

Do Citizens Vote Strategically (if They Vote at All)?

Evidence from U.S National Elections

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September 2003

PIER Conference on Political Economics

Evidence

- ◆ Selective abstention:

After going to vote some citizens decide to vote in one election but not in the other. Typically more people vote for President than for Congress.

- ◆ Split-ticket voting:

Often individuals vote for different party's candidates for President and Congress.

Evidence from 1992 Elections

Selective abstention →

P	H	A	V
A		30%	0%
V		7%	63%

Split-ticket voting →

P	H	D	R
D		49%	10%
R		11%	30%

Evidence from 1992 Elections: Selective Abstention

Democrats →

Independents



Republicans ↓

	H	A	V
P			
A		22%	0%
V		8%	70%

	H	A	V
P			
A		22%	0%
V		7%	71%

	H	A	V
P			
A		42%	0%
V		6%	52%

Evidence from 1992 Elections: Split-Ticket Voting

Democrats →

Independents ↘

Republicans ↓

	P	H	D	R
P				
D			82%	10%
R			5%	3%

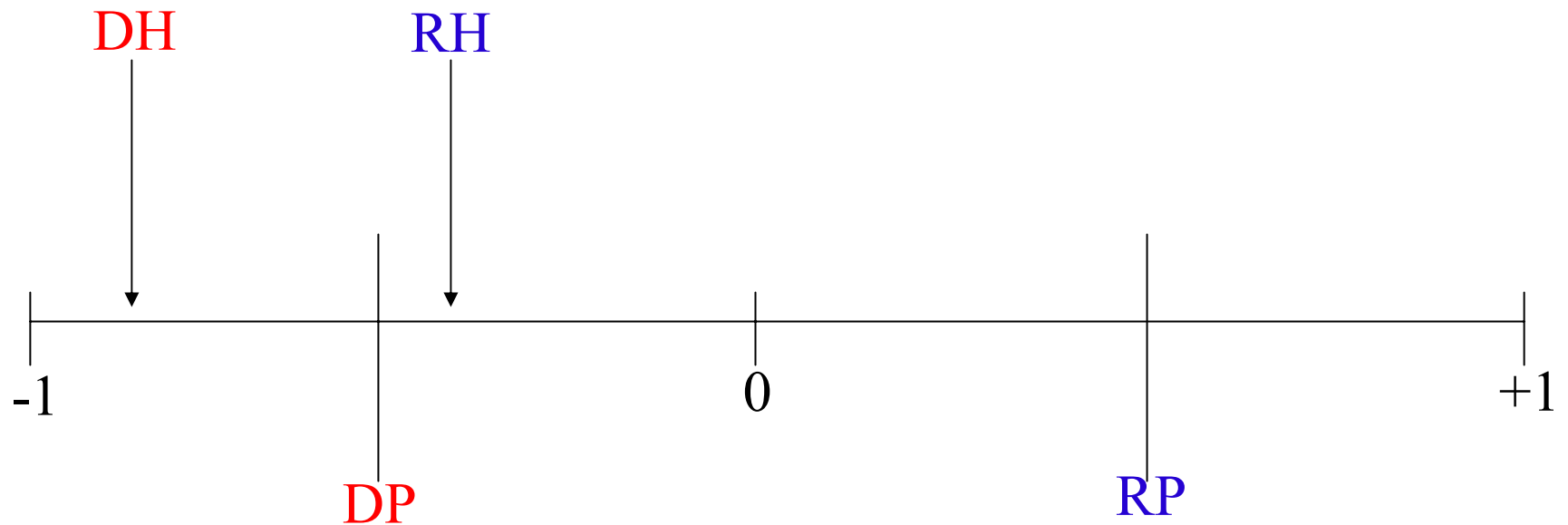
	P	H	D	R
P				
D			6%	4%
R			18%	72%

	P	H	D	R
P				
D			44%	14%
R			14%	28%

Research Questions

- ◆ To what extent is split-ticket voting the natural result of individuals who vote in each election according to their immediate policy preferences?
 - ⇒ What is the proportion of citizens who vote “sincerely” versus “strategically”?
- ◆ Can we simultaneously account for the patterns of abstention and voting observed in the data?

Sincere Split-Ticket Voting



Outline

- ◆ We propose a joint model of abstention and voting with the following key features:
 - spatial component
 - asymmetric information
 - individuals are allowed to vote in disagreement with their immediate policy-related preferences.

Outline (continued)

- ◆ We structurally estimate the model using individual-level data on turnout and voting decisions in presidential and congressional elections from 1972 to 2000
- ◆ The empirical analysis yields estimates of:
 - distribution of citizens' policy preferences
 - distribution of information among citizens
 - proportion of “sincere” and “strategic” citizens

Outline (continued)

- ◆ We investigate changes in information and strategic behavior as well as policy preferences over time
- ◆ We conduct experiments to assess the effects of information and strategic voting on electoral results

The Model: Elections and Candidates

- ◆ There is one period
- ◆ There are two types of elections: P and H
- ◆ In each electoral race there are two candidates: R and D
- ◆ Different electoral districts have different candidates running in H and either a D/R incumbent or two challengers
- ◆ Each candidate $c \in \{R, D\}$ has a policy position $y_c \subseteq [-1, +1]$

The Model: Citizens' (Observed) Heterogeneity

◆ **Electoral district**

Each citizen “j” lives in district $z_j \in \{1, \dots, n\}$

◆ **Party identification**

Each citizen “j” has a party identification $k_j \in \{d, r, i\}$

◆ **Demographic characteristics**

Each citizen “j” has a vector of characteristics X_j

➤ Age, race, gender, education, income

The Model: Citizens' (Unobserved) Heterogeneity

◆ **Policy preferences**

Each citizen “j” has a most preferred policy $y_j(X_j, k_j) \subseteq [-1, +1]$ and her policy-related utility for candidate c is:

$$U(y_c, y_j) = U_c^j = -(y_c - y_j)^2$$

◆ **Information**

Each citizen can either be informed or uninformed about the elections

- Informed π_i
- Uninformed $(1 - \pi_i)$
- $\pi_i(X, k)$

The Model: Citizens' (Unobserved) Heterogeneity

◆ **Types**

Each citizen can either be sincere, “strategic” in P or “strategic” in H

- Sincere $(1 - \pi_s)$
- Strategic in P $\pi_s (1 - \pi_h)$
- Strategic in H $\pi_s \pi_h$
- $\pi_s(y, k), \pi_h(y, k)$

◆ **Tolerance for mistakes**

Each sincere citizen has a tolerance level for making voting mistakes in P and in H: $\theta_P, \theta_H > 0$.

The Model: Information

◆ **Knowledge of uninformed**

P: $D \sim \text{Uniform on } [-1,0]$ & $R \sim \text{Uniform on } [0,+1]$

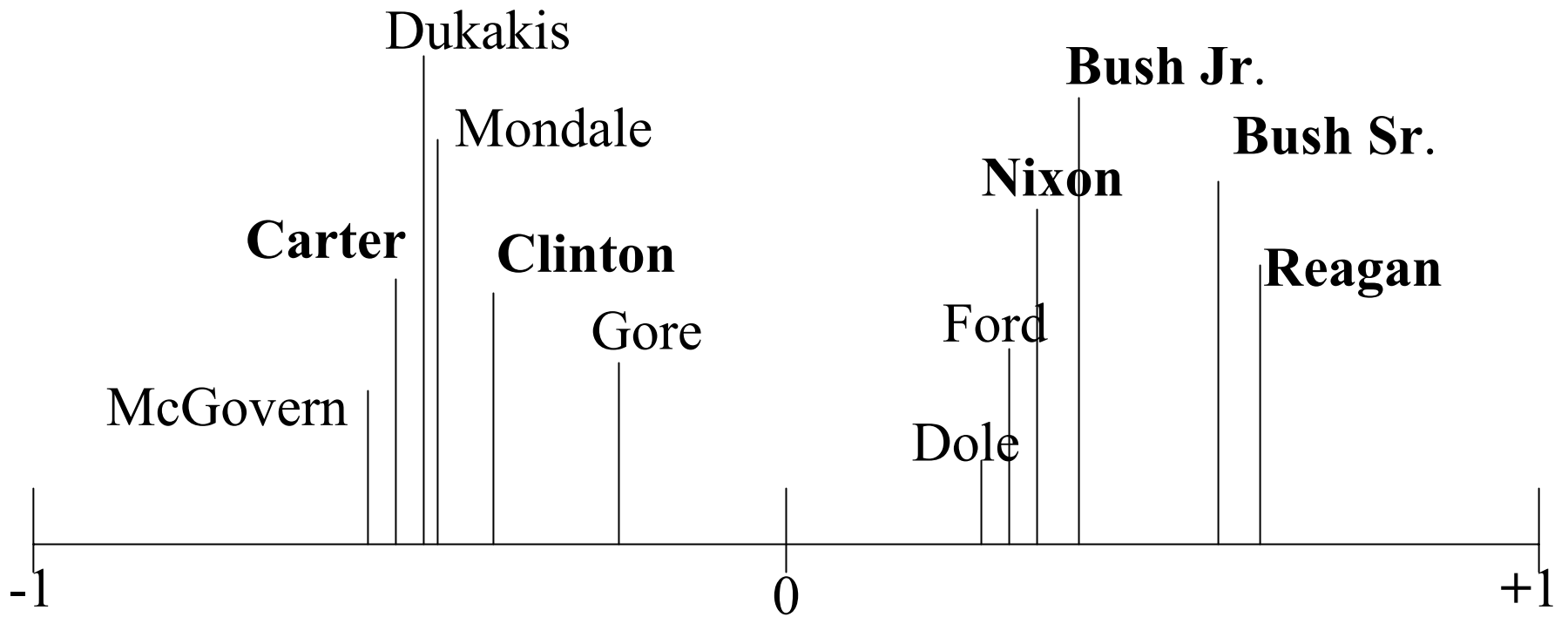
H: $D \ \& \ R \sim \text{Uniform on } [-1,+1]$ $D < R$

◆ **Knowledge of informed**

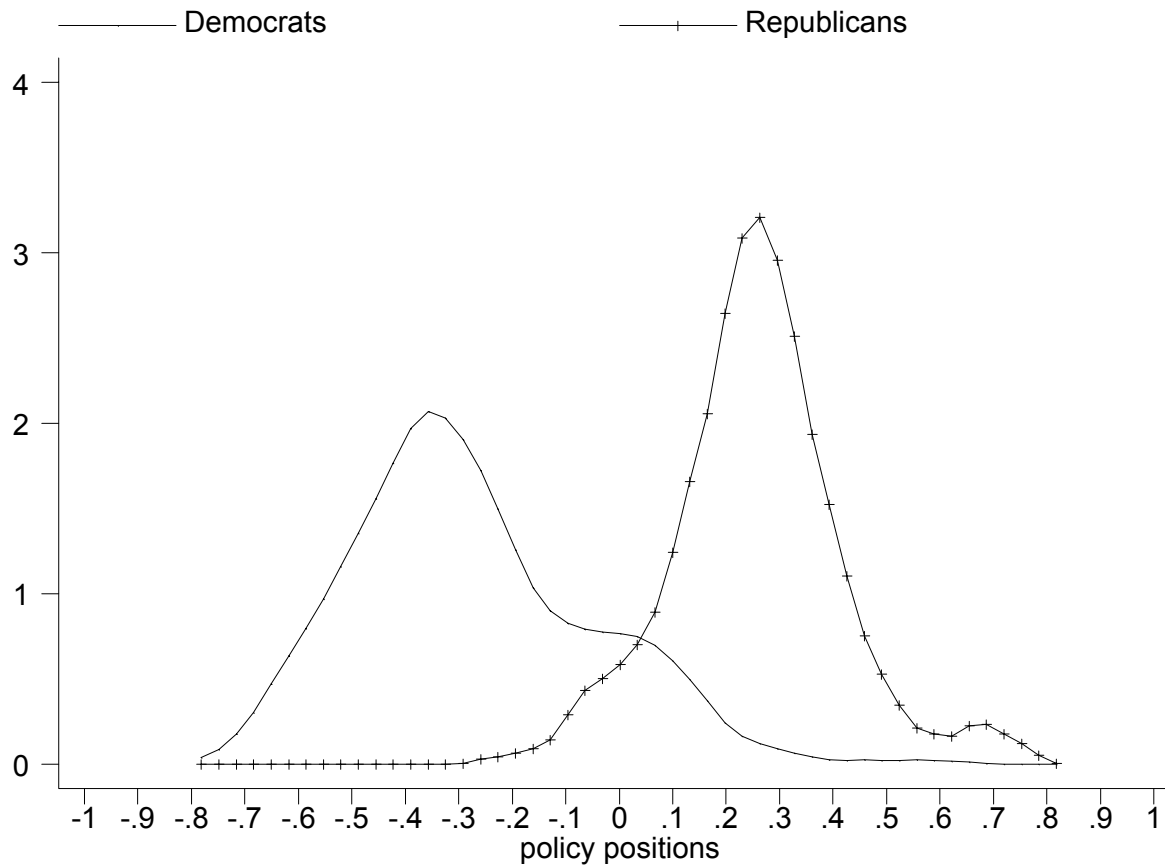
P: Policy positions of both candidates

H: Policy positions of incumbents and distribution of policy positions of challengers

Presidential Elections



House Elections



The Model: Types

- ◆ **Definition 1:** A citizen is *sincere* in an election if conditional on going to vote she votes for the candidate that gives her highest expected policy-related utility
- ◆ **Definition 2:** A citizen is “*strategic*” in an election if conditional on going to vote she votes for the candidate opposite to the one that gives her highest expected policy-related utility
- ◆ **Note:** “strategic” is a residual category (not-modeled)

The Model: Mistakes

- ◆ **Definition:** given her information, the *mistake* a citizen can make in an election is the ex-ante expected utility loss that occurs when a citizen votes for a candidate who ex-post (for realized values of y_D, y_R) is not the one that gives her highest policy-related utility:

$$E\left([1(\text{voteD and } U_{j_D} < U_{j_R}) + 1(\text{voteR and } U_{j_D} > U_{j_R})] |U_{j_D} - U_{j_R}| \right)$$

- ◆ **Aversion to mistakes**

Sincere citizens are averse to making mistakes.

- ◆ **Note:** “strategic” citizens cannot be averse to making mistakes
- ◆ **Note:** informed citizens cannot make mistakes in P

The Model: Voting

◆ Sincere voting

Given her information, it is optimal for a *sincere* citizen in an election to:

- Vote D if $E[U^j_D - U^j_R] > 0$
- Vote R if $E[U^j_D - U^j_R] < 0$
- Randomize otherwise

◆ “Strategic” voting

Given her information, a “*strategic*” citizen in an election:

- Votes R if $E[U^j_D - U^j_R] > 0$
- Votes D if $E[U^j_D - U^j_R] < 0$

The Model: Turnout

◆ Sincere behavior

Given her information and tolerance levels for mistakes, it is optimal for a *sincere* citizen to:

- Vote in P if $\text{mistake}_P \leq \theta_P$
- Abstain in P if $\text{mistake}_P > \theta_P$
- Vote in H if $\text{mistake}_H \leq \theta_H$
- Abstain in H if $\text{mistake}_H > \theta_H$

◆ **Note:** “strategic” citizens do not abstain

◆ **Note:** informed citizens do not abstain in P

Data

◆ ANES (1972-2000)

- Cross-sections of individual turnout and voting choices in P and H
- Congressional district, party identification, demographic characteristics
- We eliminate missing values, uncontested elections and residents of DC

◆ NOMINATE (Poole and Rosenthal)

- Legislators (and presidents) policy positions on $[-1,+1]$ based on roll-calls (and vetoes) for the 93rd to 107th Congress

Elections

Year	P	H
1972	McGovern v Nixon	D v R
1976	Carter v Ford	D v R
1980	Carter v Reagan	D v R
1984	Mondale v Reagan	D v R
1988	Dukakis v Bush Sr.	D v R
1992	Clinton v Bush Sr.	D v R
1996	Clinton v Dole	D v R
2000	Gore v Bush Jr.	D v R

Number of Observations

Year	All	Democrats	Republicans	Independent
1972	1627	611 (38%)	461 (28%)	555 (34%)
1976	1365	525 (38%)	362 (27%)	478 (35%)
1980	885	338 (38%)	225 (26%)	322 (36%)
1984	1423	506 (36%)	408 (28%)	509 (36%)
1988	1110	386 (35%)	329 (29%)	395 (36%)
1992	1530	571 (37%)	388 (26%)	571 (37%)
1996	1169	466 (40%)	339 (29%)	364 31%)
2000	1006	368 (37%)	271 (27%)	367 (36%)

Empirical Analysis

◆ Objects to be estimated:

- Distribution of citizens' policy preferences:

$$y_j \sim \text{Beta}(p, q | X_j, k_j) \text{ on } [-1, +1]$$

- Distributions of tolerance levels for mistakes:

$$\theta_P \sim \text{Lognormal}(\mu_P, \sigma) \text{ on } (0, +\infty)$$

$$\theta_H \sim \text{Lognormal}(\mu_H, \sigma) \text{ on } (0, +\infty)$$

- Distribution of citizens' information:

$$\pi_i(X, k)$$

- Distribution of citizens' types:

$$\pi_s(y, k)$$

$$\pi_h(y, k)$$

Empirical Analysis (continued)

◆ Identification:

- Exogenous variation in the data
- Theory
- Parametric functional forms play little role

◆ Estimation:

- Theoretical model generates likelihood function
- Maximum Likelihood Estimation

Results

- ◆ Almost all parameters estimated precisely in all years
- ◆ Model fits all aspects of the data well in all years:
 - Abstention (and selective abstention)
 - Voting patterns (and split-ticket voting)

Goodness of Fit: 1992 Elections

PH	Data	Model
AA	0.2954	0.2829
AD	0.0013	0.0018
AR	0.0000	0.0020
DA	0.0425	0.0460
RA	0.0281	0.0381
DD	0.3072	0.3113
DR	0.0621	0.0561
RD	0.0725	0.0691
RR	0.1908	0.1928

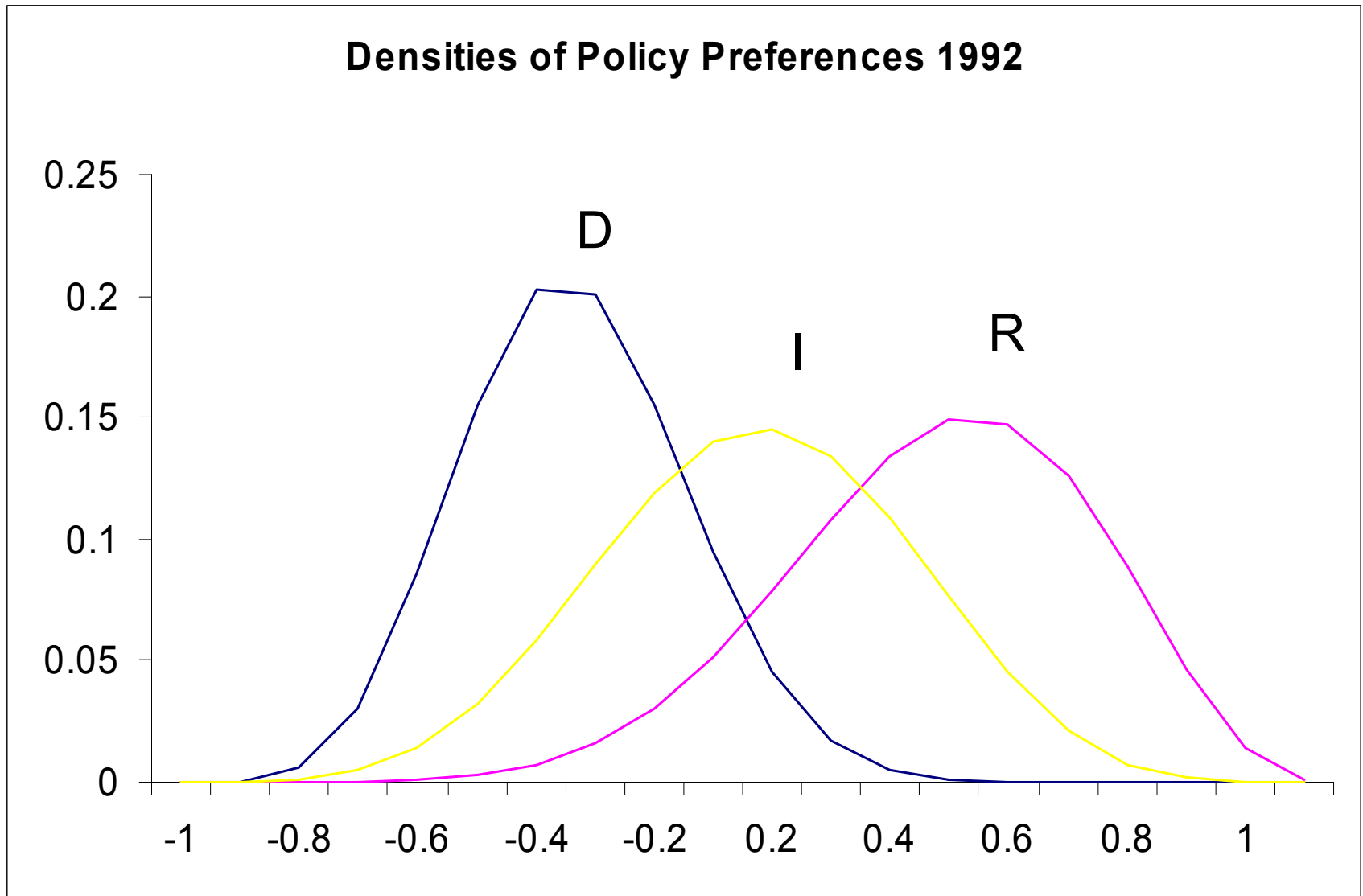
Demographic Characteristics and Policy Preferences

Variable	Policy Preferences
Age	→
Black	←
No HS	←
College +	←
Female	←
Low income	←

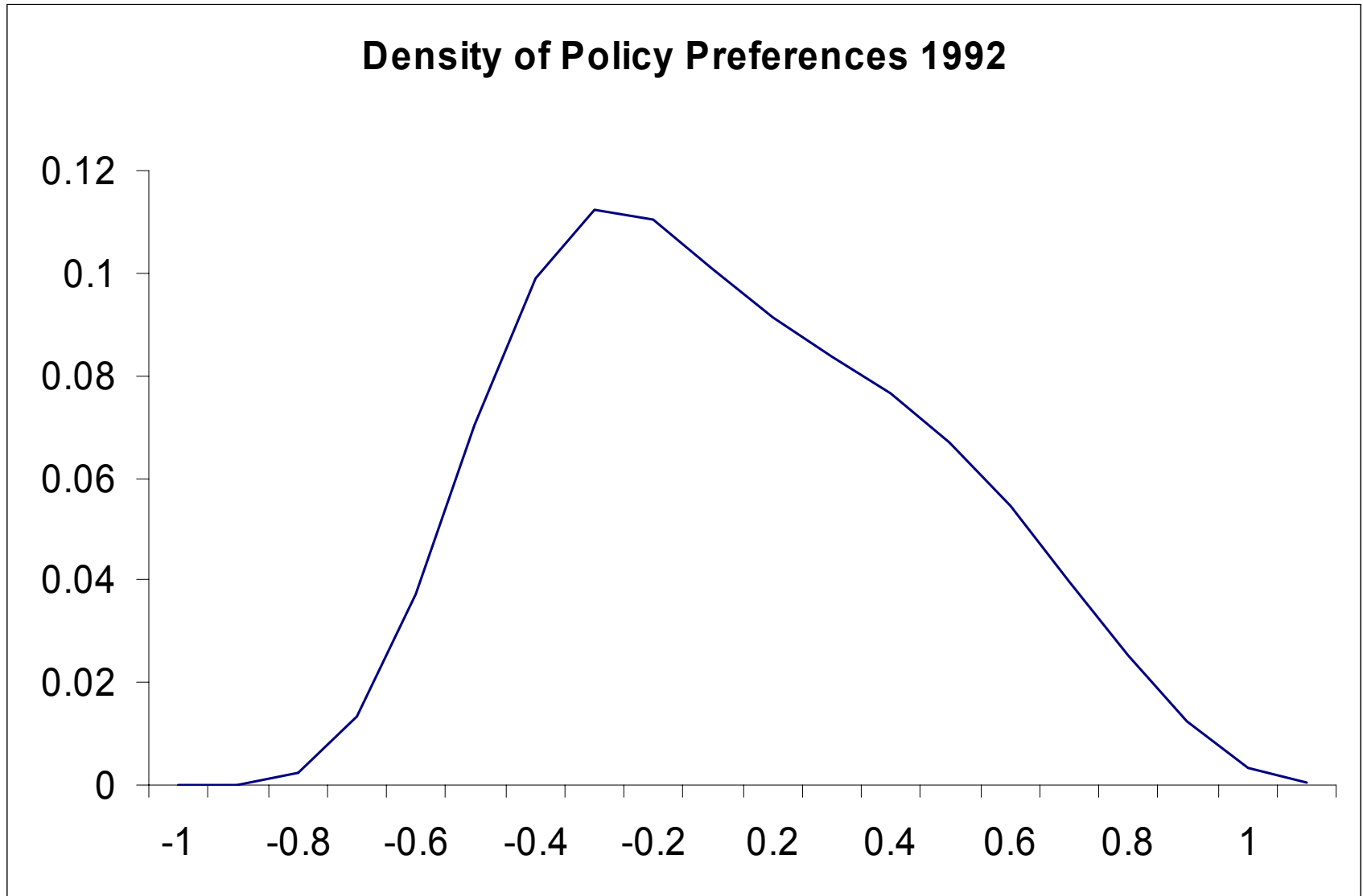
Demographic Characteristics and Information

Variable	Information
Age	↑
Black	↓
No HS	↓
College +	↑
Female	↓
Low income	↓

Estimates of Policy Preferences: 1992 Elections



Estimates of Policy Preferences: 1992 Elections



Results: Selective Abstention

◆ Information → Turnout:

- Uninformed more likely to make (“bigger”) mistakes
- Uninformed more likely to abstain

◆ Turnout in P > Turnout in H:

- Tolerance to mistakes in P < Tolerance in H
- More uncertainty in H than in P
- Mistakes bigger in H than in P
- Citizens more likely to (selectively) abstain in H

Results: Information

Year	All	Democrats	Republicans	Independent
1972	38%	31%	47%	37%
1976	44%	40%	54%	41%
1980	37%	19%	62%	39%
1984	50%	43%	68%	42%
1988	48%	41%	65%	42%
1992	50%	55%	50%	44%
1996	42%	29%	64%	37%
2000	45%	52%	38%	42%

Results: "Strategic" Voting

Year	All	Democrats	Republicans	Independent
1972	26%	29%	16%	30%
1976	23%	18%	16%	32%
1980	24%	27%	16%	25%
1984	20%	17%	15%	26%
1988	16%	12%	15%	22%
1992	18%	13%	19%	24%
1996	14%	13%	6%	21%
2000	11%	5%	13%	15%

Results: "Strategic" Voting by Election

Year	All		Democrats		Republicans		Independent	
	P	H	P	H	P	H	P	H
1972	12%	14%	23%	6%	3%	13%	7%	23%
1976	9%	14%	7%	11%	6%	10%	13%	19%
1980	6%	17%	11%	16%	2%	14%	5%	20%
1984	5%	15%	7%	10%	1%	14%	5%	21%
1988	4%	12%	4%	7%	2%	12%	6%	16%
1992	7%	11%	3%	9%	4%	16%	13%	11%
1996	8%	6%	0%	14%	6%	0%	20%	0%
2000	3%	8%	1%	4%	1%	12%	5%	10%

Experiments

- ◆ Everybody sincere
 - Decompose “sincere” vs. “strategic” split-ticket voting
 - Assess impact of strategic voting on electoral outcomes
- ◆ Everybody Informed
 - Assess impact of information on split-ticket voting
 - Assess impact of information on electoral outcomes
- ◆ Everybody votes
 - Assess impact of abstention on split-ticket voting
 - Assess impact of abstention on electoral outcomes

Experiments: Summary of Results

- Increase “straight-ticket” voting
- Increase “partisan” voting
- Strength of effects differ by party id and by year

Experiments: “Strategic” Split-Ticket Voting

Year	All	Sincere
1972	26%	2%
1976	22%	3%
1980	27%	4%
1984	24%	6%
1988	21%	7%
1992	21%	4%
1996	17%	5%
2000	15%	7%

Experiments: Effect of Strategic Voting on Elections

Year	P	H	P	H
1972	McGovern v Nixon	D v R	McGovern v Nixon	D v <u>R</u>
1976	Carter v Ford	D v R	Carter v <u>Ford</u>	D v R
1980	Carter v Reagan	D v R	Carter v Reagan	D v <u>R</u>
1984	Mondale v Reagan	D v R	Mondale v Reagan	D v <u>R</u>
1988	Dukakis v Bush Sr.	D v R	Dukakis v Bush Sr.	D v R
1992	Clinton v Bush Sr.	D v R	Clinton v Bush Sr.	D v R
1996	Clinton v Dole	D v R	Clinton v Dole	<u>D</u> v R
2000	Gore v Bush Jr.	D v R	<u>Gore</u> v Bush Jr.	D v R

Experiments: Effect of Information on Elections

Year	P	H	P	H
1972	McGovern v Nixon	D v R	McGovern v Nixon	D v <u>R</u>
1976	Carter v Ford	D v R	Carter v <u>Ford</u>	D v R
1980	Carter v Reagan	D v R	Carter v Reagan	D v <u>R</u>
1984	Mondale v Reagan	D v R	Mondale v Reagan	D v R
1988	Dukakis v Bush Sr.	D v R	Dukakis v Bush Sr.	D v R
1992	Clinton v Bush Sr.	D v R	Clinton v Bush Sr.	D v R
1996	Clinton v Dole	D v R	Clinton v Dole	<u>D</u> v R
2000	Gore v Bush Jr.	D v R	<u>Gore</u> v Bush Jr.	<u>D</u> v R

Experiments: Effect of Abstention on Elections

Year	P	H	P	H
1972	McGovern v Nixon	D v R	McGovern v Nixon	D v R
1976	Carter v Ford	D v R	Carter v Ford	D v R
1980	Carter v Reagan	D v R	Carter v Reagan	D v R
1984	Mondale v Reagan	D v R	Mondale v Reagan	D v R
1988	Dukakis v Bush Sr.	D v R	Dukakis v Bush Sr.	D v R
1992	Clinton v Bush Sr.	D v R	Clinton v Bush Sr.	D v R
1996	Clinton v Dole	D v R	Clinton v Dole	D v R
2000	Gore v Bush Jr.	D v R	Gore v Bush Jr.	D v R