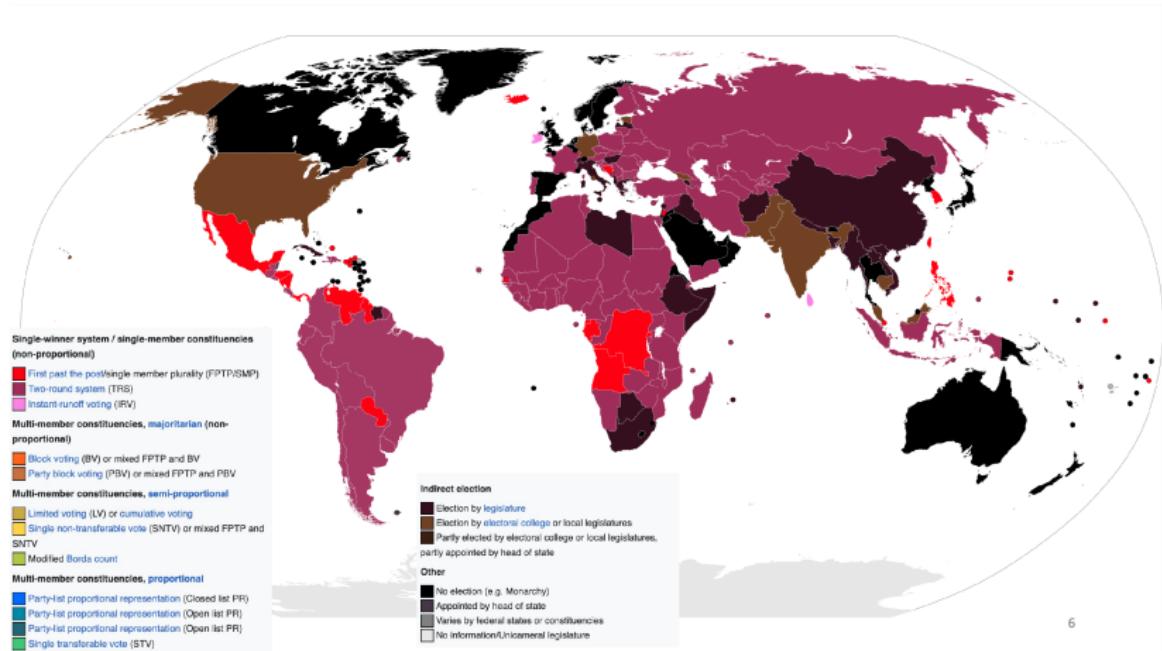
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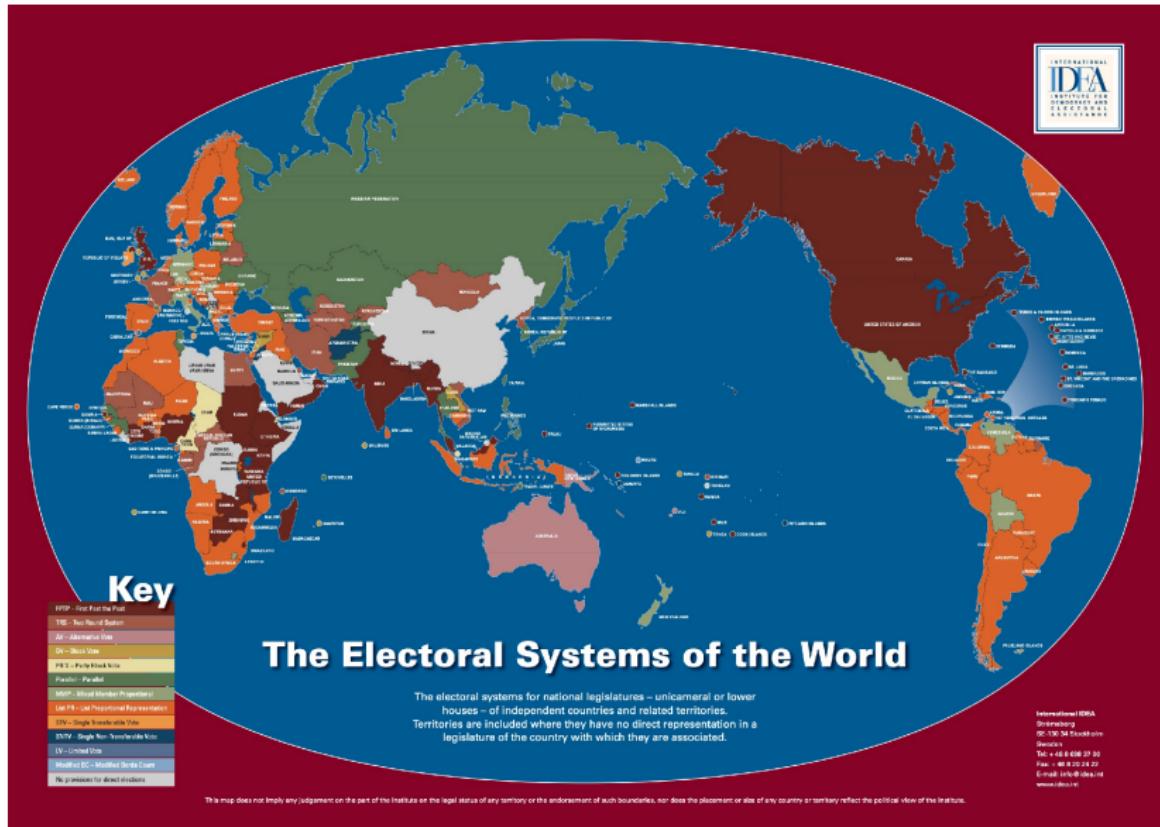
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  - **Different electoral systems produce systematically different outcomes** for who is in office, how governments work, and what kind of accountability we obtain
  - Accordingly, we often see **political battles around the design of electoral systems**

# Electoral system for heads of state



6

# Electoral system for national legislators



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- Evaluating electoral systems

# Electoral systems: Key levers and how they matter

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- Electoral systems are best thought of as a **combined choice from multiple choice sets**, or along different dimensions

# Key dimensions of variation in electoral systems

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- Some legislative offices are not even elected, rather they are **designated** – e.g. members of the upper house in Germany, and some members of the upper house in Spain

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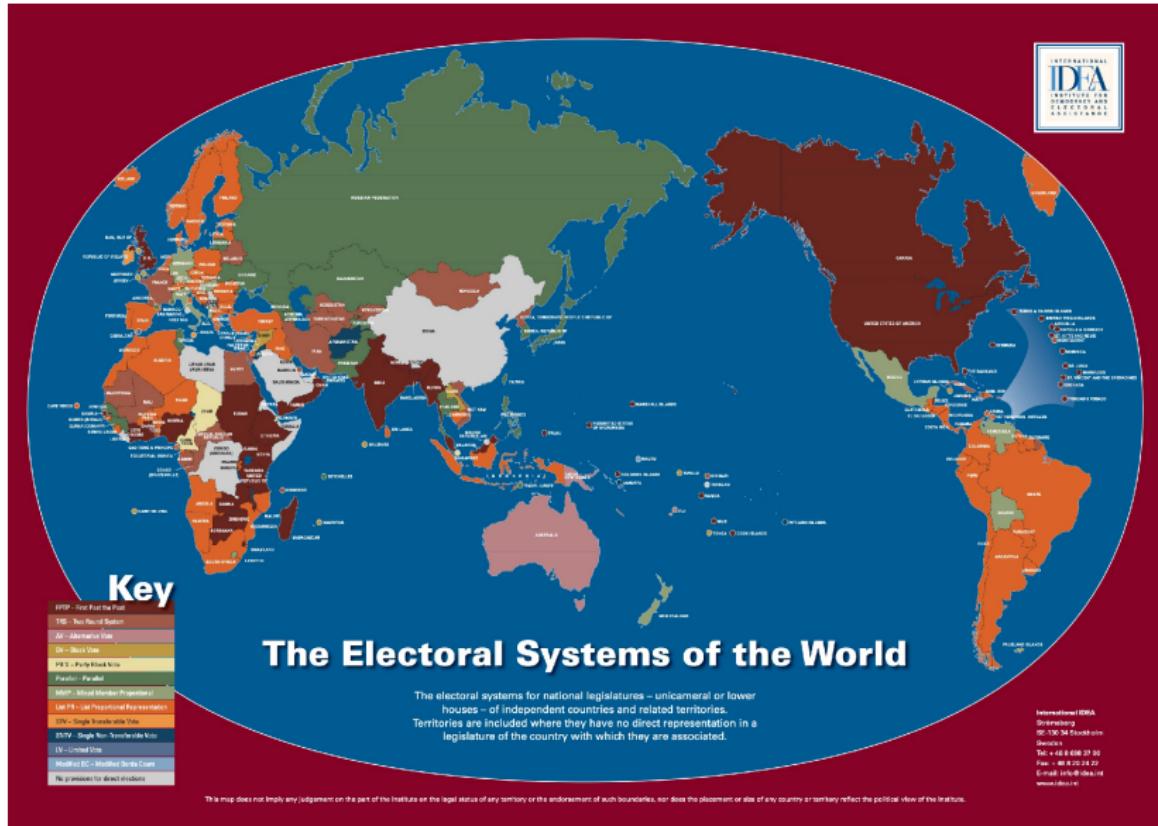
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- **Mixed systems** combine majority and PR principles

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# PR quota systems: Example with Hare quota

First distribution of seats based on quotas

	Party A	Party B	Party C	Party D	Party E	Party F	Total
Votes	47,000	16,000	15,800	12,000	6,100	3,100	100,000
Seats							10
Quota							10,000
Votes ÷ Quota	4.7	1.6	1.58	1.2	0.61	0.31	
Automatic seats	4	1	1	1	0	0	7
Remainder seats							3

# PR quota systems: Example with Hare quota

Second distribution of seats based on remainders

	Party A	Party B	Party C	Party D	Party E	Party F	Total
Votes	47,000	16,000	15,800	12,000	6,100	3,100	100,000
Seats							10
Quota							10,000
Votes ÷ Quota	4.7	1.6	1.58	1.2	0.61	0.31	
Automatic seats	4	1	1	1	0	0	7
Remainder	0.7	0.6	0.58	0.2	0.61	0.31	
Remainder seats	1	1	0	0	1	0	3
Total seats	5	2	1	1	1	0	10

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  - Sainte-Lagüe: 1, 3, 5, 7, 9, ...
  - Imperiali: 1, 1.5, 2, 2.5, 3, ... (strongly favors large parties)

## PR quota systems: Example with D'Hondt divisor

	Party A	Party B	Party C	Party D	Party E	Party F	Total
Votes	47,000	16,000	15,800	12,000	6,100	3,100	100,000
Seats							10
Votes ÷ 1	47,000 (1)	16,000 (3)	15,800 (4)	12,000 (6)	6,100	3,100	
Votes ÷ 2	23,500 (2)	8,000 (9)	7,900 (10)	6,000	3,050	1,550	
Votes ÷ 3	15,666 (5)	5,333	5,266	4,000	2,033	1,033	
Votes ÷ 4	11,750 (7)	4,000	3,950	3,000	1,525	775	
Votes ÷ 5	9,400 (8)	3,200	3,160	2,400	1,220	620	
Votes ÷ 6	7,833	2,667	2,633	2,000	1,017	517	
Total seats	5	2	2	1	0	0	10

# Overview of quota and divisor systems

Largest remainders method	Variants	Quota	Countries employing	
Award a seat to each party for every quota in its total of seats; to fill any unfilled seats, reward the largest remainders (see Table 1)	LR-Hare	v/s	Austria (lower), Belgium (lower), Denmark (higher), Germany (higher), Italy (higher)	
	LR-Droop	v/(s+1)	Greece (lower)	
	LR-Imperiali	v/(s+2)	Italy (lower)	
Highest averages method	Variants	nth divisor	Sequence (first/five divisors)	Countries employing
Award seats sequentially to the parties according to the 'average' each presents for the next seat. Each party's vote total is divided by the $n$ th divisor from a prescribed sequence, where $(n - 1)$ is the number of seats it has already won (see Table 2)	Imperiali d'Hondt	(n + 1)/2 n	1, 1.5, 2, 2.5, 3 1, 2, 3, 4, 5	Belgium (municipal elections) Austria (higher), Belgium (higher), Finland, France (1986), Iceland (higher), Israel, Luxembourg, Netherlands, Portugal, Spain, Switzerland
	Modified Sainte-Laguë	(10n - 5)/7*	1, 2.14, 3.57, 5, 6.43	Denmark (lower), Norway, Sweden
	Sainte-Laguë	2n - 1	1, 3, 5, 7, 9	Denmark (higher from 1945 to 1953)
	Equal proportions	$\sqrt{n(n - 1)}$	0, 1.41, 2.45, 3.46, 4.47	USA (for allocating Representatives to states)
	Danish	3n - 2	1, 4, 7, 10, 13	Denmark (for awarding seats within parties)
	Adams	n - 1	0, 1, 2, 3, 4	—
Single transferable vote method			Countries employing	
Candidates with Droop quota are elected. Unfilled seats are filled by transferring surplus votes from elected candidates and by transferring votes from low-placed candidates			Ireland, Malta	

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- District magnitude is the **more direct lever to make PR systems more or less proportional**

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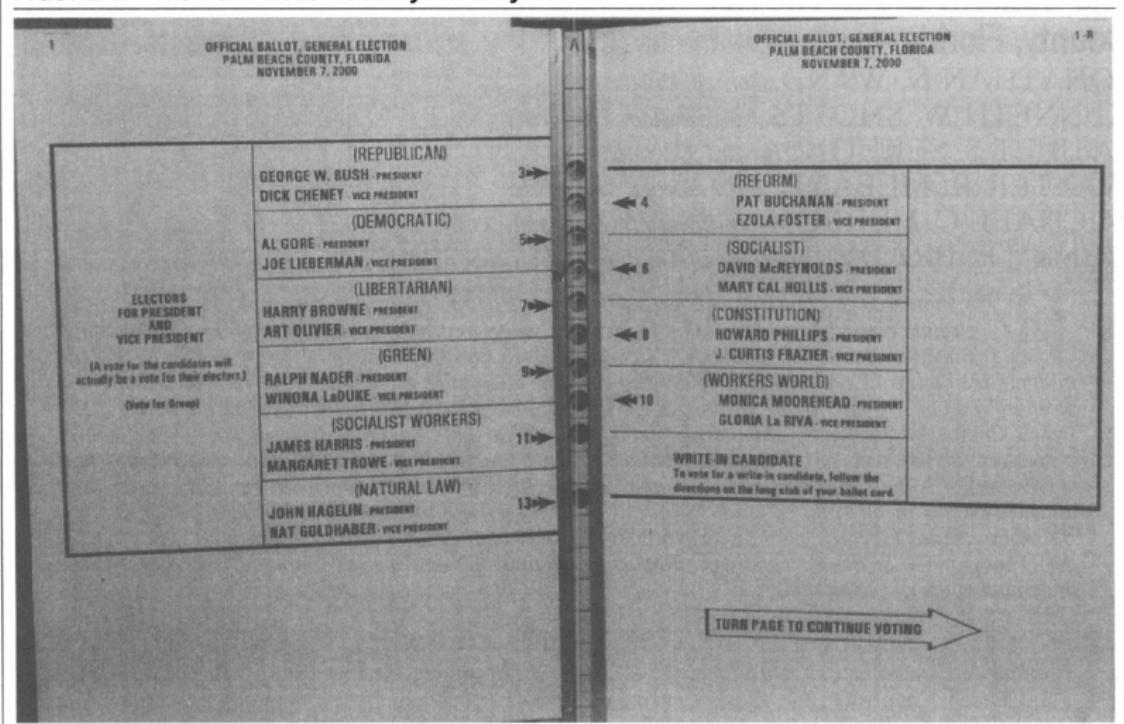
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- Ordinal ballots allow voters to rank their choices
  - Can be cognitively cumbersome for voters
  - May take significantly longer to count

# Infamous case of confusing ballot: 2000 Butterfly ballot in Palm Beach, FL

FIGURE 1. The Palm Beach County Butterfly Ballot



Source: AP Worldwide Photos, Gary I. Rothstein. Reprinted with permission.

# Infamous case of confusing ballot: 2000 Butterfly ballot in Palm Beach, FL

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## The Butterfly Did It: The Aberrant Vote for Buchanan in Palm Beach County, Florida

JONATHAN N. WAND *Cornell University*

KENNETH W. SHOTTS *Northwestern University*

JASJEET S. SEKHON *Harvard University*

WALTER R. MEBANE, JR. *Cornell University*

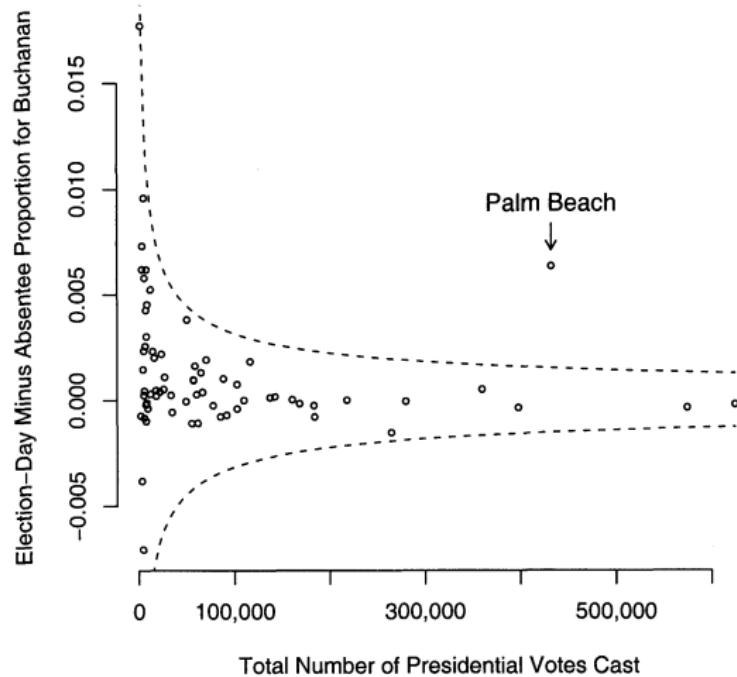
MICHAEL C. HERRON *Northwestern University*

HENRY E. BRADY *University of California, Berkeley*

*We show that the butterfly ballot used in Palm Beach County, Florida, in the 2000 presidential election caused more than 2,000 Democratic voters to vote by mistake for Reform candidate Pat Buchanan, a number larger than George W. Bush's certified margin of victory in Florida. We use multiple methods and several kinds of data to rule out alternative explanations for the votes Buchanan received in Palm Beach County. Among 3,053 U.S. counties where Buchanan was on the ballot, Palm Beach County has the most anomalous excess of votes for him. In Palm Beach County, Buchanan's proportion of the vote on election-day ballots is four times larger than his proportion on absentee (nonbutterfly) ballots, but Buchanan's proportion does not differ significantly between election-day and absentee ballots in any other Florida county. Unlike other Reform candidates in Palm Beach County, Buchanan tended to receive election-day votes in Democratic precincts and from individuals who voted for the Democratic U.S. Senate candidate. Robust estimation of overdispersed binomial regression models underpins much of the analysis.*

# Infamous case of confusing ballot: 2000 Butterfly ballot in Palm Beach, FL

FIGURE 3. Election-Day 2000 Minus Absentee Ballot Support for Buchanan in Florida Counties



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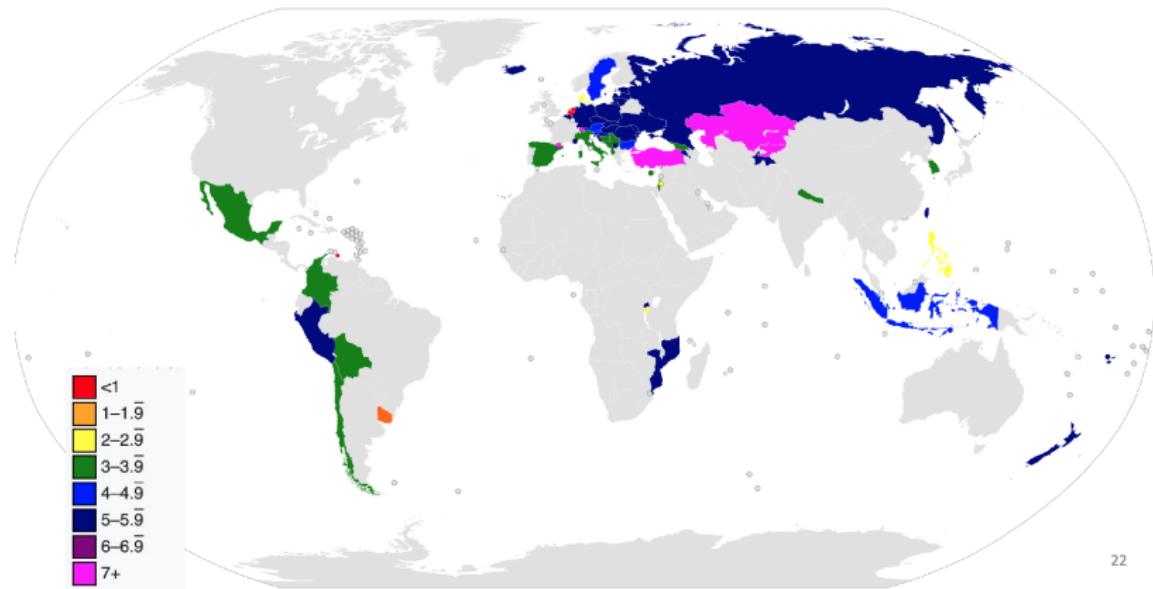
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  - Limits the fragmentation of parliament and the party system

## Electoral threshold

- Electoral threshold refers to the **minimum performance a party needs to reach in order to participate in the distribution of seats**
- Key distinction: natural vs explicit electoral thresholds.
- A **natural threshold** applies when no explicit threshold applies, and equals 1 divided by the number of seats to be distributed
- Many countries establish higher explicit electoral thresholds
- **Explicit thresholds** constrain the representation of smaller political parties
  - This constrains the diversity of views represented in the legislature
  - Limits the fragmentation of parliament and the party system
  - In that way, explicit thresholds contribute to making government formation easier and coalition politics less complicated

# Electoral threshold: Variation for national legislative elections



22

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- Free party lists allow voters to choose candidates from different parties

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- **Citizens who do not reside in the country** are sometimes excluded from the franchise
- Countries also vary on whether they use **compulsory voting** or not, with wide variation in how they implement that

# Franchise reforms along lines of class and gender

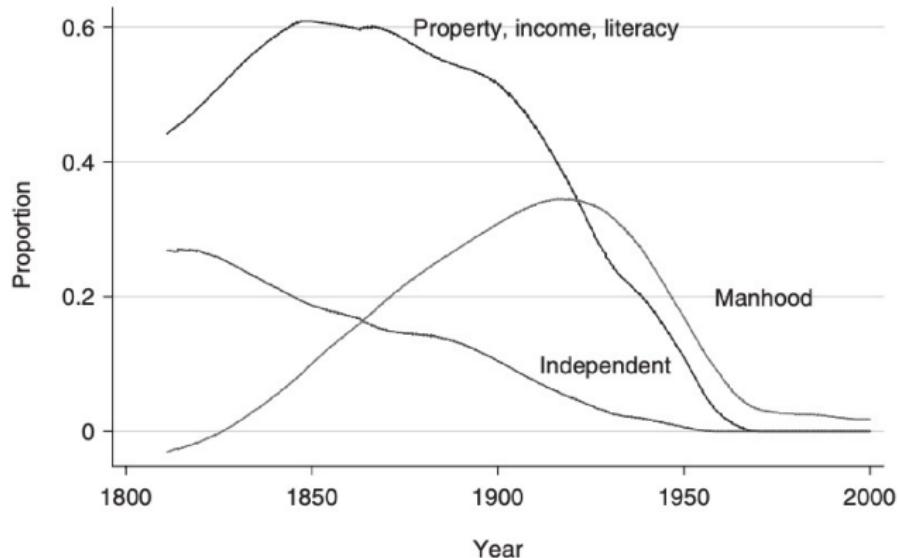


Fig. 2. Proportion of countries with different forms of male suffrage, 1810–2000

Note: Lowess smooth. The base is countries with any kind of suffrage, so the complement is women's suffrage.

# What explains franchise extensions along the lines of class? And gender?

From a study on **suffrage extensions** (which you can download at [www.guillermotoral.com/cp/przeworski.pdf](http://www.guillermotoral.com/cp/przeworski.pdf))

TABLE 2 *Effect on the Probability of Particular Types of Extensions (Marginal Effects, Probit Estimates)*

	Any	Class	Gender	Both
<i>unrest</i>	0.0060*** (0.0011; 60)	0.0057** (0.0014; 15)	0.0038 (0.0019; 39)	
<i>milper</i>	-1.1297 (0.6919; 175)	-0.2022 (0.5629; 49)	-0.4138 (0.3933; 45)	-1.5009 (0.8011; 26)
<i>urban</i>	0.0044** (0.0019; 166)	0.0005 (0.0025; 85)	0.0045*** (0.0010; 47)	0.0049* (0.0028; 42)
<i>infmor</i>	0.0040*** (0.0009; 91)	0.0023*** (0.0006; 35)	-0.0024*** (0.0006; 35)	-0.0094*** (0.0027; 21)
<i>farms</i>	0.0068*** (0.0024; 140)	0.0029 (0.0024; 61)	0.0039*** (0.0010; 49)	0.0058*** (0.0010; 49)
<i>gdpcap</i>	-0.0010 (0.0014; 159)	0.0053*** (0.0026; 58)	0.0003 (0.0010; 56)	0.0018 (0.0050; 45)
Condition	Franchise lag < 72	First digit lag < 7	Second digit lag < 2	First digit lag < 7 and second digit lag < 2

Note: The first number in parentheses is the country-clustered standard error of the estimate, while the second number is the count of extensions of a given type in the particular subset of data. Empty cell indicates insufficient number of observations.

## Exercise: Simulating election results under different electoral systems

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- **Form and declare your groups on Blackboard, and I will assign one electoral system to each group**

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- Submit the table with your results and answers as a CSV file** on Blackboard (no links)

# Working file and system choices

Party	Votes	Percent of total votes	Seats allocated	Votes "paid" per seat	% of total seats obtained				
Party A	47000	0.3615							
Party B	16000	0.1231							
Party C	15000	0.1154							
Party D	14200	0.1092							
Party E	12000	0.0923							
Party F	6100	0.0469							
Party G	5900	0.0454							
Party H	5400	0.0415							
Party I	3100	0.0238							
Party J	2500	0.0192							
Party K	1100	0.0085							
Party L	900	0.0069							
Party M	800	0.0062							
Total votes	130000	1.0000							
MARK YOUR SYSTEM -->	SYSTEM A	SYSTEM B	SYSTEM C	SYSTEM D	SYSTEM E	SYSTEM F	SYSTEM G	SYSTEM H	
District magnitude	10	100	100	10	30	30	30	100	
Threshold	Natural	Natural	3%	Natural	Natural	10%	Natural	Natural	
Quota or divisor?	Quota	Quota	Quota	Divisor	Divisor	Divisor	Divisor	Divisor	
Quota or divisor system	Hare	Hare	Imperiali	d'Hondt	d'Hondt	d'Hondt	Imperiali	Imperiali	

Questions to answer about the results from your electoral system:

1. Which parties gain representation, and which ones are left out of the legislature?
2. How many parties would party A need to include to form a minimum winning coalition?
3. What alternative coalitions would be feasible, if any?
4. What else would you want to know to predict what coalition will form?
5. How would you reform this electoral system, if you had the chance, and why?

## Evaluating electoral systems: Which one's better?

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- More vs less **fragmentation of party systems and legislatures** – with its potential correlates on **cabinet stability**

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- **Representation of women and minorities**

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- But we can make progress using research designs that approximate an experiment, aka “natural experiments” or **quasi-experiments**
- These differ but they all have in common one thing – focus on one part of naturally occurring variation where we can **rule out confounders**

# Most common quasi-experimental designs

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# Learning about the consequences of electoral systems: Quasi-experimental design and evidence on Spain

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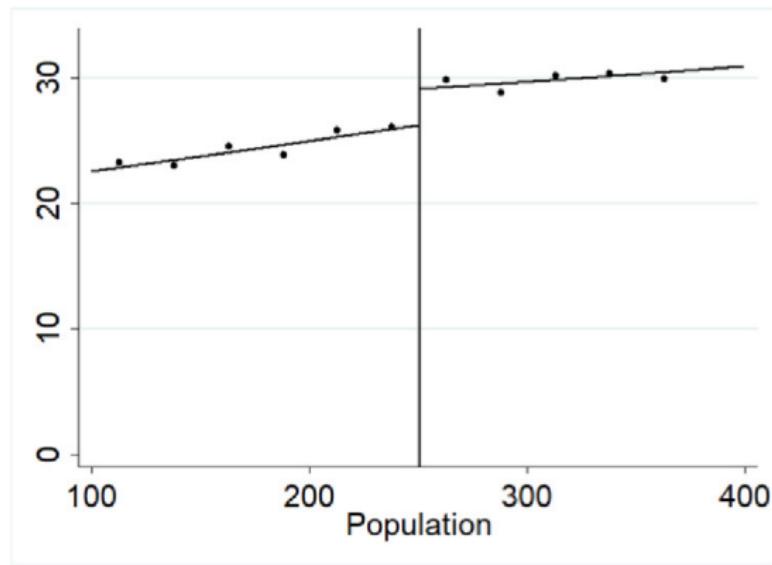
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  - The number of city councilors to elect is 5 in municipalities with up to 250 residents, and 7 in those with 251-1000 residents
- By comparing what happens in municipalities right above and below the population threshold at 250, we can learn about the effect of closed lists on outcomes of interest

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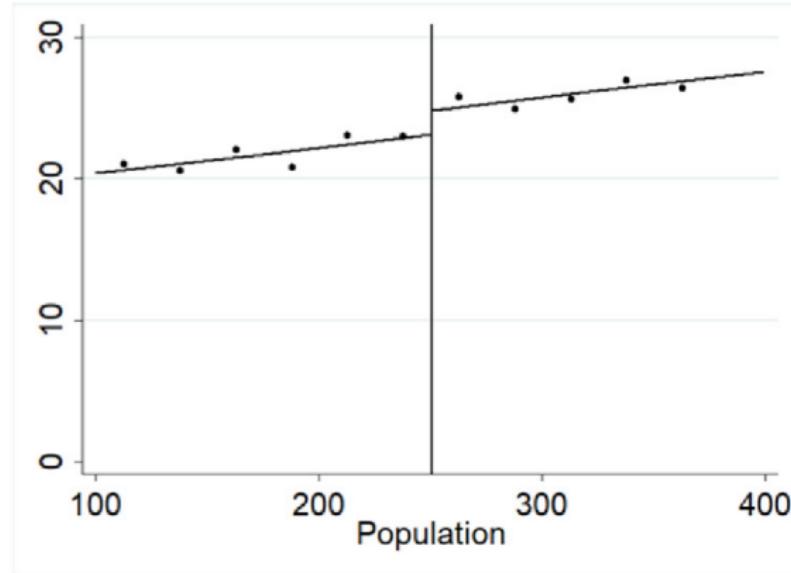
From a study on **effects on the representation of women** (which you can download at [www.guillermotoral.com/cp/gonzalez.pdf](http://www.guillermotoral.com/cp/gonzalez.pdf))



(a) Percent of female candidates

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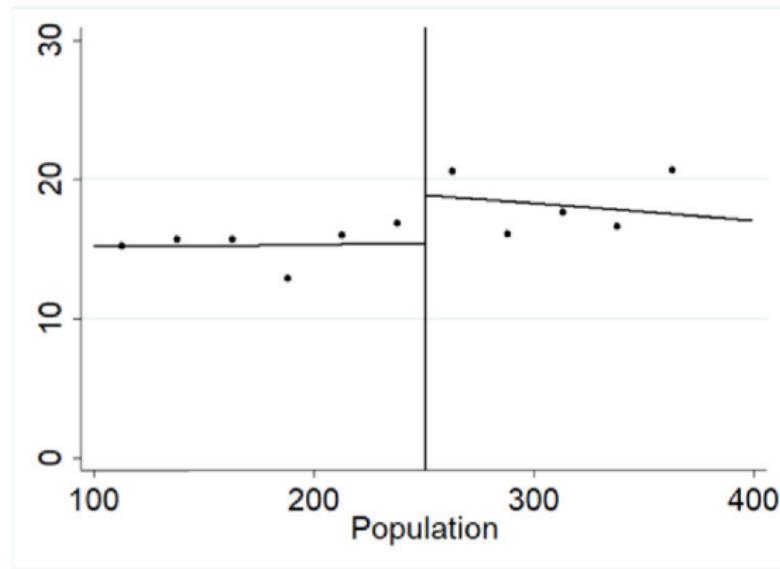
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(b) Percent of female councilors

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(c) Percent of female mayors

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**Table 3**  
Effect on the Percent of Female Candidates, Councilors, and Mayors.

Panel A: Percent of Female Candidates						
	(1)	(2)	(3)	(4)	(5)	(6)
CL	4.056*** (1.192)	5.532*** (2.064)	2.787*** (0.456)	3.140*** (0.677)	4.699*** (1.593)	4.652*** (1.519)
Constant	25.78					p-v = 0.000
Observations	1674	3461	11617	11617	1674	2490
Bw Size	23	49	150	150	23	36
Bw Method	CCT	CCT	All	All	CCT	CCT
Polynomial	1	2	1	2	1	1
Kernel	Uniform	Uniform	Uniform	Uniform	Uniform	Triangular
S.e.	Clustered	Clustered	Clustered	Clustered	CCT Rob.	Clustered
Panel B: Percent of Female Councilors						
	(1)	(2)	(3)	(4)	(5)	(6)
CL	4.801*** (1.145)	5.917*** (1.682)	1.691* (0.919)	2.241** (0.956)	5.477*** (1.877)	4.660*** (1.771)
Constant	21.34					p-v = 0.008
Observations	1886	3882	11617	11617	1886	2620
Bw Size	26	56	150	150	26	37
Bw Method	CCT	CCT	All	All	CCT	CCT
Polynomial	1	2	1	2	1	1
Kernel	Uniform	Uniform	Uniform	Uniform	Uniform	Triangular
S.e.	Clustered	Clustered	Clustered	Clustered	CCT Rob.	Clustered
Panel C: Percent of Female Mayors						
	(1)	(2)	(3)	(4)	(5)	(6)
CL	7.096*** (2.385)	7.795*** (2.761)	3.389*** (1.263)	3.621* (1.865)	7.684** (3.168)	6.747** (3.146)
Constant	15.72					p-v = 0.048
Observations	2958	4333	11603	11603	2958	3584
Bw Size	43	61	150	150	43	51
Bw Method	CCT	CCT	All	All	CCT	CCT
Polynomial	1	2	1	2	1	1
Kernel	Uniform	Uniform	Uniform	Uniform	Uniform	Triangular
S.e.	Clustered	Clustered	Clustered	Clustered	CCT Rob.	Clustered

Results from estimating  $Outcome_{int} = \alpha + \beta CL_{int} + f(Pop_{int} - 250) + u_{int}$ . Each column reports a separate local polynomial regression estimate with the specified bandwidth, polynomial order, and standard errors. Separate polynomials are fitted on each side of the threshold. The last column shows the results from [Cattaneo et al. \(2015\)](#)'s procedure. Clustered standard errors are clustered by municipality and election period. CCT Rob. standard errors refers to bias-corrected estimates, robust standard errors, as

# Learning about the consequences of electoral systems: Quasi-experimental design and evidence on Spain

Relative to the OL system, **the CL system increases the share of female candidates** by 4.1 percentage points (p.p.), a relative increase of 15.7%. Similarly, the CL system increases the **share of female councilors** by 4.8 p.p. (22.5%) and the **share of female mayors** by 7.1 p.p. (45.1%). (Gonzalez-Eiras and Sanz 2021, 2)

# Learning about the consequences of electoral systems: Quasi-experimental design and evidence on Spain

From a study on **effects on overall turnout** (which you can download at [www.guillermotoral.com/cp/sanz.pdf](http://www.guillermotoral.com/cp/sanz.pdf))

TABLE 3 *Effect of Ballot Structure on Voter Turnout: Open Versus Closed Lists*

	(1)	(2)	(3)	(4)	(5)	(6)
	Turnout	Turnout	Turnout	Turnout	Turnout	Turnout
OL	1.031*** (0.381)	1.237*** (0.395)	1.156*** (0.407)	1.547*** (0.431)	1.844*** (0.491)	1.308** (0.641)
Observations	15,954	13,556	11,226	8798	6404	3976
Municipalities	2826	2597	2343	2079	1803	1512
Bandwidth	IK	0.85 × IK	0.70 × IK	0.55 × IK	0.40 × IK	0.25 × IK

Note: standard errors clustered by municipality in parentheses. All regressions include municipality and year fixed effects. IK refers to the minimum of Imbens and Kalyanaraman's (2012) bandwidth and 250 inhabitants.

OL = open list system.

\*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

# Learning about the consequences of electoral systems: Quasi-experimental design and evidence on Spain

*I find that the OL system increases voter turnout with respect to the CL system by between 1 and 2 percentage points. [...] I provide evidence that the differences in turnout are at least partially driven by the number of parties that enter competition. A higher number of parties in competition may in turn affect voter turnout by increased aggregate mobilization efforts and by providing voters with a more compelling set of options. I find that the OL system increases by 0.35 the average number of lists in competition. (Sanz 2017, 690)*

# Wrap-up

## Taking stock of what we saw today

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  - Mock (short) exam
- Review the material** and write down any questions / doubts you may have