Government 317: Campaigns and Elections

Fall 2005
Tuesday and Thursday 2:55–4:10 (ML 106)
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Course web page:
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TA Office Hours: Tue 12:30–2:30 or other times by appointment.

- **soft money**
  - **banned by BCRA**
  - **exempt: voter registration and GOTV ($10,000 per source)**
  - **rules being litigated right now include:**
    - **whether elected officials can raise unlimited amounts for Constitutional amendments (in California re redistricting initiative)**
    - **in general in litigation the courts have not liked the rules the FEC promulgated to implement BCRA**
    - **see e.g. Shays and Meehan v. FEC (C.A. No. 02-1984)** `http://www.fec.gov/pages/bcra/litigation.shtml`

- **hard money**
  - **individuals: $2,000 per election to a candidate (up from $1,000)**
  - **higher limits if running against a "millionaire"**
  - **PACs: $5,000 per election to a candidate**
  - **individuals: $37,500 aggregate to candidates per two years**
  - **individuals: $5,000 to a PAC per year**
  - **individuals: $25,000 per year to a party committee**
  - **individuals: $57,500 aggregate to PACs and parties per two years**

- **non-party electioneering**
  - **corporations and unions prohibited**
  - **limited disclosure and reporting requirements**
  - **unlimited spending and contributions**
  - **501(c)(4)s (but not 501(c)(3)s)**
  - **527s**

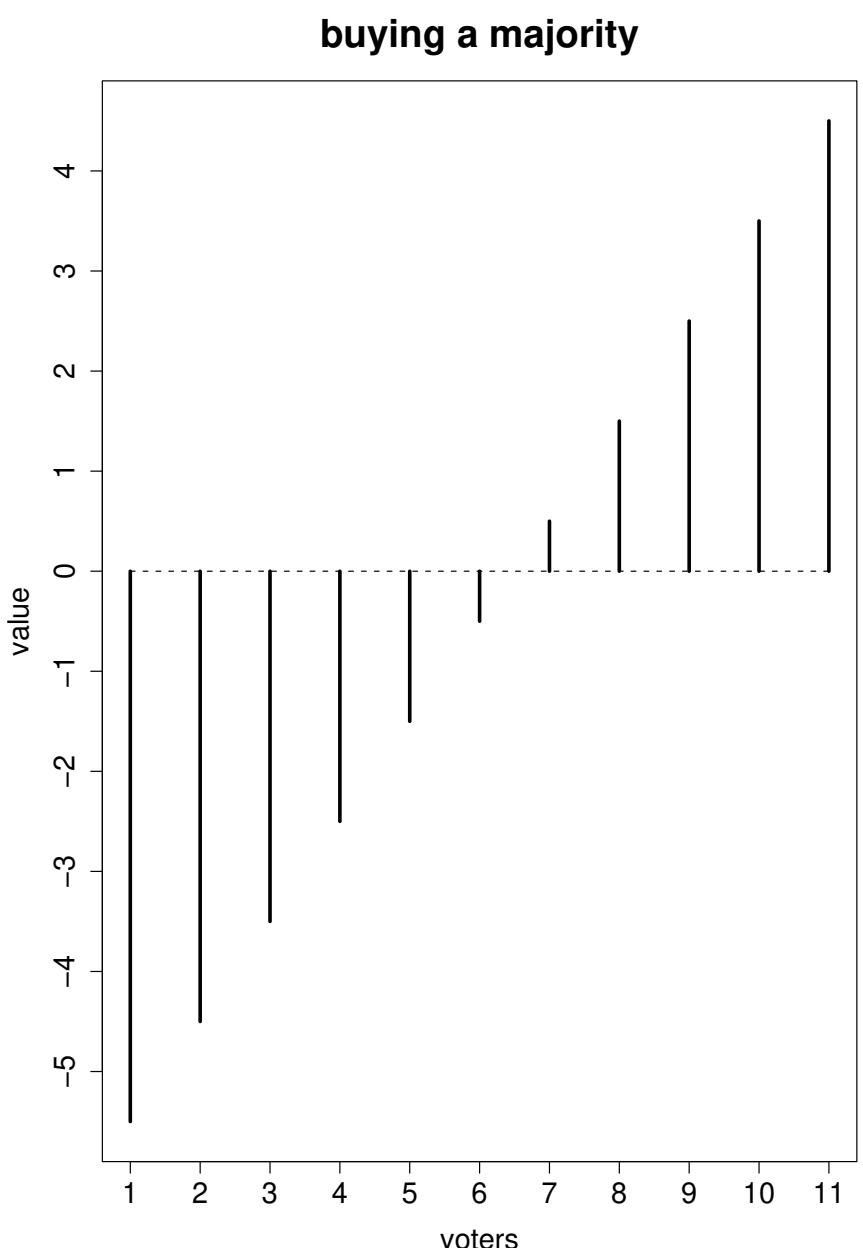
- **itemized individual contributions FEC data (1982–2002)**
  - **in terms of the number of contributions, there is roughly parity between parties as long as Democrats are in the majority**
  - **REVOLUTION in 1994, especially in the last three months**
  - **individuals abandon Democrats after they lose the majority**
  - **most individuals who contribute are investors**
  - **(see the fecdiffs02.pdf plots linked to the course webpage)**

- service
  - votes
  - changing priorities for a legislator's actions, e.g., raising salience
  - bill proposals
  - legislative committee actions
  - regulation
  - bureaucratic intervention (oversight)
  - pork (local federal expenditure)

- service
  - votes
  - changing priorities for a legislator's actions, e.g., raising salience
  - bill proposals
  - legislative committee actions
  - regulation
  - bureaucratic intervention (oversight)
  - pork (local federal expenditure)
- timing
  - quid pro quo
  - long-term relationships (access)

- **extent: pay different people for different things**
  - **paying supporters or buying off opponents**
  - **buying majorities (or supermajorities)**
  - **buying agenda control**

- extent: pay different people for different things
  - paying supporters or buying off opponents
  - buying majorities (or supermajorities)
  - buying agenda control
- Groseclose-Snyder theory: buy (super)majority with
  - enough money to outspend the opposition
  - money allocated to give all the weakest supporters the same final payoff, taking into account their initial evaluations


buying a majority
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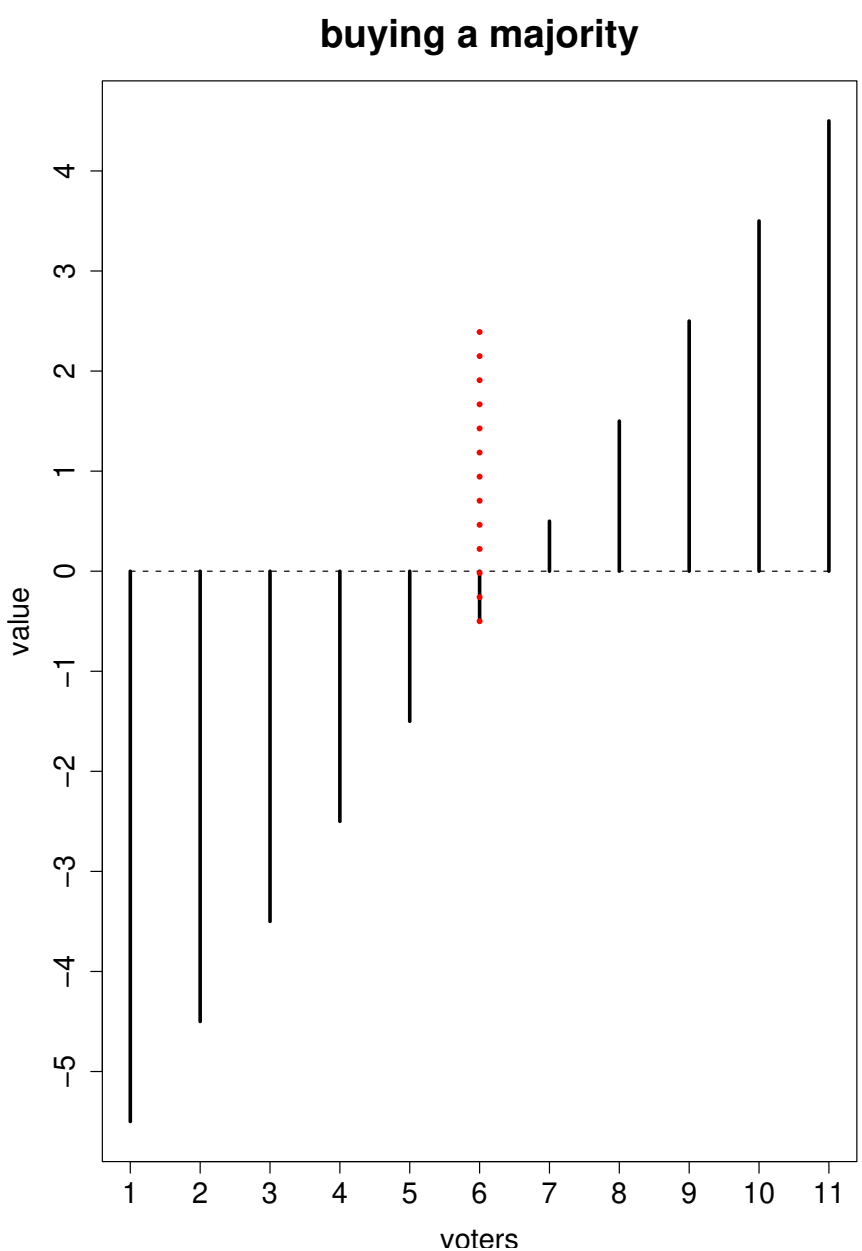
voters


buying a majority
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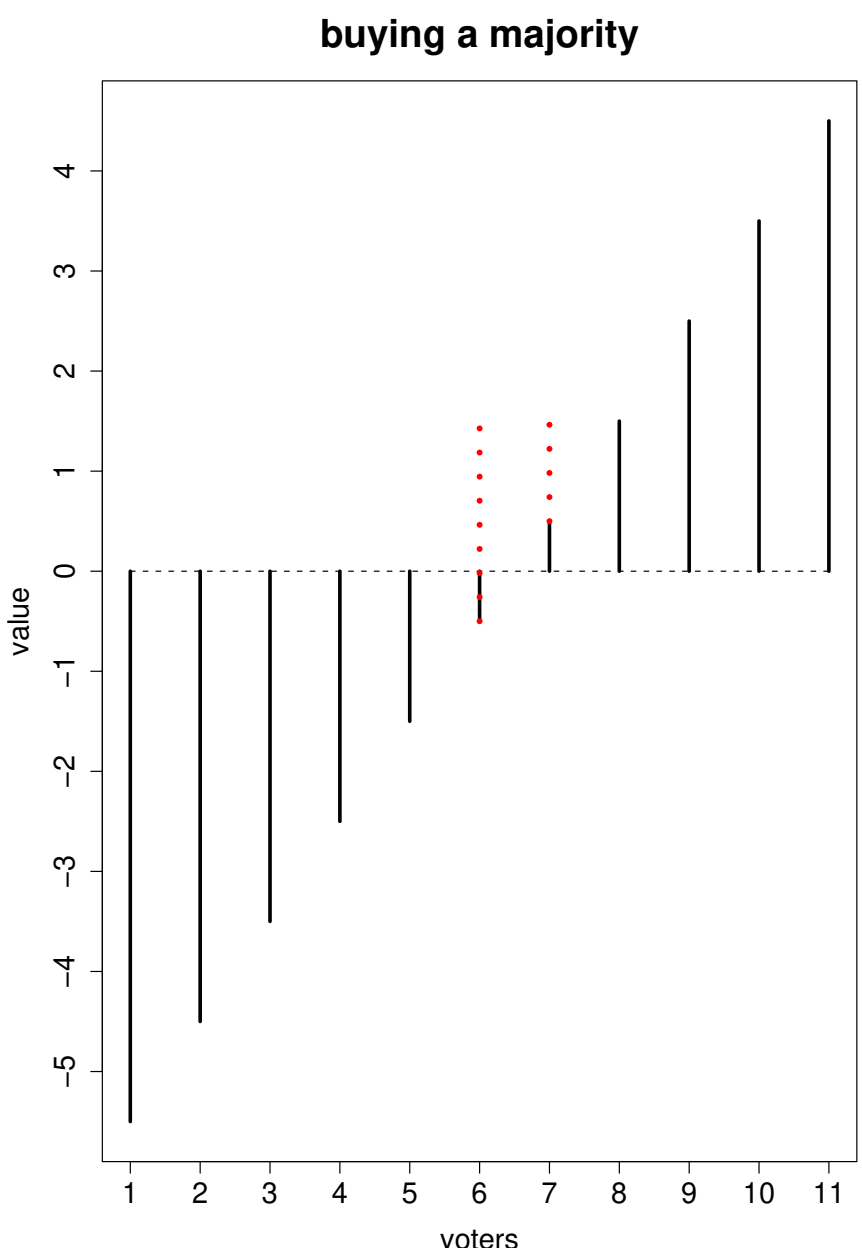
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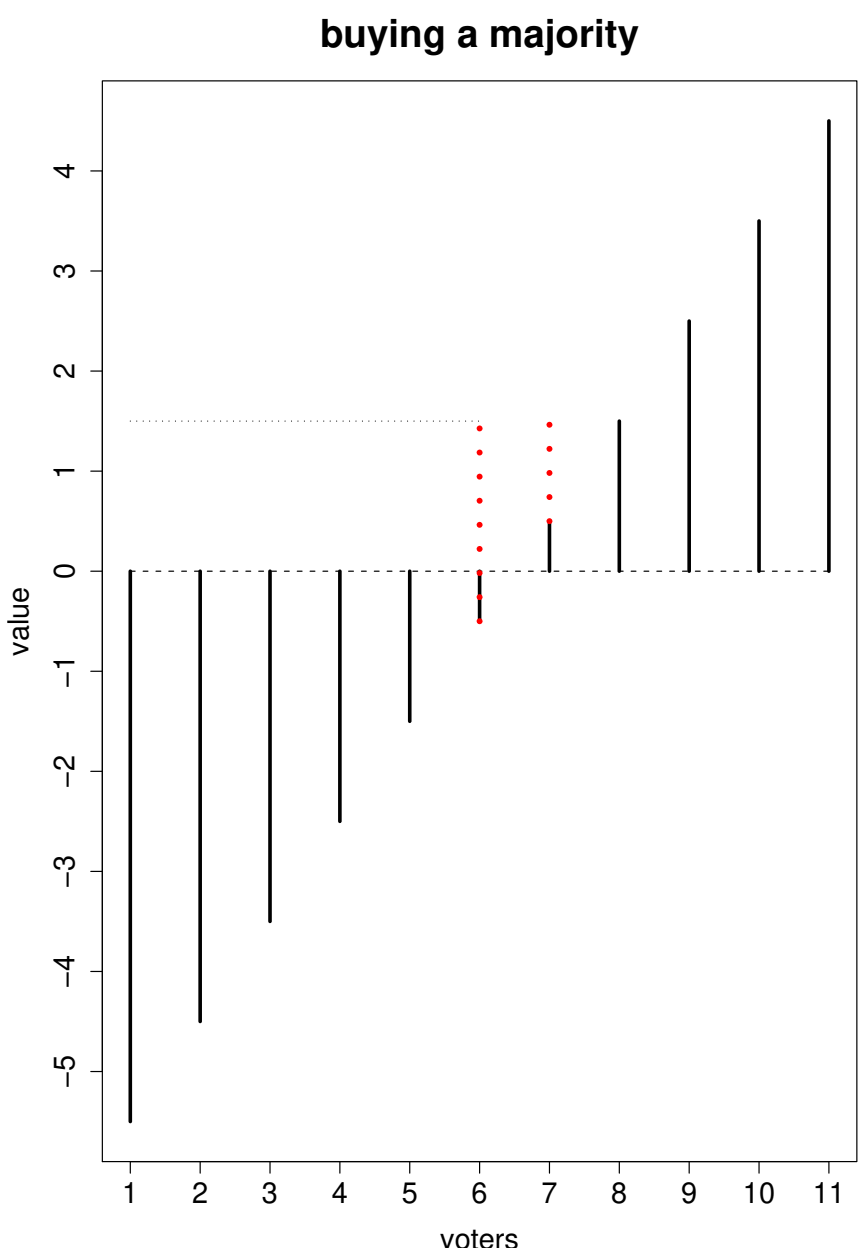
voters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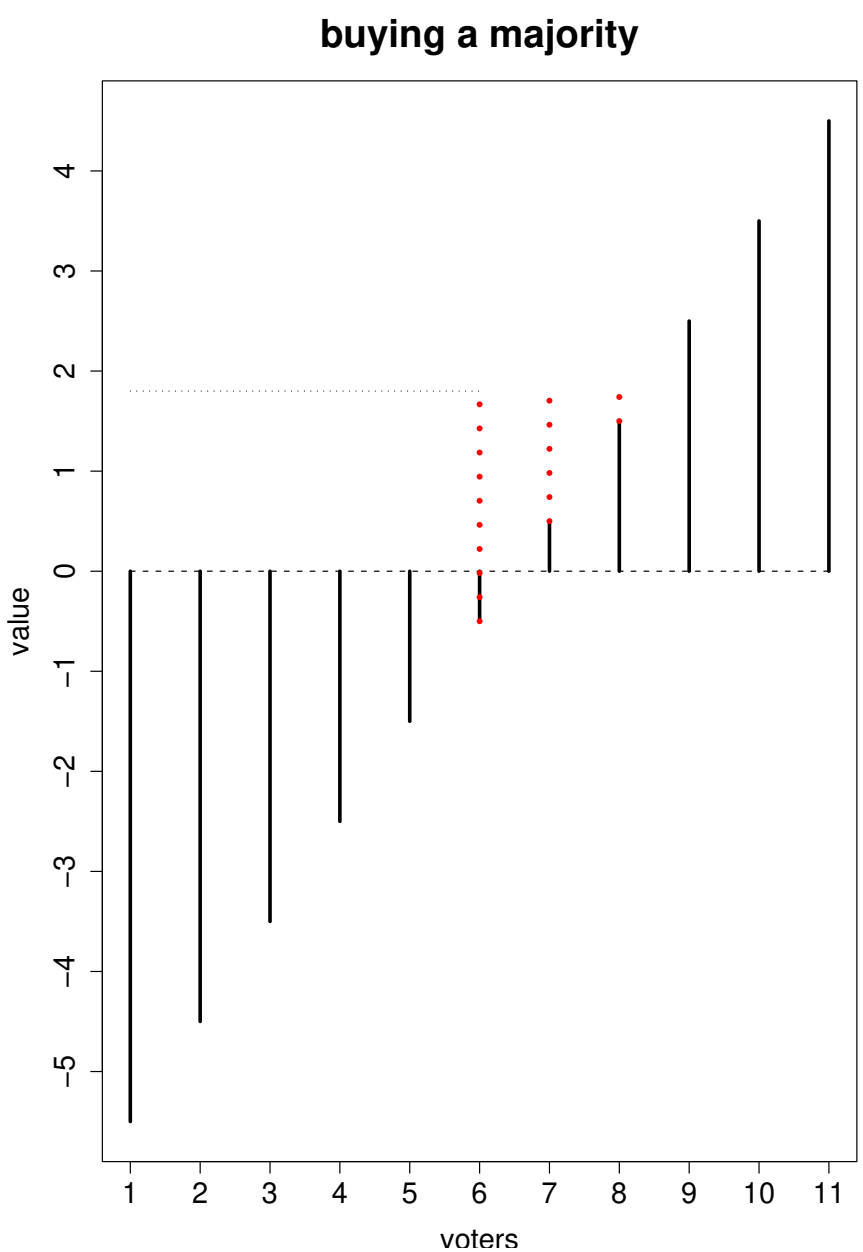
voters


buying a majority
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10
11
voters

- **Groseclose-Snyder theory: buy (super)majority with**
  - **enough money to outspend the opposition**
  - **money allocated to give all the weakest supporters the same final payoff, taking into account their initial evaluations**
- **the Groseclose-Snyder theory is nominally about votes, but it's not hard to see that the same idea should generalize to all kinds of service**

- **one basic principle for investing: equate marginal costs across possible investments**

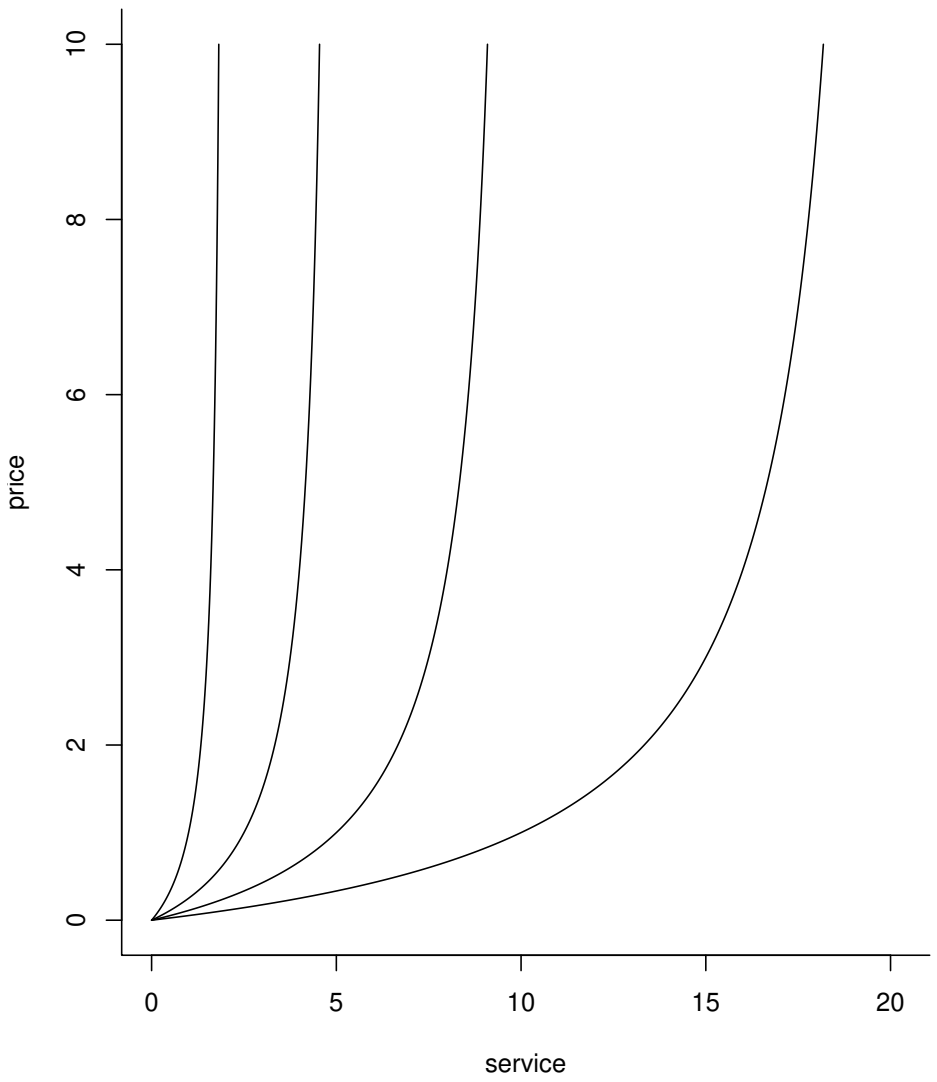

Price−service curves
price
service
0
2
4
6
8
10
0
5
10
15
20

Figure 1: Price−service curves with maximum service limits

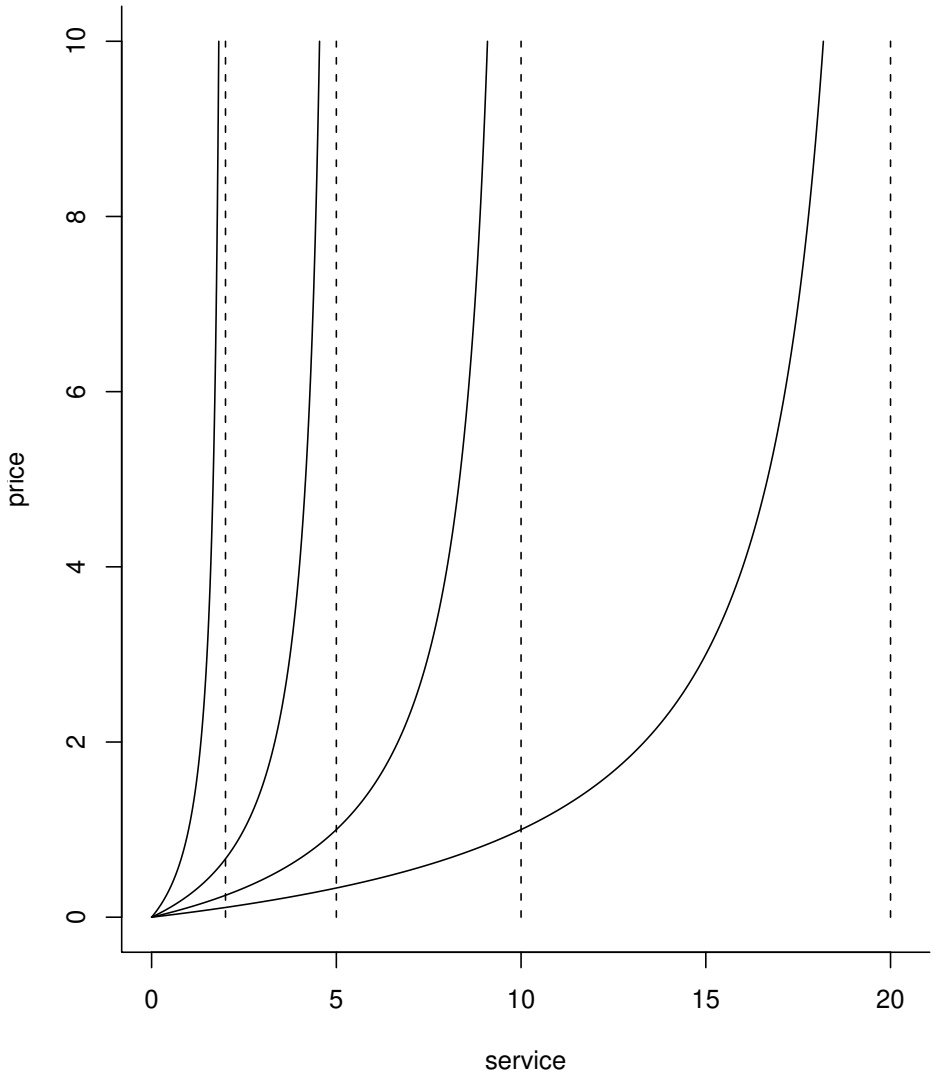


Figure 2: Service–price curves

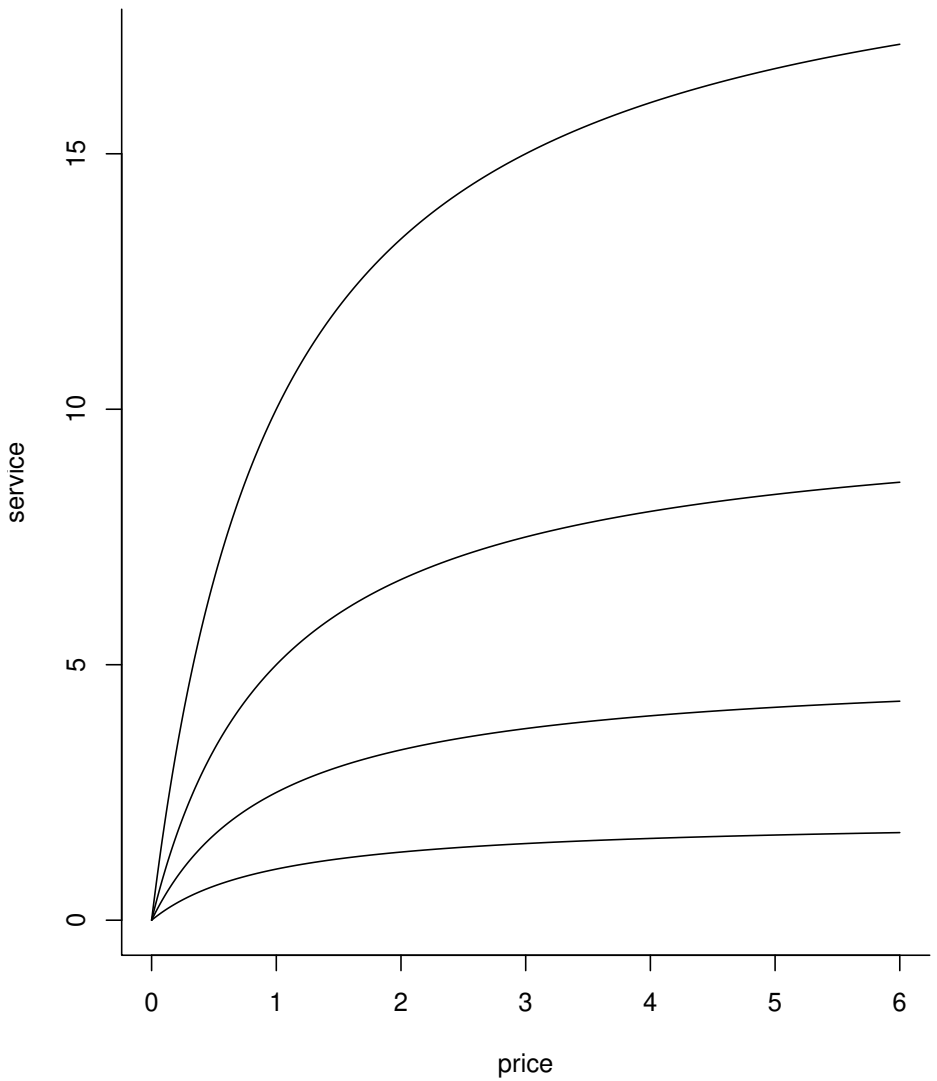


Figure 8: Service−price relationships with budget = 10

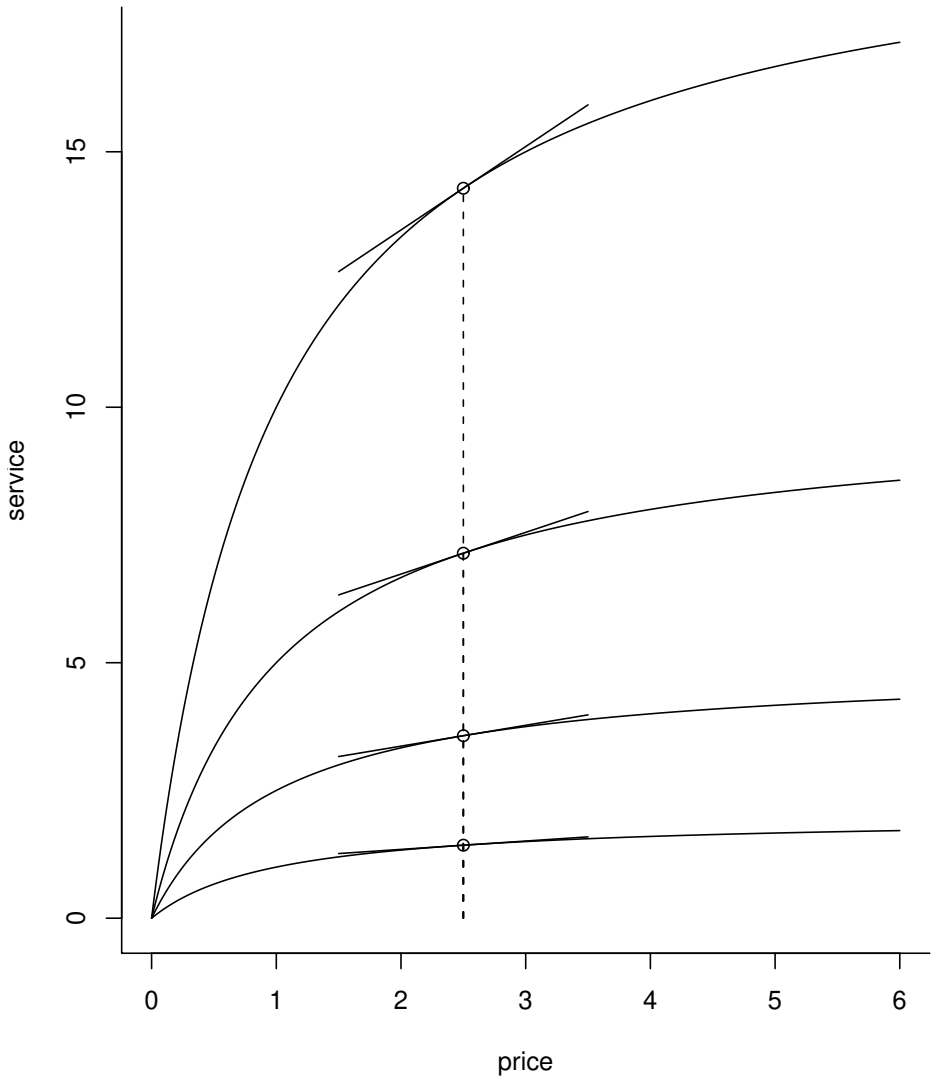


Figure 3: Service−price relationships with budget = 10

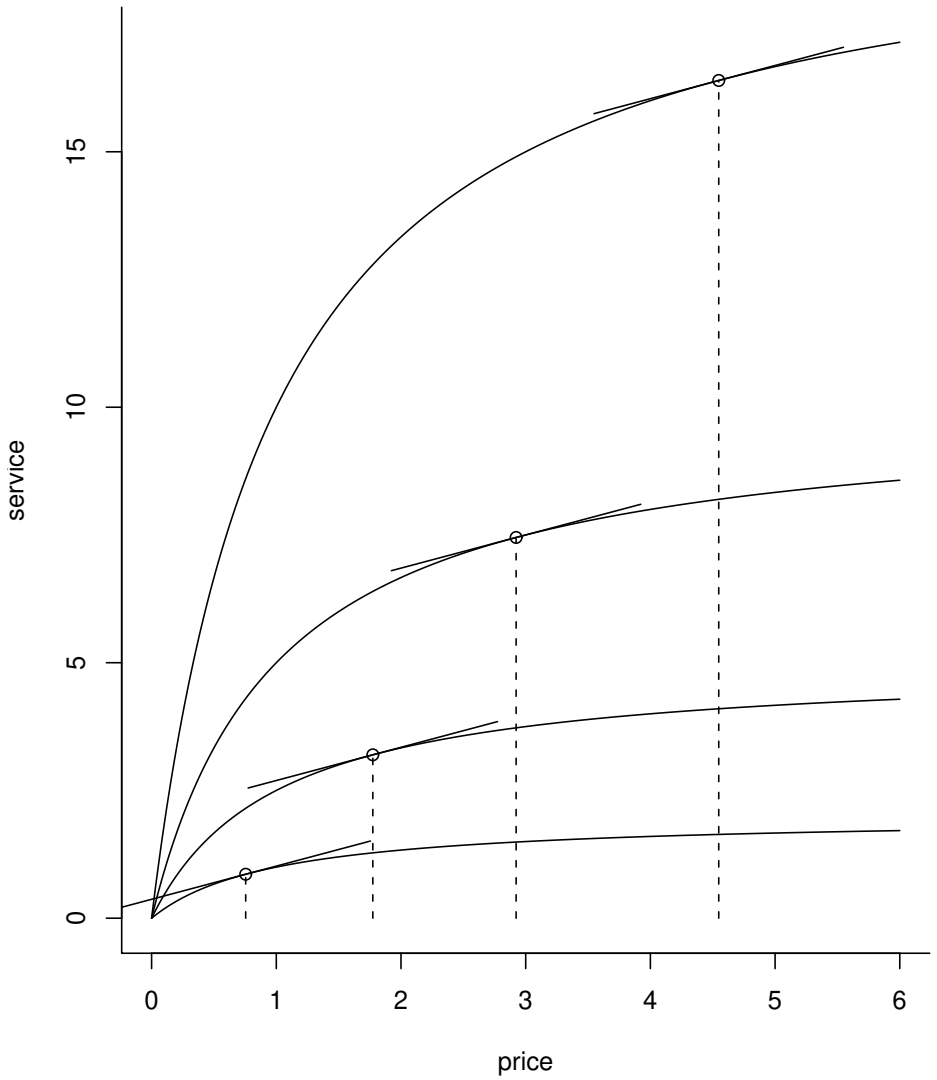


Figure 4: Service–price relationships with budget = 5

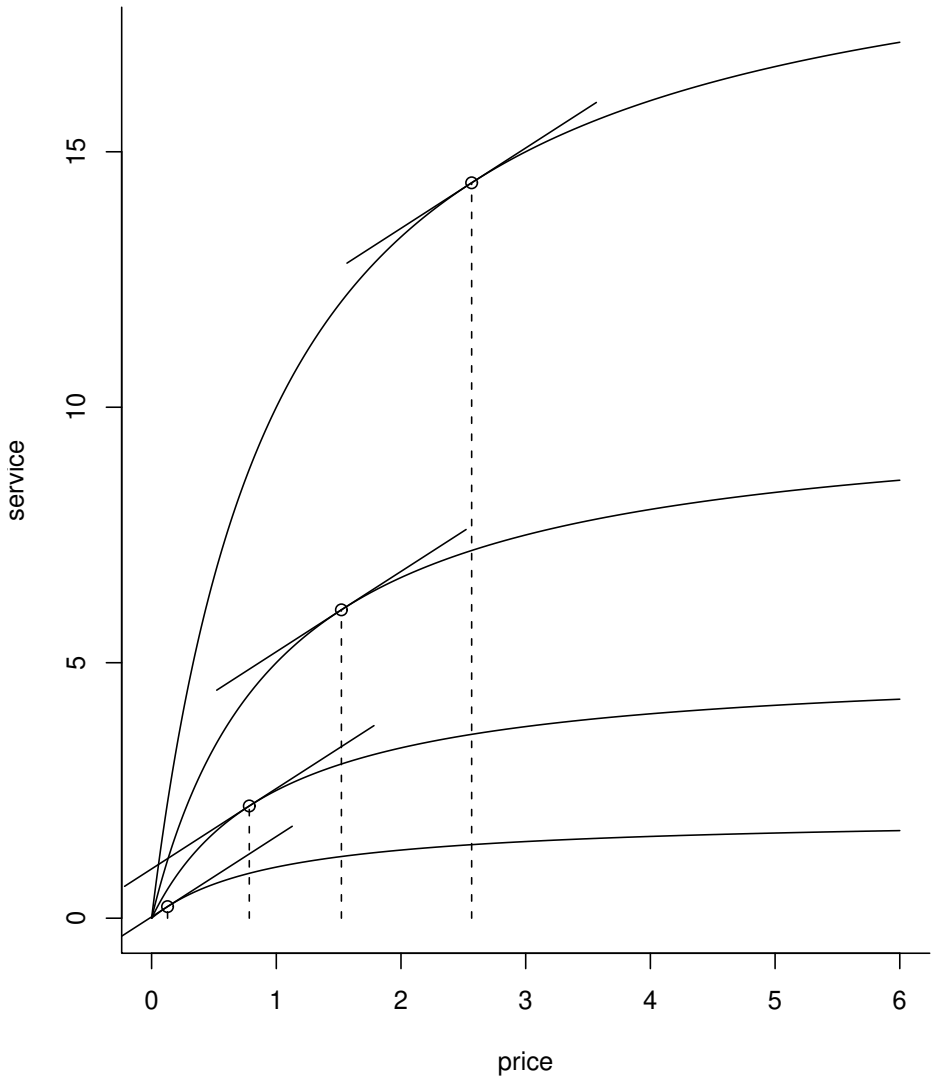


Figure 5: Service–price relationships with budget = 2

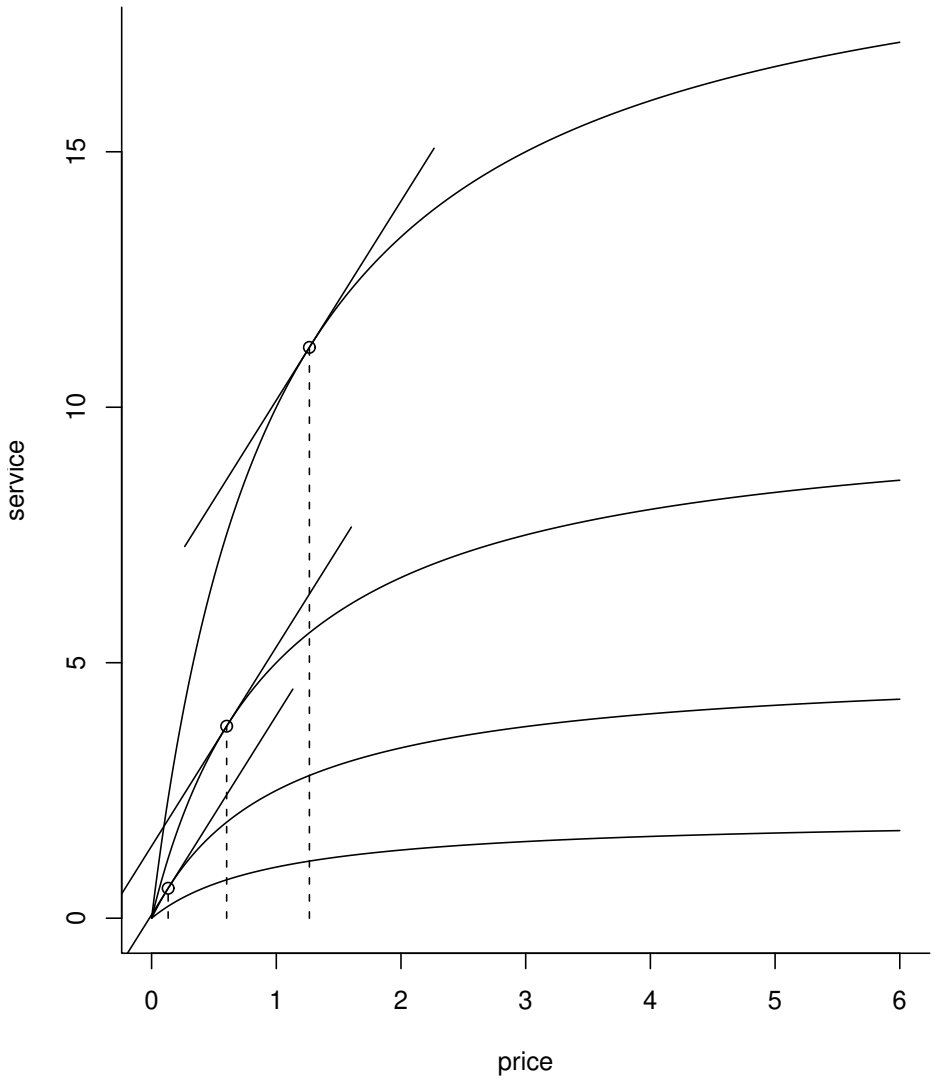


Figure 6: Service–price relationships with budget = 1

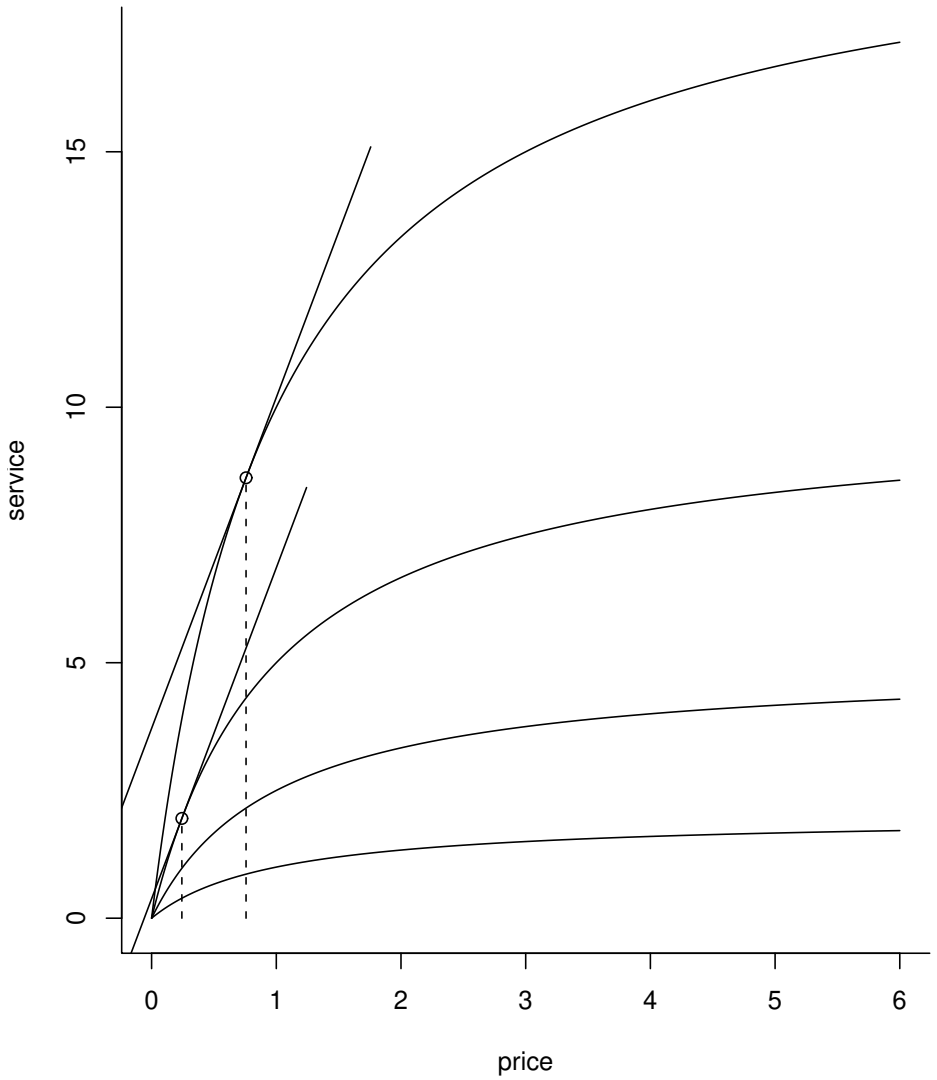


Figure 3: Service−price relationships with budget = 10

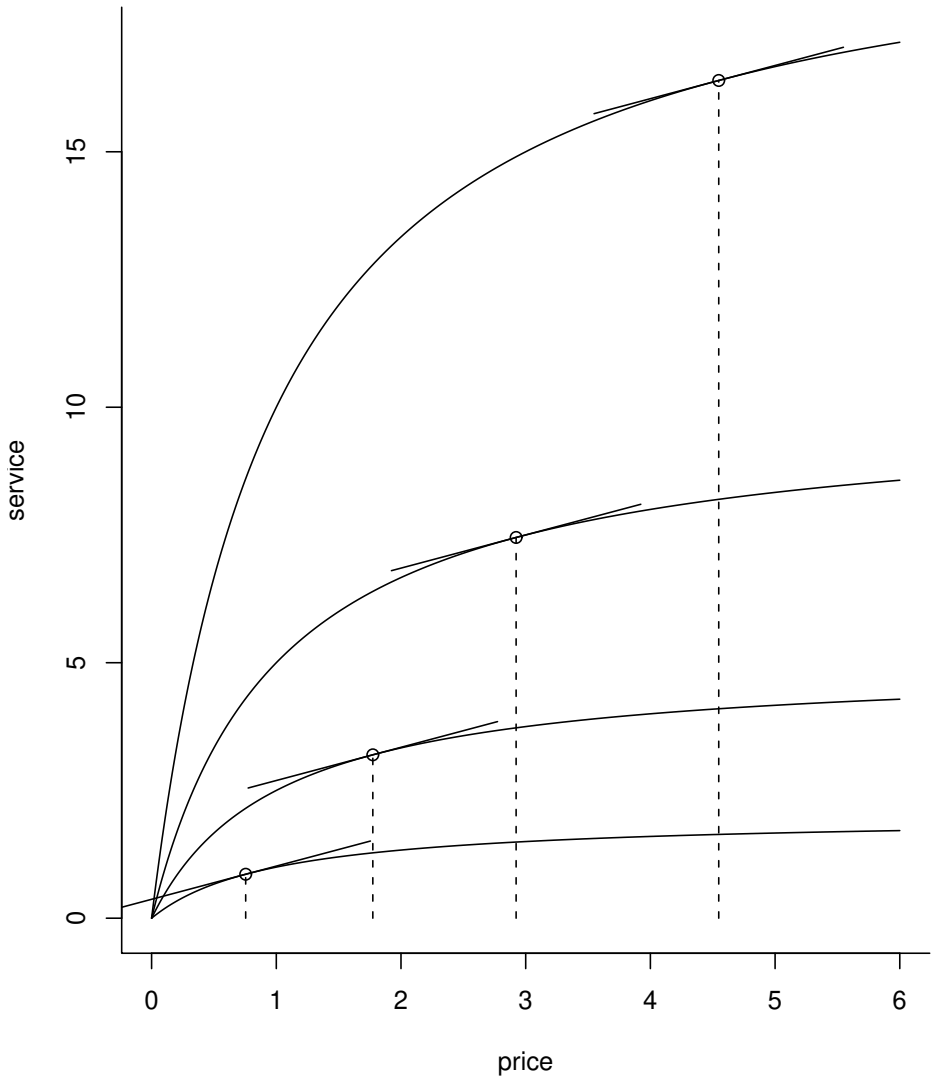


Figure 8: Service−price relationships with budget = 10
and maximum contribution = 4

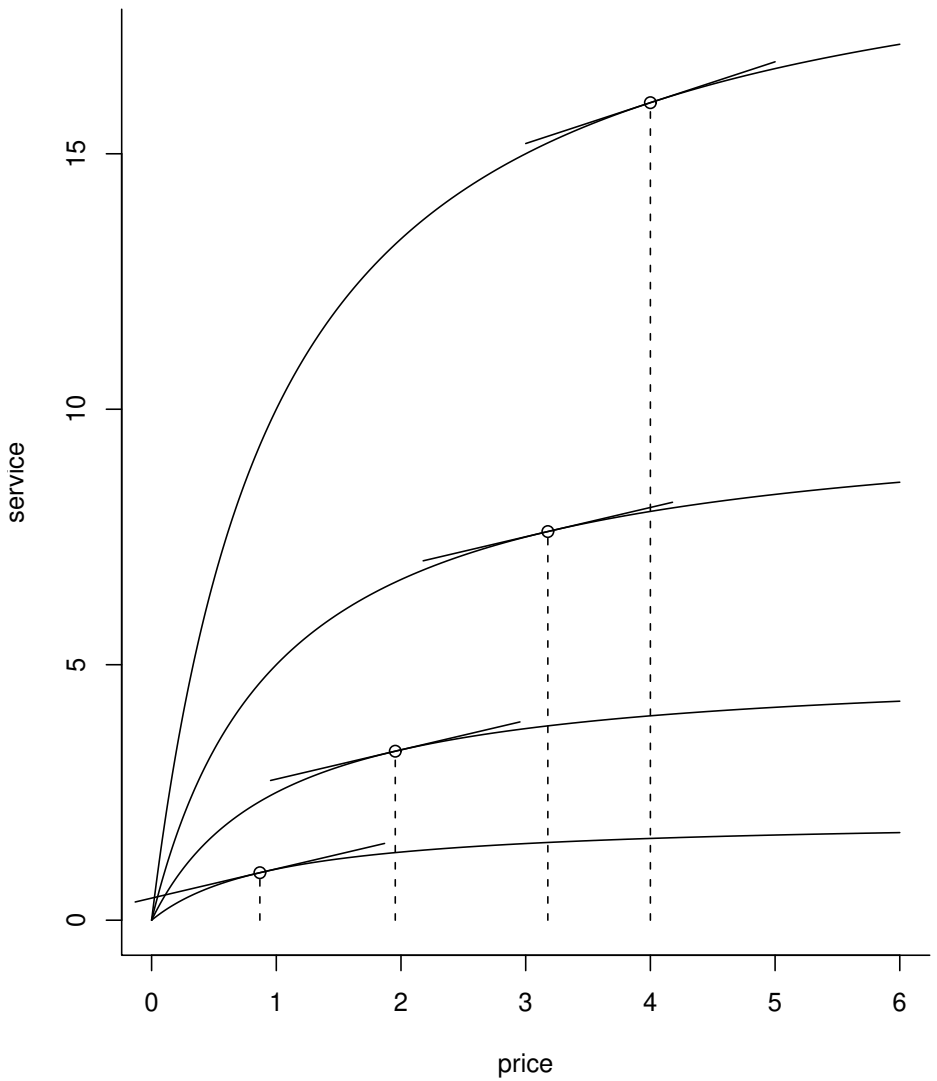
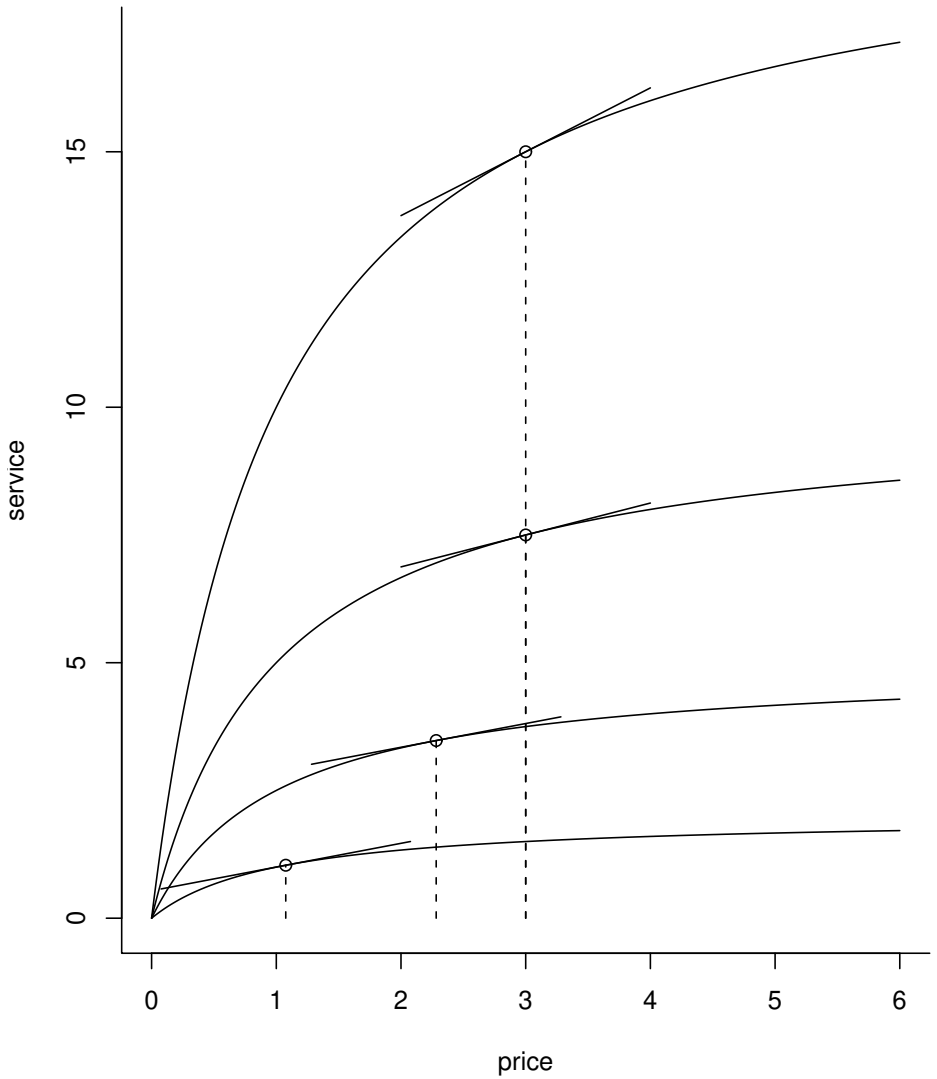


Figure 8: Service−price relationships with budget = 10
and maximum contribution = 3



- **to buy the most high-quality service, equate marginal costs across legislators**
  - **give the most to the highest quality source, but not everything**
  - **with a limited contributor budget, some legislators receive zero**

- to buy the most high-quality service, equate marginal costs across legislators
  - give the most to the highest quality source, but not everything
  - with a limited contributor budget, some legislators receive zero
- upper limits on contributions
  - imposing an upper limit may cause contributions to lower quality legislators to increase
  - increasing an existing upper limit may cause contributions to lower quality legislators to decrease

- **telecomm bill example**
  - **seven Baby Bells' mean: $607.40**
  - **seven long distance companies' mean: $608.96**
- **party, committees, leadership, voting record, seniority**

Descriptions of Legislator Quality Attribute Variables
Business Interest, Electoral and Party Variables:

BizState	One if legislator is from a state in which the telco operates local telephone exchanges, otherwise zero
AFL-CIO	AFL-CIO roll call vote rating scores
BIPAC	Business Industry Political Action Committee roll call vote rating scores
IncProp	Proportion of all 1992 general election votes for the legislator
IncClos	IncProp*(1-IncProp)
PMoney	Total campaign contributions ($1000) received by all 1992 primary election challengers
GMoney	Total campaign contributions ($1000) received by all 1992 general election challengers
IsDem	One for Democrats and Bernie Sanders (I-VT), zero for Republicans
Terms	Number of House terms served (counted from 1)

House Committee Variables:

AG	Agriculture
AP	Appropriations
AR	Armed Services
BA	Banking, Finance and Urban Affairs
BU	Budget
DC	District of Columbia
ED	Education and Labor
EN	Energy and Commerce
FO	Foreign Affairs
GO	Government Operations
HO	House Administration
IN	Interior and Insular Affairs
JU	Judiciary
ME	Merchant Marine and Fisheries
PO	Post Office and Civil Service
PU	Public Works and Transportation
RU	Rules
SC	Science, Space, and Technology
SM	Small Business
ST	Standards of Official Conduct
VE	Veterans' Affairs
WA	Ways and Means

Subcommittee Dummy Variables:

EN04	Telecomunications and Finance
EN06	Commerce, Consumer Protection, and Competitiveness
GO04	Commerce, Consumer, and Monetary Affairs
JU01	Economic and Commercial Law
JU04	Intellectual Property and Judicial Administration
SC05	Technology and Competitiveness
SC06	Science
SM03	Regulation, Business Opportunities, and Energy
SM04	Antitrust, Impact of Deregulation, and Ecology
WA01	Trade
WA03	Select Revenue Measures

Descriptions of Legislator Quality Attribute Variables
Committee and Subcommittee Chair Dummy Variables:

Chair1	Chair of exclusive committee (Dems)
Chair2	Chair of semi-exclusive committee (Dems)
Chair3	Chair of non-exclusive committee (Dems)
SChair1	Chair of subcomm of exclusive committee (Dems)
SChair2	Chair of subcomm of semi-exclusive committee (Dems)
SChair3	Chair of subcomm of non-exclusive committee (Dems)
Rank1	Ranking member of "Red" committee (Reps)
Rank2	Ranking member of "White" committee (Reps)
Rank3	Ranking member of "White" committee (Reps)
SRank1	Ranking member of subcomm of "Red" committee (Reps)
SRank2	Ranking member of subcomm of "White" comm (Reps)
SRank3	Ranking member of subcomm of "White" committee (Reps)

Note: Exclusive committees are AP, RU, WA, semi-exclusive are AG, AR, BA, ED, EN, FO, JU, PU and non-exclusive are BU, DC, GO, HO, IN, ME, PO, SC, SM, VE, ST. "Red" committees are AP, RU, WA, EN, "White" committees are the semi-exclusive set less EN, and "White" is the same as non-exclusive.

Party Committee Dummy Variables:

ComPol	Committee on Committees or Policy Comm (Republican)
Steering	Steering Committee (Democrat)
DCCC	Congressional Campaign Committee (Democrat)
RCCC	National Congressional Committee (Republican)
Whips	Whips

Special Position Dummy Variables:

Speaker	Speaker of the House
MajLead, MinLead	Majority and Minority Leaders
MajWhip, MinWhip	Majority and Minority Whips
Leader	Speaker; Majority and Minority Leaders; Whips; Chief Deputy Whips; Caucus Chair, Vice Chair and Secretary; Conference Chair and Vice Chair; Chairs of Steering and Policy Comm., Republican Policy Comm., Republican Research Comm., Democratic Study Group Democratic Campaign Comm., Republican National Congressional Comm.

Long-Distance Company PACs

parameter	MLE	parameter	MLE
BizState	7.5	Chair3	−5.7
IsDem	27.9	SChair1	−4.6
R:AP	4.5	SRank1	−4.3
R:EN	4.3	DCCC	2.2
R:GO	2.6	MinLead	18.9
R:RU	6.2	R:IncProp	10.3
R:WA	5.3	D:PMoney	−.0
D:BA	−3.1	R:Terms	−.9
D:ED	−1.8	D:AFL-CIO	−.1
D:JU04	−7.7		
D:SC05	3.8		
D:SM03	−4.4		

Regional Holding Company ("Baby Bell") PACs (part 1)

parameter	MLE	parameter	MLE
BizState	22.4	D:SC	2.4
R:DC	−3.7	D:SM	2.6
R:ED	2.8	D:WA	6.9
R:JU	4.7	D:GO04	2.2
R:ST	4.9	D:JU01	−13.5
R:WA	6.9	D:SC05	3.3
D:DC	3.0	R:EN04	8.7
D:EN	7.2	R:GO04	7.7
D:HO	2.5	R:JU04	−7.8
D:JU	8.3	R:SC05	−3.9
D:ME	2.2	R:SM03	6.1
D:RU	4.7	R:WA01	−15.4

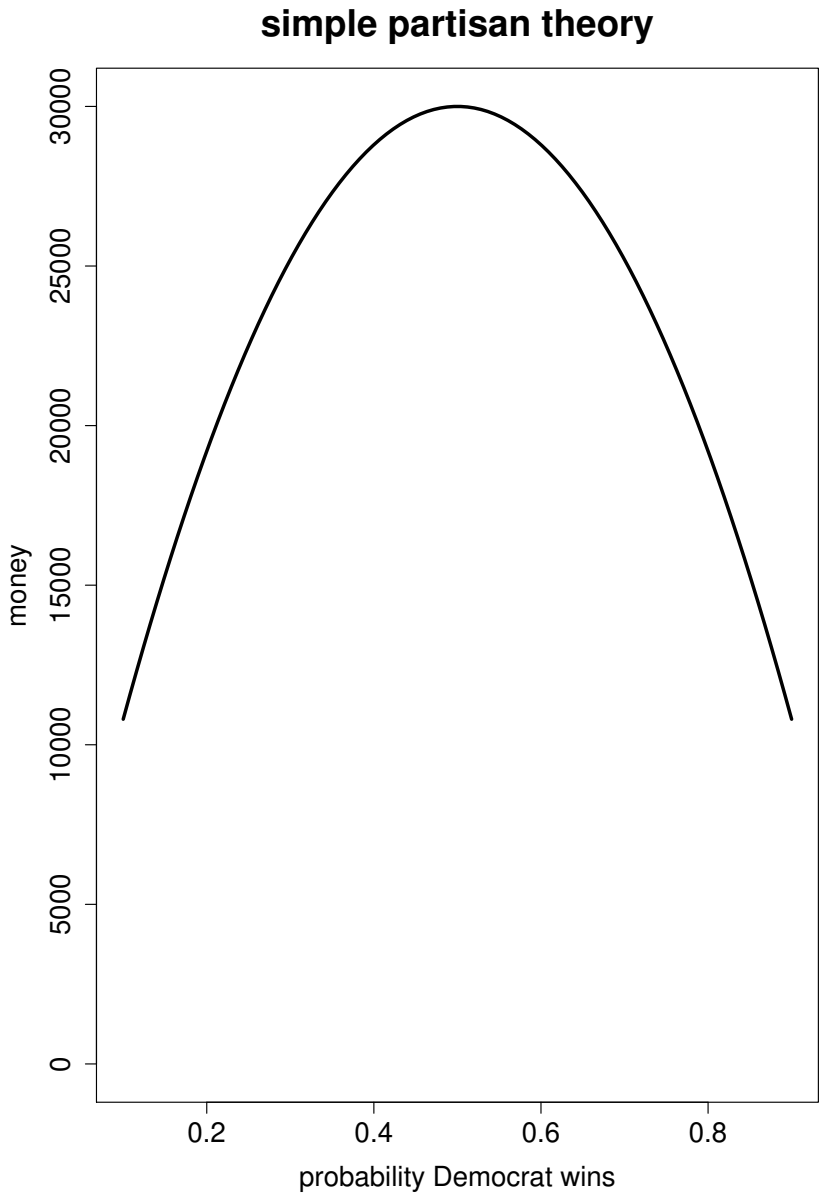
Regional Holding Company ("Baby Bell") PACs (part 2)

parameter	MLE	parameter	MLE
Chair3	−8.4	DCCC	3.1
SChair1	−10.3	Speaker	−11.9
SChair3	−4.6	D:IncProp	−7.1
D:Leader	14.4	D:IncClos	−25.4
ComPol	−3.6	D:PMoney	−.0
Steering	3.5	D:Terms	.5

- **distributing contributions across open seats**
- **partisan contributors and investor contributors**

- distributing contributions across open seats
- partisan contributors and investor contributors
  - almost all labor PACs are Democratic partisans
  - very few labor PACs (some maritime unions) are Republican investors
  - most corporate PACs are Republican partisans
  - but many corporate PACs are also Democratic investors, at least when Democrats hold the majority

- **Partisan Contributions Theory (Snyder)**
- **Investor Contributions Theory (Baron, Snyder)**
- **Unified Contributions Theory (Baron, Snyder, Wand)**


simple partisan theory
money
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5000
10000
15000
20000
25000
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0.2
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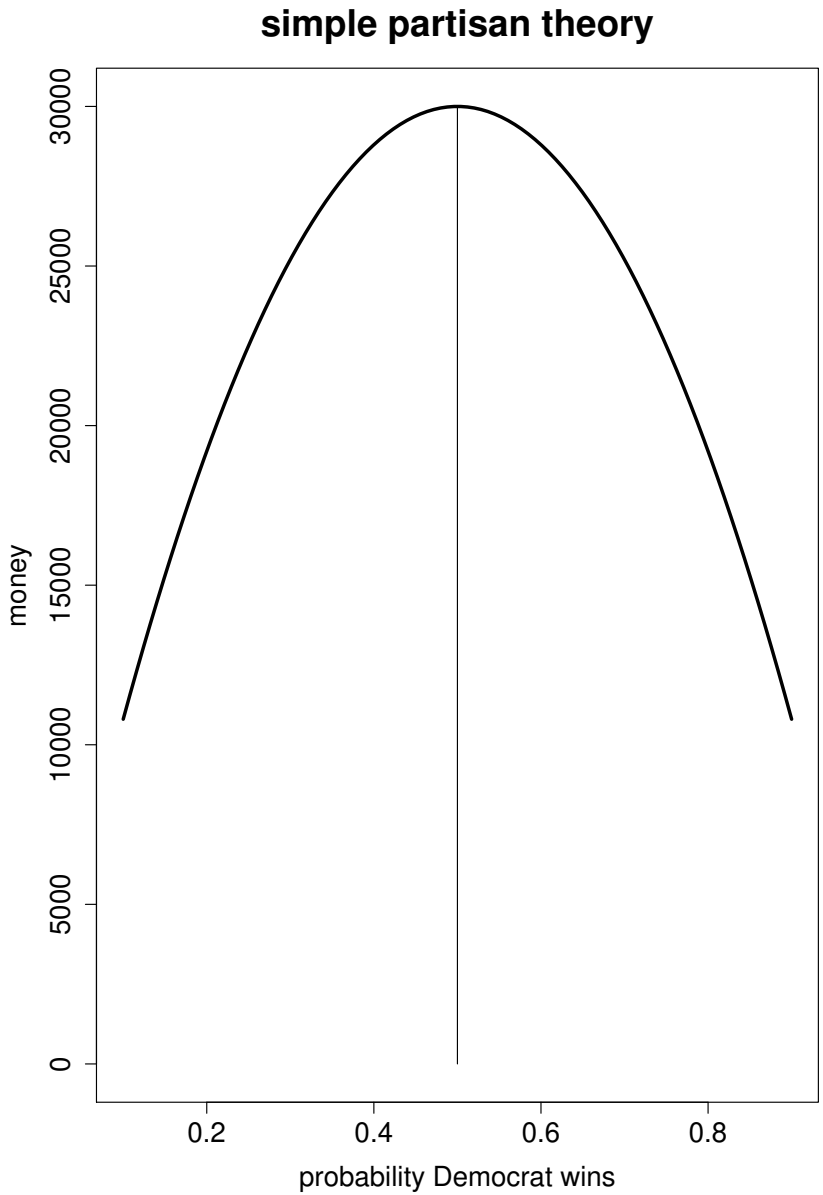
0.6
0.8
probability Democrat wins


simple partisan theory
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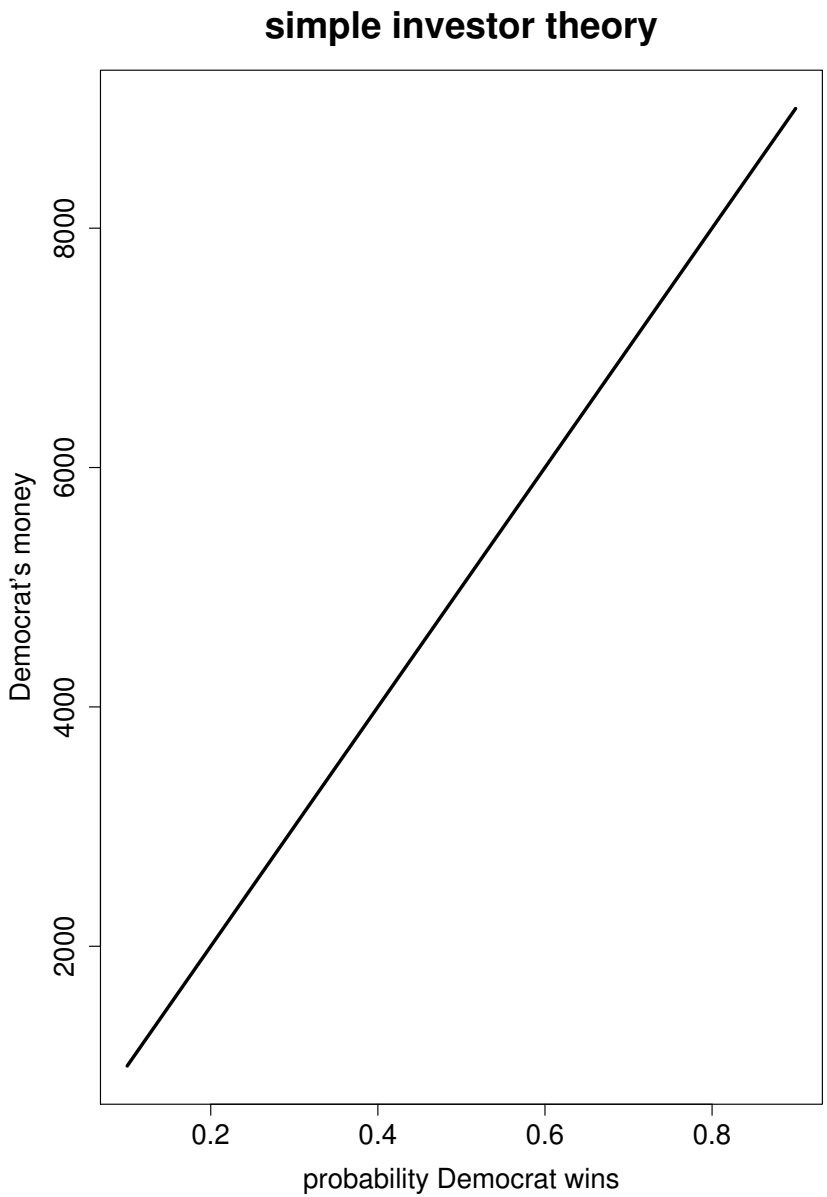
simple investor theory
Democrat's money
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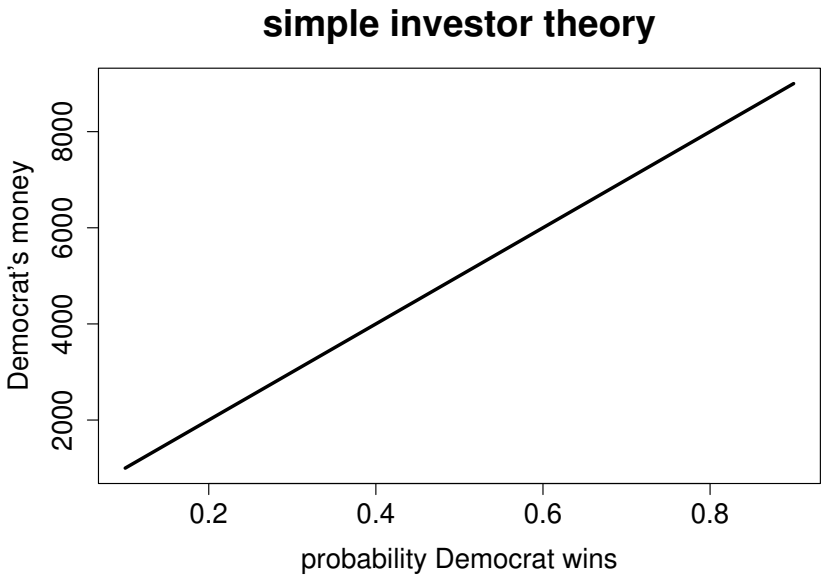
6000
8000
0.2
0.4
0.6
0.8
probability Democrat wins


simple investor theory
Democrat's money
2000
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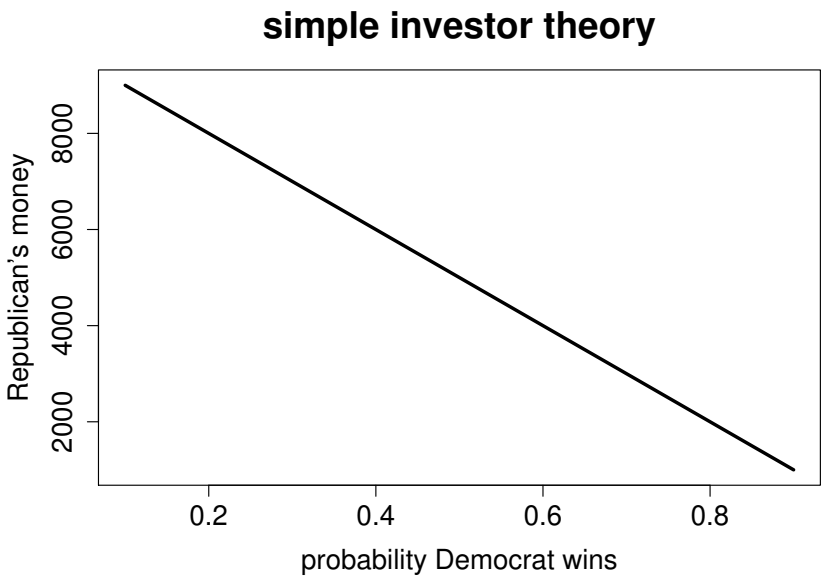
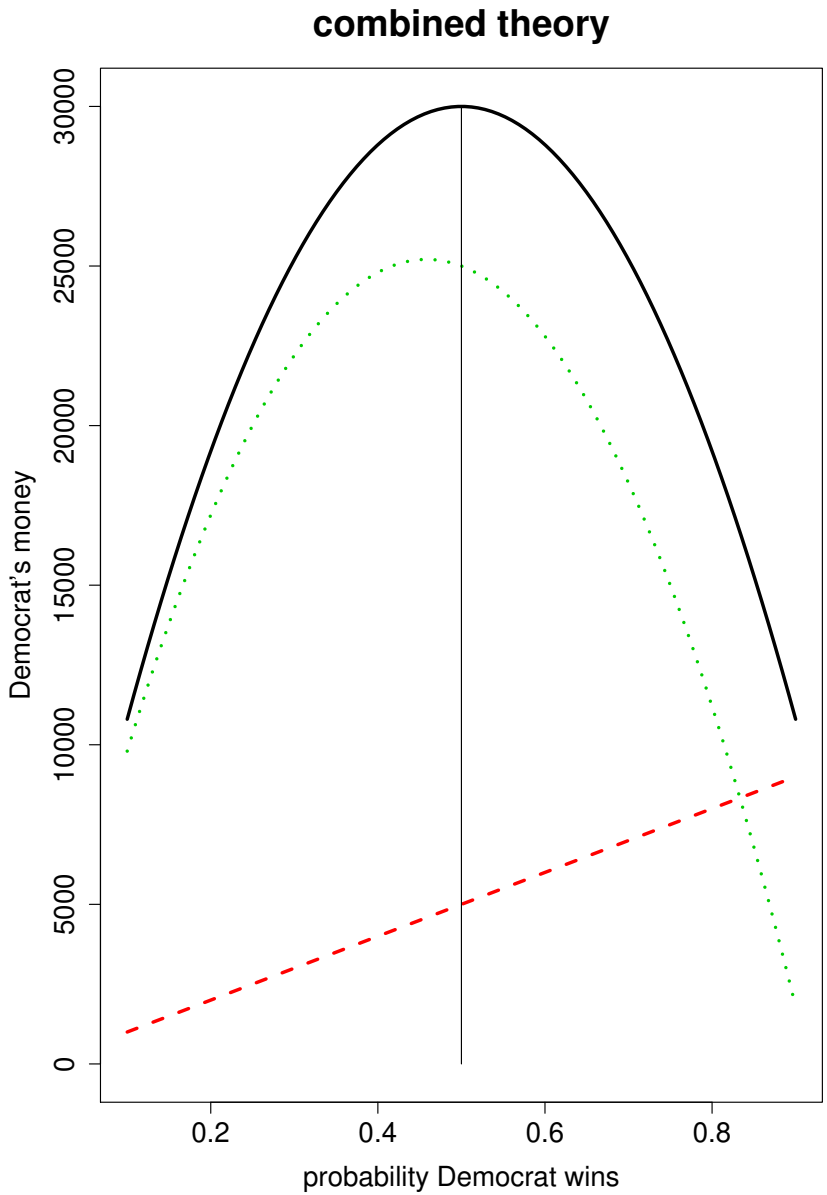
6000
8000
0.2
0.4
0.6
0.8
probability Democrat wins


simple investor theory
Republican's money
2000
4000
6000
8000
0.2
0.4
0.6
0.8
probability Democrat wins


combined theory
Democrat's money
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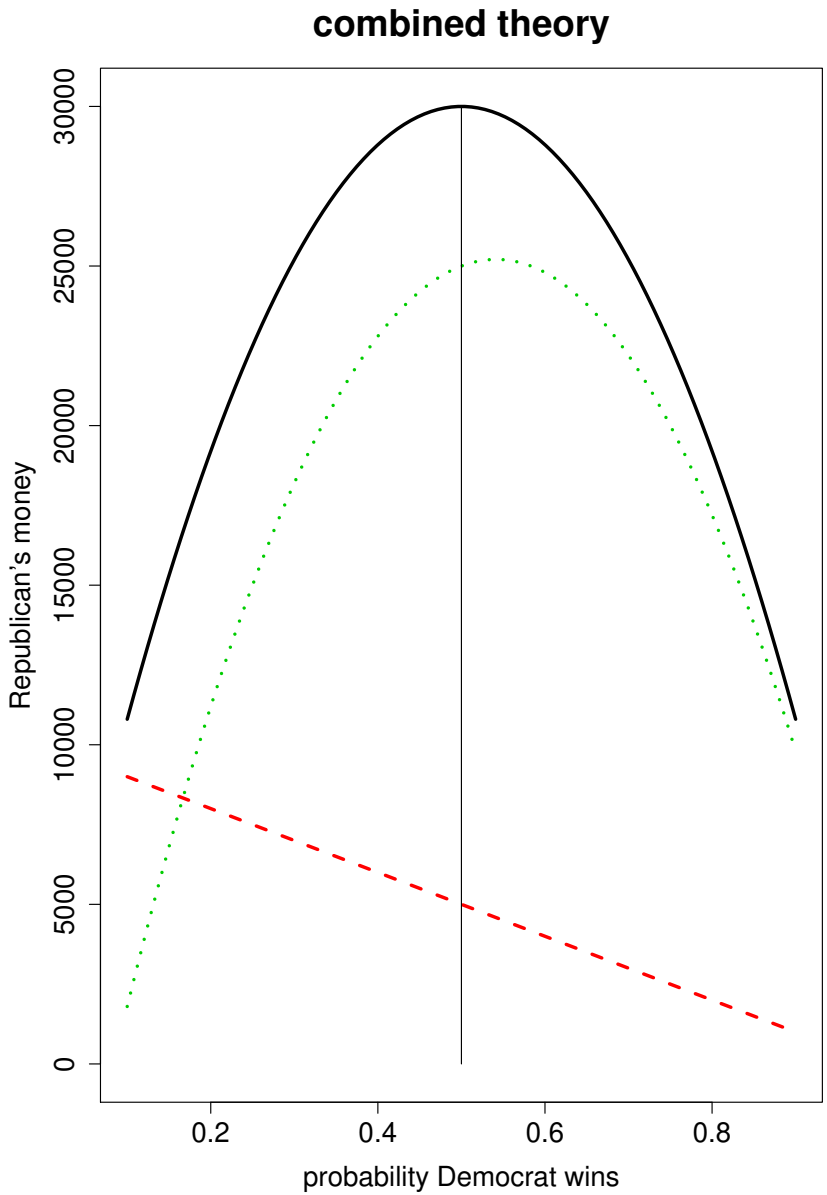
5000
10000
15000
20000
25000
30000
0.2
0.4
0.6
0.8
probability Democrat wins


combined theory
Republican's money
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5000
10000
15000
20000
25000
30000
0.2
0.4
0.6
0.8
probability Democrat wins

Contributions Theory Equilibrium (Baron, Snyder, Wand)

p **is the probability that the Democrat defeats the Republican:** $0 < p < 1$**.**

total of investor contributions, by party:

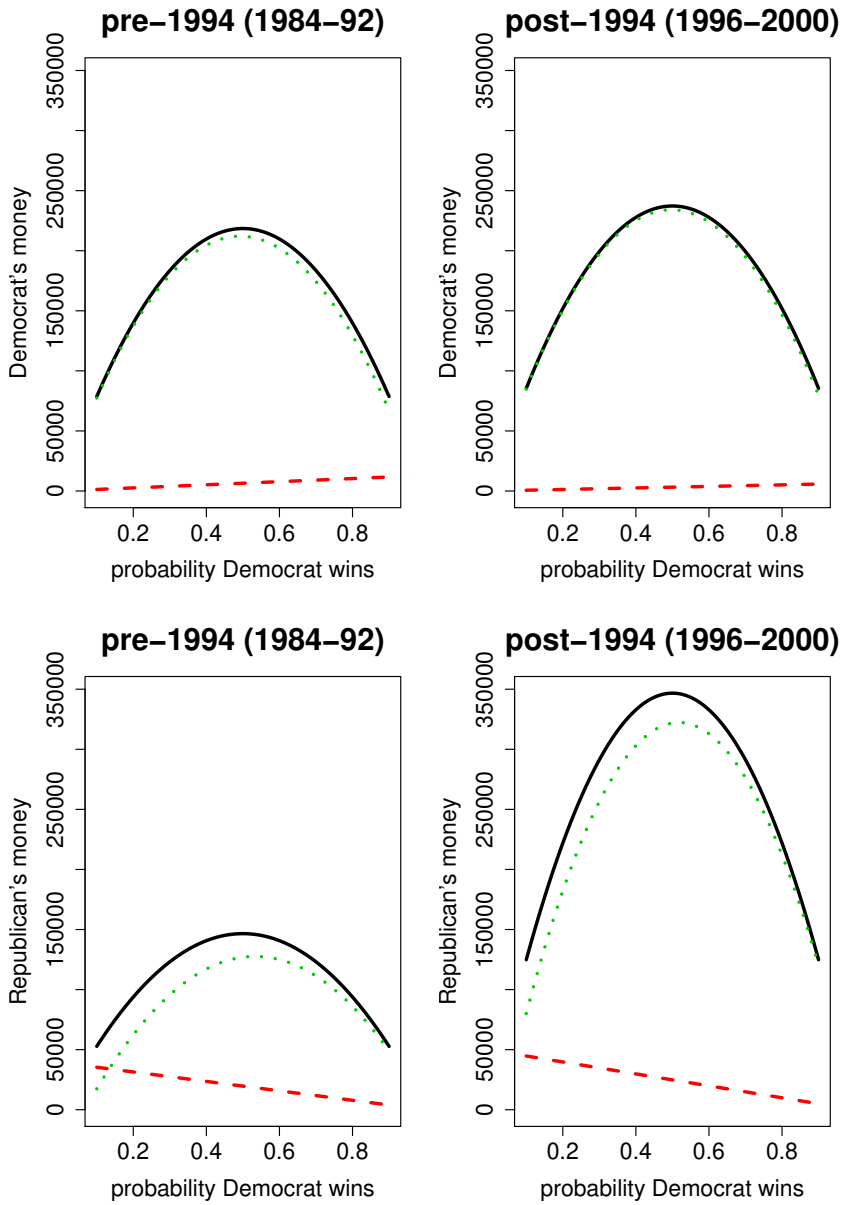
$$X_D = \gamma_D \, p$$
$$X_R = \gamma_R \, (1 - p)$$

total of partisan contributions, by party:

$$Y_D = \phi_D \, p(1 - p) - X_D$$
$$Y_R = \phi_R \, p(1 - p) - X_R$$

(see also Wand 2003, 35)

- before and after 1994, separately, Wand (2003) classifies PACs as one of:
  - Republican partisan
  - Democratic partisan
  - Republican investor
  - Democratic investor
  - classification rules (pages 62–65)
- Wand then estimates the preceding model for each set of years 1984–92 and 1996–2000


pre−1994 (1984−92)
post−1994 (1996−2000)
pre−1994 (1984−92)
post−1994 (1996−2000)
Democrat's money
Republican's money
0
50000
150000
250000
350000
0.2
0.4
0.6
0.8
probability Democrat wins

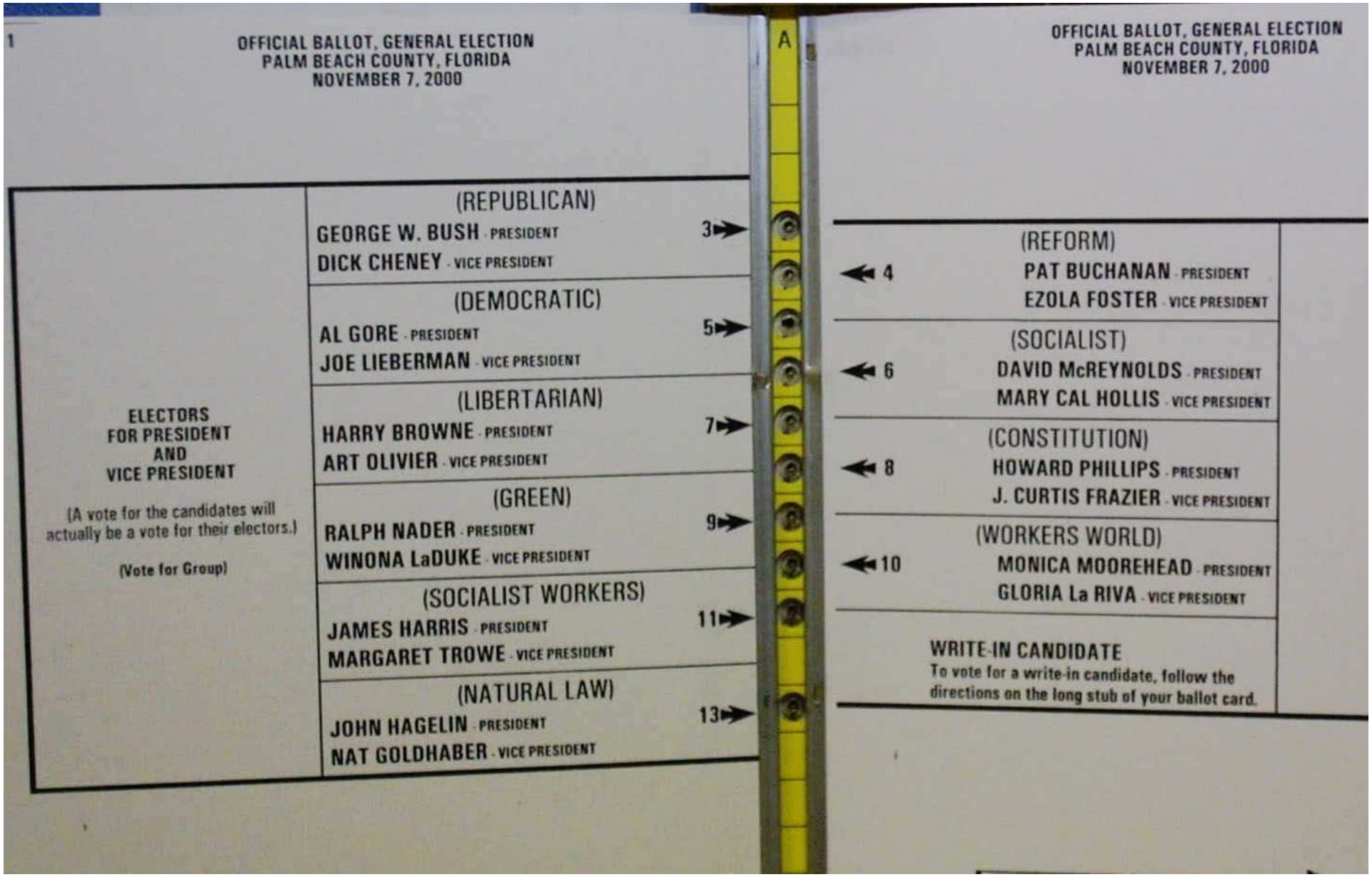
how well does the theoretical model describe contributions in open seats?

Wand (2003) uses nonparametric estimates to assess this:

- **party committees (Figure 3.1, page 46)**
- **corporate and labor PACs, presumptively partisan (Figure 3.2, page 48)**
- **corporate and labor PACs, presumptively investor (Figure 3.3, page 50)**
- **investors and partisans**
  - **classification rules (pages 62–65)**
  - **partisan estimates (Figure 3.8, page 66)**
  - **investor estimates (Figure 3.9, page 67)**

parametric model estimates (2003, pages 73–74)

- **Florida 2000**
  - **Palm Beach County's butterfly ballot**



1

OFFICIAL BALLOT, GENERAL ELECTION
PALM BEACH COUNTY, FLORIDA
NOVEMBER 7, 2000

ELECTORS FOR PRESIDENT AND VICE PRESIDENT

(A vote for the candidates will actually be a vote for their electors.)

(Vote for Group)

(REPUBLICAN)
GEORGE W. BUSH - PRESIDENT
DICK CHENEY - VICE PRESIDENT
3

(DEMOCRATIC)
AL GORE - PRESIDENT
JOE LIEBERMAN - VICE PRESIDENT
5

(LIBERTARIAN)
HARRY BROWNE - PRESIDENT
ART OLIVIER - VICE PRESIDENT
7

(GREEN)
RALPH NADER - PRESIDENT
WINONA LaDUKE - VICE PRESIDENT
9

(SOCIALIST WORKERS)
JAMES HARRIS - PRESIDENT
MARGARET TROWE - VICE PRESIDENT
11

(NATURAL LAW)
JOHN HAGELIN - PRESIDENT
NAT GOLDHABER - VICE PRESIDENT
13

A

OFFICIAL BALLOT, GENERAL ELECTION
PALM BEACH COUNTY, FLORIDA
NOVEMBER 7, 2000

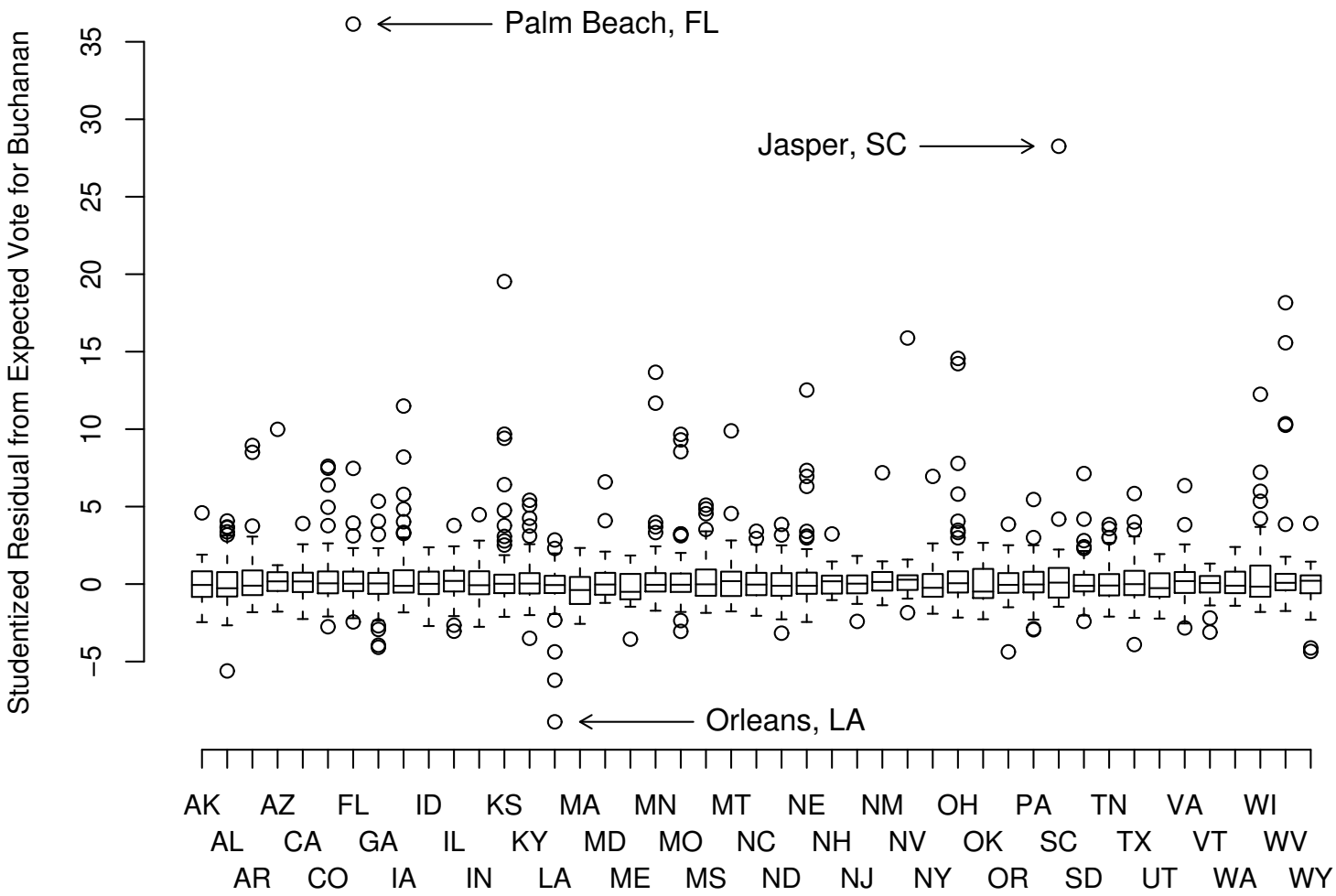
(REFORM)
4
PAT BUCHANAN - PRESIDENT
EZOLA FOSTER - VICE PRESIDENT

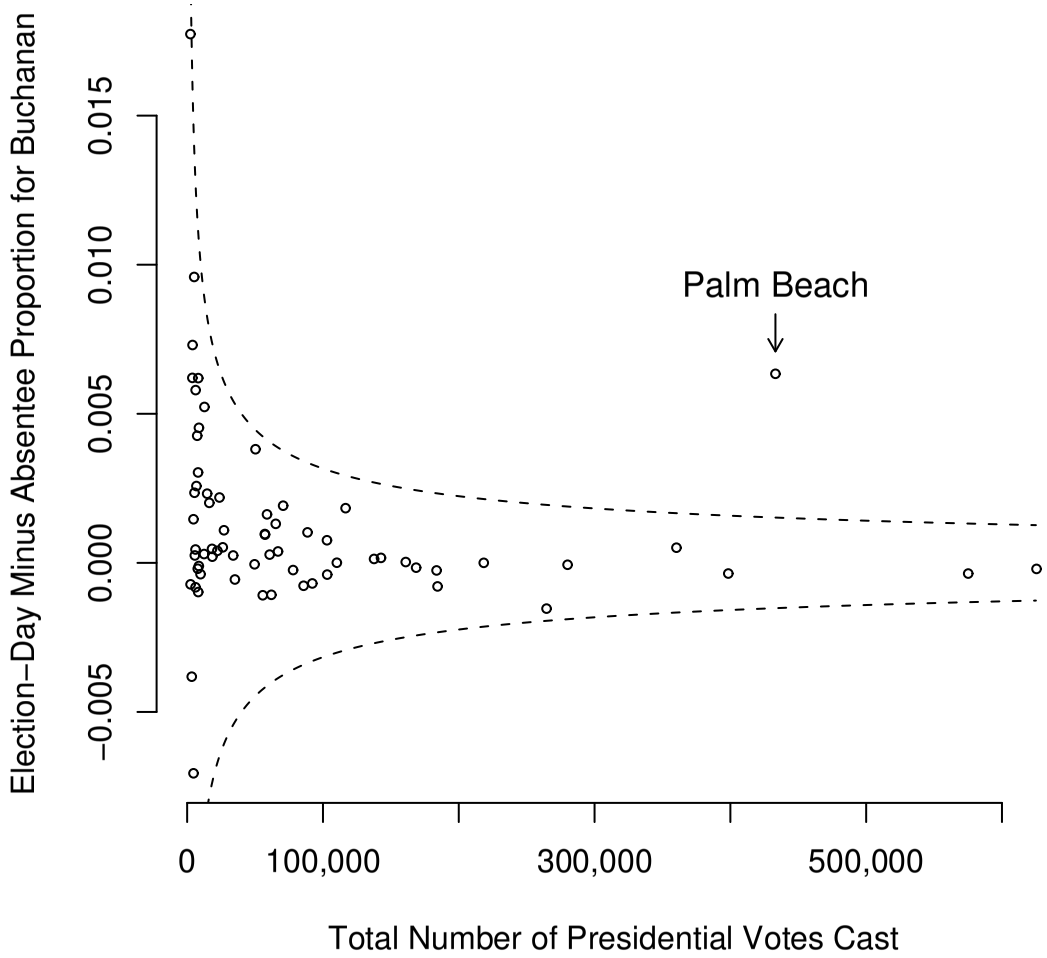
(SOCIALIST)
6
DAVID McREYNOLDS - PRESIDENT
MARY CAL HOLLIS - VICE PRESIDENT

(CONSTITUTION)
8
HOWARD PHILLIPS - PRESIDENT
J. CURTIS FRAZIER - VICE PRESIDENT

(WORKERS WORLD)
10
MONICA MOOREHEAD - PRESIDENT
GLORIA La RIVA - VICE PRESIDENT

WRITE-IN CANDIDATE
To vote for a write-in candidate, follow the directions on the long stub of your ballot card.


Studentized Residual from Expected Vote for Buchanan
−5
0
5
10
15
20
25
30
35
Palm Beach, FL
Jasper, SC
Orleans, LA
AK AL AR AZ CA CO FL GA IA ID IL IN KS KY LA MA MD ME MN MO MS MT NC ND NE NH NJ NM NV NY OH OK OR PA SC SD TN TX UT VA VT WA WI WV WY


Election−Day Minus Absentee Proportion for Buchanan
−0.005
0.000
0.005
0.010
0.015
Palm Beach
0
100,000
300,000
500,000
Total Number of Presidential Votes Cast

Votes for Reform Candidates by Proportions Voting for U.S. Senate Candidates, for Palm Beach County Precincts

Scope	Reform Candidate	Intercept	Senate: Nelson (D)	Senate: Deckard (Ref)	$\hat{\sigma}$
All precincts	Buchanan	-6.17 **(0.15)**	2.06 **(0.21)**	-12.74 **(14.79)**	**1.22**
District 35	Buchanan	-7.48 **(0.51)**	3.85 **(0.71)**	13.13 **(23.89)**	**1.26**
District 35	Lowe	-1.98 **(0.34)**	-1.86 **(0.51)**	18.06 **(14.46)**	**1.54**
District 16	Buchanan	-7.00 **(0.29)**	3.32 **(0.46)**	3.95 **(15.09)**	**1.15**
District 16	McGuire	-3.37 **(0.30)**	-1.00 **(0.50)**	25.96 **(9.10)**	**1.52**

Note: Entries are $\tanh$ estimates of coefficient parameters of the overdispersed binomial regression model using precinct-level data from the 2000 election (standard errors are in parentheses). The last column reports the LQD dispersion estimate $\hat{\sigma}$. Number of precincts: all precincts, 515; District 35, 105; District 16, 149.

Vote for Buchanan by U.S. Senate Vote in Palm Beach County, for Individual Ballots by Ballot Type

Ballot Type	Intercept	Nelson (D)	Deckard (Ref)
Election-Day	-5.18 **(0.034)**	0.61 **(0.040)**	2.41 **(0.138)**
Absentee	-6.11 **(0.156)**	-0.21 **(0.236)**	3.68 **(0.400)**

Note: Entries are maximum likelihood estimates of coefficient parameters of the binary logistic regression model using ballot data from the 2000 election (standard errors are in parentheses). Ballots with spoiled presidential votes (undervotes or overvotes) are omitted. Including them does not materially change the results. Number of unspoiled ballots for each type: election-day, 381,449; absentee, 36,412.

Proportion Voting for Buchanan by U.S. Senate Vote Choice and Ballot Type in Palm Beach County

	Election-Day Ballots		Absentee Ballots	
Senate Candidate	Proportion	N	Proportion	N
Bill Nelson (D)	0.0102	228,455	0.0017	17,779
Joel Deckard (Ref)	0.0590	1,000	0.0808	99

Note: Entries are the proportion of ballots with a vote for Buchanan out of the N ballots of each type voted for each Senate candidate, using ballot data from the 2000 election. Ballots with spoiled presidential votes (undervotes or overvotes) are omitted.

- **Florida 2000**
  - **Palm Beach County's butterfly ballot**

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  - **at least 2,000 people voted by mistake for Buchanan instead of Gore**

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  - **most likely the number is about 2,800 people**

- **Florida 2000**
  - **Palm Beach County's butterfly ballot**
  - **at least 2,000 people voted by mistake for Buchanan instead of Gore**
  - **most likely the number is about 2,800 people**
  - **were other ballots used in Florida better?**

- **Florida 2000: other ballots better than the butterfly?**
  - **most counties with Votomatic machines had the candidates for president on one page**
  - **consider examples from Broward, Lee and Pinellas counties**

OFFICIAL BALLOT, GENERAL ELECTION
BROWARD COUNTY, FLORIDA
NOVEMBER 7, 2000

GENERAL ELECTION

ELECTORS FOR PRESIDENT AND VICE PRESIDENT

PRESIDENT AND VICE PRESIDENT
(Vote for ONE Group)

GEORGE W. BUSH - For PRESIDENT **DICK CHENEY** - For VICE PRESIDENT	REPUBLICAN	2
AL GORE - For PRESIDENT **JOE LIEBERMAN** - For VICE PRESIDENT	DEMOCRATIC	3
HARRY BROWNE - For PRESIDENT **ART OLIVIER** - For VICE PRESIDENT	LIBERTARIAN	4
RALPH NADER - For PRESIDENT **WINONA LADUKE** - For VICE PRESIDENT	GREEN	5
JAMES HARRIS - For PRESIDENT **MARGARET TROWE** - For VICE PRESIDENT	SOCIALIST WORKERS	6
JOHN HAGELIN - For PRESIDENT **NAT GOLDHABER** - For VICE PRESIDENT	NATURAL LAW	7
PAT BUCHANAN - For PRESIDENT **EZOLA FOSTER** - For VICE PRESIDENT	REFORM	8
DAVID MCREYNOLDS - For PRESIDENT **MARY CAL HOLLIS** - For VICE PRESIDENT	SOCIALIST	9
HOWARD PHILLIPS - For PRESIDENT **J. CURTIS FRAZIER** - For VICE PRESIDENT	CONSTITUTION	10
MONICA MOOREHEAD - For PRESIDENT **GLORIA LA RIVA** - For VICE PRESIDENT	WORKERS WORLD	11

To vote for a write-in candidate,
follow directions on the grey envelope.

1
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OFFICIAL BALLOT, GENERAL ELECTION
LEE COUNTY, FLORIDA
NOVEMBER 7, 2000

FEDERAL

ELECTORS FOR PRESIDENT AND VICE PRESIDENT Vote for One Group	**GEORGE W. BUSH** for PRESIDENT **DICK CHENEY** for VICE PRESIDENT	(REP)	4 ➡
	AL GORE for PRESIDENT **JOE LIEBERMAN** for VICE PRESIDENT	(DEM)	5 ➡
	HARRY BROWNE for PRESIDENT **ART OLIVIER** for VICE PRESIDENT	(LIB)	6 ➡
	RALPH NADER for PRESIDENT **WINONA LaDUKE** for VICE PRESIDENT	(GRE)	7 ➡
	JAMES HARRIS for PRESIDENT **MARGARET TROWE** for VICE PRESIDENT	(SWP)	8 ➡
	JOHN HAGELIN for PRESIDENT **NAT GOLDHABER** for VICE PRESIDENT	(LAW)	9 ➡
	PAT BUCHANAN for PRESIDENT **EZOLA FOSTER** for VICE PRESIDENT	(REF)	10 ➡
	DAVID McREYNOLDS for PRESIDENT **MARY CAL HOLLIS** for VICE PRESIDENT	(SPF)	11 ➡
	HOWARD PHILLIPS for PRESIDENT **J. CURTIS FRAZIER** for VICE PRESIDENT	(CPF)	12 ➡
	MONICA MOOREHEAD for PRESIDENT **GLORIA LaRIVA** for VICE PRESIDENT	(WWP)	13 ➡
	To vote for a write-in candidate, follow the directions on the long stub of your ballot card.		14 ➡

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OFFICIAL BALLOT, GENERAL ELECTION
LEE COUNTY, FLORIDA
NOVEMBER 7, 2000

CONGRESSIONAL

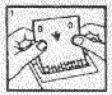
UNITED STATES SENATOR Vote for One	**BILL McCOLLUM**	(REP)	22 ➡
	BILL NELSON	(DEM)	23 ➡
	JOE SIMONETTA	(LAW)	24 ➡
	JOEL DECKARD	(REF)	25 ➡
	WILLIE LOGAN	(NPA)	26 ➡
	ANDY MARTIN	(NPA)	27 ➡
	DARRELL L. McCORMICK	(NPA)	28 ➡
	To vote for a write-in candidate, follow the directions on the long stub of your ballot card.		29 ➡

REPRESENTATIVE IN CONGRESS, 14th CONGRESSIONAL DISTRICT Vote for One	**PORTER GOSS**	(REP)	32 ➡
	SAM FARLING	(LAW)	33 ➡
	To vote for a write-in candidate, follow the directions on the long stub of your ballot card.		34 ➡

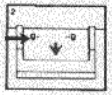
Official Sample Ballot, General Election, Pinellas County, FL

VOTING INSTRUCTIONS

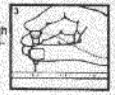
STEP 1. Using both hands, insert the ballot card all the way into the Votomatic.



STEP 2. Be sure the two slots in the end of your card fit down over the 2 red pins.



STEP 3. To vote, hold the punching stylus straight up. Punch straight down through the ballot card for the candidates or issues of your choice.



DO NOT USE PEN OR PENCIL.

STEP 4. Vote all pages.

STEP 5. After voting, remove the ballot card from the Votomatic.

NOTE: If you make a mistake, return your ballot card and obtain another.

OFFICIAL BALLOT
GENERAL ELECTION
PINELLAS COUNTY, FLORIDA
NOVEMBER 7, 2000

FEDERAL

THIS CONTEST WILL APPEAR IN ALL PRECINCTS

ELECTORS FOR PRESIDENT AND VICE PRESIDENT
(Vote for ONE Group)

GEORGE W. BUSH - PRESIDENT Dick Cheney - VICE PRESIDENT	(Republican)	3
AL GORE - PRESIDENT Joe Lieberman - VICE PRESIDENT	(Democratic)	4
HARRY BROWNE - PRESIDENT Art Olivier - VICE PRESIDENT	(Libertarian)	5
RALPH NADER - PRESIDENT Winona LaDuke - VICE PRESIDENT	(Green)	6
JAMES HARRIS - PRESIDENT Margaret Trowe - VICE PRESIDENT	(Socialist Workers)	7
JOHN HAGELIN - PRESIDENT Nat Goldhaber - VICE PRESIDENT	(Natural Law)	8
PAT BUCHANAN - PRESIDENT Ezola Foster - VICE PRESIDENT	(Reform)	9
DAVID McREYNOLDS - PRESIDENT Mary Cal Hollis - VICE PRESIDENT	(Socialist)	10
HOWARD PHILLIPS - PRESIDENT J. Curtis Frazier - VICE PRESIDENT	(Constitution)	11
MONICA MOOREHEAD - PRESIDENT Gloria La Riva - VICE PRESIDENT	(Workers World)	12
WRITE-IN CANDIDATE To vote for a write-in candidate, follow directions on the long stub of the ballot card.		

CONGRESSIONAL

THIS CONTEST WILL APPEAR IN ALL PRECINCTS

UNITED STATES SENATOR
(Vote for ONE)

BILL McCOLLUM	(Republican)	21
BILL NELSON	(Democratic)	22
JOE SIMONETTA	(Natural Law)	23
JOEL DECKARD	(Reform)	24
WILLIE LOGAN	(No Party)	25
ANDY MARTIN	(No Party)	26
DARRELL L. McCORMICK	(No Party)	27
WRITE-IN CANDIDATE To vote for a write-in candidate, follow directions on the long stub of the ballot card.		

THIS CONTEST WILL APPEAR IN PRECINCTS WITHIN THE 9TH CONGRESSIONAL DISTRICT

REPRESENTATIVE IN CONGRESS 9TH CONGRESSIONAL DISTRICT
(Vote for ONE)

MICHAEL BILIRAKIS	(Republican)	31
JON DUFFEY	(Reform)	32
WRITE-IN CANDIDATE To vote for a write-in candidate, follow directions on the long stub of the ballot card.		

THIS CONTEST WILL APPEAR IN PRECINCTS WITHIN THE 10TH CONGRESSIONAL DISTRICT

REPRESENTATIVE IN CONGRESS 10TH CONGRESSIONAL DISTRICT
(Vote for ONE)

C. W. BILL YOUNG	(Republican)	34
JOSETTE GREEN	(Natural Law)	35
RANDY HEINE	(No Party)	36
WRITE-IN CANDIDATE To vote for a write-in candidate, follow directions on the long stub of the ballot card.		

STATE

THESE CONTESTS WILL APPEAR IN ALL PRECINCTS

TREASURER
(Vote for ONE)

TOM GALLAGHER	(Republican)	42
JOHN COSGROVE	(Democratic)	43

COMMISSIONER OF EDUCATION
(Vote for ONE)

CHARLIE CRIST	(Republican)	46
GEORGE H. SHELDON	(Democratic)	47
VASSILIA GAZETAS	(No Party)	48

LEGISLATIVE

THIS CONTEST WILL APPEAR IN PRECINCTS WITHIN STATE SENATE DISTRICT 21

STATE SENATOR 21ST SENATORIAL DISTRICT
(Vote for ONE)

RUDOLPH 'RUDY' BRADLEY	(Republican)	52
LESLEY 'LES' MILLER	(Democratic)	53
KIM COLJOHN	(No Party)	54

THIS CONTEST WILL APPEAR IN PRECINCTS WITHIN STATE HOUSE DISTRICT 47

STATE REPRESENTATIVE 47TH HOUSE DISTRICT
(Vote for ONE)

ROB WALLACE	(Republican)	60
MONTE BELOTE	(Democratic)	61

THIS CONTEST WILL APPEAR IN PRECINCTS WITHIN STATE HOUSE DISTRICT 48

STATE REPRESENTATIVE 48TH HOUSE DISTRICT
(Vote for ONE)

GUS MICHAEL BILIRAKIS	(Republican)	62
CHRIS GREGG	(No Party)	63

THIS CONTEST WILL APPEAR IN PRECINCTS WITHIN STATE HOUSE DISTRICT 49

STATE REPRESENTATIVE 49TH HOUSE DISTRICT
(Vote for ONE)

LARRY CROW	(Republican)	64
SUE HUMPHREYS	(Democratic)	65

THIS CONTEST WILL APPEAR IN PRECINCTS WITHIN STATE HOUSE DISTRICT 50

STATE REPRESENTATIVE 50TH HOUSE DISTRICT
(Vote for ONE)

KIM BERFIELD	(Republican)	66
AVA VanNAHMEN	(Democratic)	67

THIS CONTEST WILL APPEAR IN PRECINCTS WITHIN STATE HOUSE DISTRICT 51

STATE REPRESENTATIVE 51ST HOUSE DISTRICT
(Vote for ONE)

LESLIE WATERS	(Republican)	68
MARY BRENNAN	(Democratic)	69

NOVEMBER 7, 2000

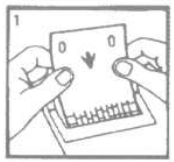
For Additional Information, Contact:

DEE BROWN

MARION COUNTY SUPERVISOR OF ELECTIONS
Post Office Box 289
Ocala, Florida 34478-0289

VOTING INSTRUCTIONS

STEP 1. Using both hands, insert the ballot card all the way into the Votomatic.



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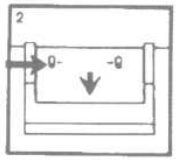

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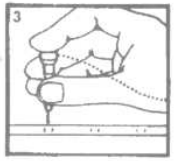
DO NOT USE PEN OR PENCIL.

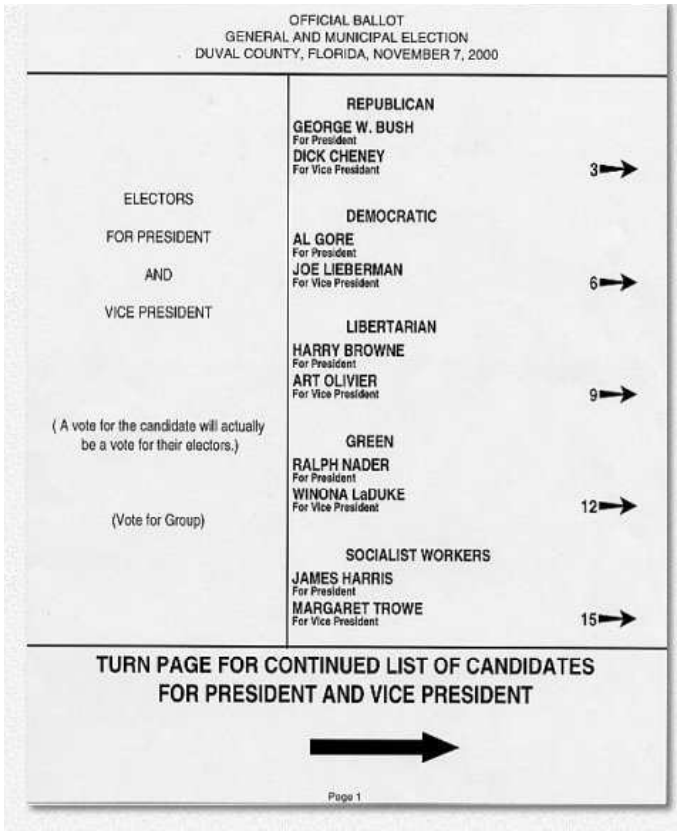


STEP 4. You may vote all pages.

STEP 5. After voting, remove the ballot card from the Votomatic. Turn ballot card over and remove any small "chips" that may be attached to back of card. Fold top of ballot card down over voted portion and place in ballot box.

NOTE: If you make a mistake, return your ballot card and obtain another.

- **Florida 2000**
  - **Duval County's two-page ballot**
    - **the cover of the voting book had the instruction (as in Pinellas County) "Vote all pages"**



OFFICIAL BALLOT
GENERAL AND MUNICIPAL ELECTION
DUVAL COUNTY, FLORIDA, NOVEMBER 7, 2000

ELECTORS

FOR PRESIDENT

AND

VICE PRESIDENT

(A vote for the candidate will actually be a vote for their electors.)

(Vote for Group)

REPUBLICAN
GEORGE W. BUSH
For President
DICK CHENEY
For Vice President
3

DEMOCRATIC
AL GORE
For President
JOE LIEBERMAN
For Vice President
6

LIBERTARIAN
HARRY BROWNE
For President
ART OLIVIER
For Vice President
9

GREEN
RALPH NADER
For President
WINONA LaDUKE
For Vice President
12

SOCIALIST WORKERS
JAMES HARRIS
For President
MARGARET TROWE
For Vice President
15

TURN PAGE FOR CONTINUED LIST OF CANDIDATES
FOR PRESIDENT AND VICE PRESIDENT

Page 1

OFFICIAL BALLOT
GENERAL AND MUNICIPAL ELECTION
DUVAL COUNTY, FLORIDA, NOVEMBER 7, 2000

ELECTORS

FOR PRESIDENT

AND

VICE PRESIDENT

(A vote for the candidate will actually be a vote for their electors)

(Continued from previous page)

NATURAL LAW
JOHN HAGELIN
For President
NAT GOLDHABER
For Vice President
22 →

REFORM
PAT BUCHANAN
For President
EZOLA FOSTER
For Vice President
25 →

SOCIALIST
DAVID McREYNOLDS
For President
MARY CAL HOLLIS
For Vice President
28 →

CONSTITUTION
HOWARD PHILLIPS
For President
J. CURTIS FRAZIER
For Vice President
31 →

WORKERS WORLD
MONICA MOOREHEAD
For President
GLORIA LA RIVA
For Vice President
34 →

WRITE-IN CANDIDATE
For President
For Vice President
36 →

- **Florida 2000**
  - **Duval County's two-page ballot**
    - **the cover of the voting book had the instruction (as in Pinellas County) "Vote all pages"**
  - **what happened?**

- **Florida 2000**
  - **Duval County's two-page ballot**
    - **the cover of the voting book had the instruction (as in Pinellas County) "Vote all pages"**
  - **what happened?**
  - **the result was more than 26,000 overvotes**
  - **291,581 ballots were cast in Duval County**
  - **about 9 percent of all ballots cast in Duval had an overvote for president**

- **Florida 2000: better ballots**
  - **optical scan ballots**
    - ∗ **precinct-tabulated in Hernando County**

SAMPLE

BALLOT

OFFICIAL GENERAL ELECTION
HERNANDO COUNTY, FLORIDA
NOVEMBER 7, 2000

ANN S. MAU
SUPERVISOR OF ELECTIONS
20 NORTH MAIN STREET, ROOM 463
BROOKSVILLE, FL 34601
(352) 754-4125

CHECKLIST FOR VOTERS

1. ***Picture ID or Affidavit is required*** to be issued a ballot and vote.
2. To ***find your polling place***, see list on this sample ballot.
3. ***Have you moved or changed your name since you last voted?*** If you did, please make change in writing to the SOE Office to save you time on election day.
4. According to Florida law, ***you must vote in the precinct where you live.***
5. For ***absentee ballot*** information, call the Elections Office.
6. ***YES, you may take this sample ballot into the voting booth for reference.***

DIRECTIONS: ● TO VOTE, COMPLETELY FILL IN THE OVAL TO THE LEFT OF YOUR CHOICE, AS SHOWN. TO VOTE FOR A WRITE-IN CANDIDATE, WRITE THE NAME OF THE CANDIDATE IN THE BLANK SPACE PROVIDED FOR THAT

VOTERS IN ALL PRECINCTS

ELECTORS FOR PRESIDENT AND VICE PRESIDENT

ELECTORS FOR PRESIDENT AND VICE PRESIDENT
Vote for Group

REPUBLICAN
◯ GEORGE W. BUSH
DICK CHENEY

DEMOCRATIC
◯ AL GORE
JOE LIEBERMAN

LIBERTARIAN
◯ HARRY BROWNE
ART OLIVIER

GREEN
◯ RALPH NADER
WINONA LADUKE

SOCIALIST WORKERS
◯ JAMES HARRIS
MARGARET TROWE

NATURAL LAW
◯ JOHN HAGELIN
NAT GOLDHABER

REFORM
◯ PAT BUCHANAN
EZOLA FOSTER

SOCIALIST
◯ DAVID McREYNOLDS
MARY CAL HOLLIS

CONSTITUTION
◯ HOWARD PHILLIPS
J. CURTIS FRAZIER

WORKERS WORLD
◯ MONICA MOOREHEAD
GLORIA LA RIVA

◯ _____
Write-in

VOTERS IN ALL PRECINCTS

CONGRESSIONAL

UNITED STATES SENATOR
Vote for One

◯ BILL McCOLLUM — REP
◯ BILL NELSON — DEM
◯ JOE SIMONETTA — LAW
◯ JOEL DECKARD — REF
◯ WILLIE LOGAN — NPA
◯ ANDY MARTIN — NPA
◯ DARRELL McCORMICK — NPA
◯ _____
Write-in

REPRESENTATIVE IN CONGRESS
5th Congressional District
Vote for One

◯ PETE ENWALL — REP
◯ KAREN L. THURMAN — DEM
◯ _____
Write-in

STATE

TREASURER
Vote for One

◯ TOM GALLAGHER — REP
◯ JOHN COSGROVE — DEM

COMMISSIONER OF EDUCATION
Vote for One

◯ CHARLIE CRIST — REP
◯ GEORGE H. SHELDON — DEM
◯ VASSILIA GAZETAS — NPA

VOTERS IN ALL PRECINCTS

COUNTY

SHERIFF
Vote for One

◯ RICHARD B. (RICH) NUGENT — REP
◯ JAMES E. "EDDIE" McCONNELL — DEM
◯ MICHAEL JOSEPH ROBINSON SR. — NPA

TAX COLLECTOR
Vote for One

◯ GARRY ALLEN — REP
◯ JUANITA B. SIKES — DEM

SUPERVISOR OF ELECTIONS
Vote for One

◯ "GUS" GUSTAVE GUADAGNINO — REP
◯ ANNIE "PAT" WILLIAMS — DEM

COUNTY COMMISSIONER
DISTRICT 1
Vote for One

◯ MARTHA JANE "JANEY" BALDWIN — REP
◯ MARY E. (BETTY) WHITEHOUSE — DEM

COUNTY COMMISSIONER
DISTRICT 3
Vote for One

◯ CAREY CARLSON — REP
◯ DIANE ROWDEN — DEM

COUNTY COMMISSIONER
DISTRICT 5
Vote for One

◯ WILLIAM ALONZO MERRITT — REP
◯ MARY C. AIKEN — DEM

VOTERS IN ALL PRECINCTS

NON PARTISAN JUDICIAL/SCHOOL BOARD SUPREME COURT

Shall Justice R. FRED LEWIS of the Supreme Court be retained in office?
◯ YES
◯ NO

Shall Justice BARBARA J. PARIENTE of the Supreme Court be retained in office?
◯ YES
◯ NO

Shall Justice PEGGY A. QUINCE of the Supreme Court be retained in office?
◯ YES
◯ NO

VOTERS IN ALL PRECINCTS

DISTRICT COURT OF APPEAL 5th DISTRICT

Shall Judge EMERSON R. THOMPSON, JR. of the 5th District Court of Appeal be retained in office?
◯ YES
◯ NO

VOTERS IN ALL PRECINCTS

SCHOOL BOARD MEMBER
District 2
Vote for One

◯ GAIL M. COLEMAN
◯ SHANNON LAVIANO

VOTERS IN ALL PRECINCTS

PROPOSED CONSTITUTIONAL AMENDMENTS AND OTHER PUBLIC MEASURES

NO. 1 CONSTITUTIONAL AMENDMENT
ARTICLE X, SECTION 19
(Initiative)

Florida Transportation Initiative for statewide high-speed monorail, fixed guideway or magnetic levitation system.

To reduce traffic and increase travel alternatives, this amendment provides for development of a high speed monorail, fixed guideway or magnetic levitation system linking Florida's five largest urban areas and providing for access to existing airport and seaport passenger facilities and directed by directing the state and/or state authorized private entity to implement the financing, acquisition of rights-of-way, design, construction and operation of the system, with construction beginning by November 11, 2003.

◯ YES FOR A PPROVAL ◯ NO FOR REJECTION

NO. 2 CIRCUIT COURT JUDGE REFERENDUM
(Implementing Article V, Section 10)

Local Option for Selection of Circuit Judges

Shall the method of selecting circuit court judges in the 5th Judicial Circuit be changed from election by a vote of the people to selection by the Judicial Nominating Commission and appointment by the Governor with subsequent terms determined by a retention vote of the people?

◯ YES ◯ NO

NO. 3 COUNTY COURT JUDGE REFERENDUM
(Implementing Article V, Section 10)

Local Option for Selection of County Judges

Shall the method of selecting county court judges in Hernando County be changed from election by a vote of the people to selection by the Judicial Nominating Commission and appointment by the Governor with subsequent terms determined by a retention vote of the people?

◯ YES ◯ NO

- **Florida 2000: better ballots**
  - **optical scan ballots**
    - **not so good in Lake County**
    - **choices too compressed (see the Orlando Sentinel clip)**

Lake County's solution -- and more problems

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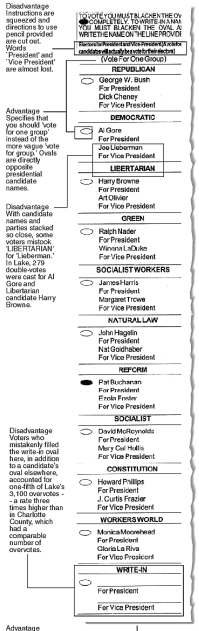

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    - **irresponsible Election Board illegally did not count unambiguous write-ins**

- **Florida 2000: undervotes, other votes and overvotes**
  - **undervotes**
    - **primary focus of the recount efforts**
    - **Toobin tells the story well**
    - **divining the undervotes, the outcome depends on the rules used**
    - **with some rules Bush wins by a few hundred votes**
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  - **overseas absentee votes**
    - **680 that were counted were illegal (New York Times)**
    - **without those ballots, Bush's winning margin shrinks to (best guess) 251**

- **Florida 2000: overvotes**
  - **there were approximately 110,000 overvotes**
  - **the frequency of overvotes depended on administrative procedures, especially on:**
    - **the type of machine**
    - **the type of ballot**
    - **the tabulation method**
    - **whether a warn-and-correct system was in operation**
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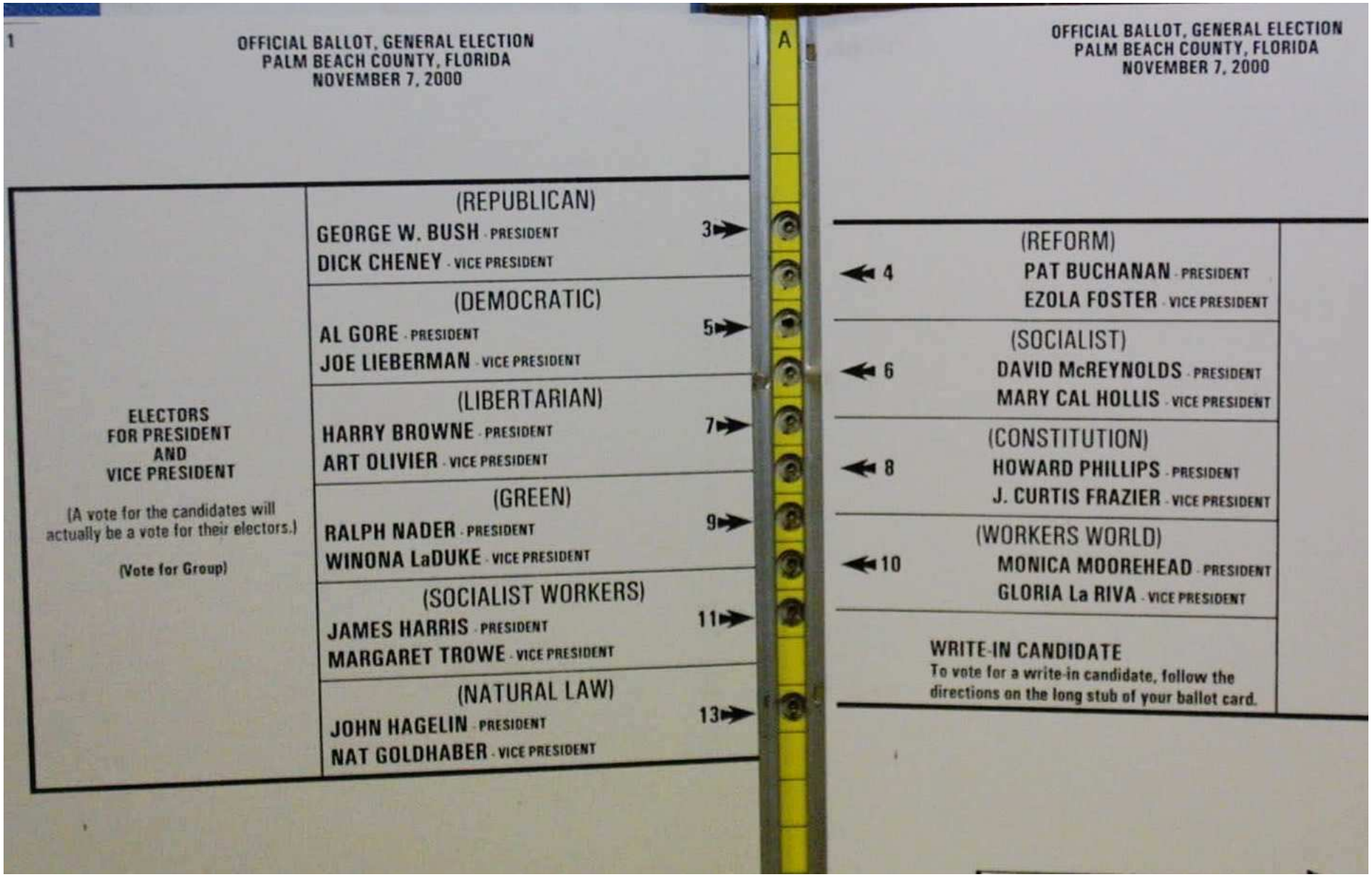

1

OFFICIAL BALLOT, GENERAL ELECTION
PALM BEACH COUNTY, FLORIDA
NOVEMBER 7, 2000

ELECTORS FOR PRESIDENT AND VICE PRESIDENT

(A vote for the candidates will actually be a vote for their electors.)

(Vote for Group)

(REPUBLICAN)
GEORGE W. BUSH - PRESIDENT
DICK CHENEY - VICE PRESIDENT
3

(DEMOCRATIC)
AL GORE - PRESIDENT
JOE LIEBERMAN - VICE PRESIDENT
5

(LIBERTARIAN)
HARRY BROWNE - PRESIDENT
ART OLIVIER - VICE PRESIDENT
7

(GREEN)
RALPH NADER - PRESIDENT
WINONA LaDUKE - VICE PRESIDENT
9

(SOCIALIST WORKERS)
JAMES HARRIS - PRESIDENT
MARGARET TROWE - VICE PRESIDENT
11

(NATURAL LAW)
JOHN HAGELIN - PRESIDENT
NAT GOLDHABER - VICE PRESIDENT
13

A

OFFICIAL BALLOT, GENERAL ELECTION
PALM BEACH COUNTY, FLORIDA
NOVEMBER 7, 2000

(REFORM)
4
PAT BUCHANAN - PRESIDENT
EZOLA FOSTER - VICE PRESIDENT

(SOCIALIST)
6
DAVID McREYNOLDS - PRESIDENT
MARY CAL HOLLIS - VICE PRESIDENT

(CONSTITUTION)
8
HOWARD PHILLIPS - PRESIDENT
J. CURTIS FRAZIER - VICE PRESIDENT

(WORKERS WORLD)
10
MONICA MOOREHEAD - PRESIDENT
GLORIA La RIVA - VICE PRESIDENT

WRITE-IN CANDIDATE
To vote for a write-in candidate, follow the directions on the long stub of your ballot card.

- **many overvotes were Bush+ or Gore+**
  - **adjacent holes (e.g., on the butterfly ballot)**
  - **adjacent bubbles (e.g., Lieberman-Libertarian in Lake County)**

Lake County's solution -- and more problems

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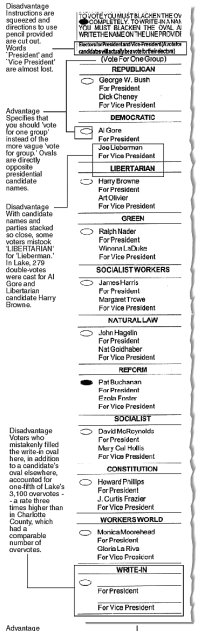

- **many overvotes were Bush+ or Gore+**
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- **WHAT IF BETTER ADMINISTRATIVE PROCEDURES HAD BEEN USED?**

Votes and Allocated Overvotes in Florida, 2000 Presidential Election

	Vote Counts	
	Bush	Gore
Certified Results:[a]		
Florida Total	2,911,215	2,911,417
Federal Absentee	1,575	836
Certified Total	2,912,790	2,912,253
Uncounted Election-day Ballots:[b]		
Unambiguous Write-ins	477	732
Ambiguous Write-ins	220	812
Two-mark Overvotes	15,236	39,148
Multiple-mark Overvotes	8,355	29,328
All Allocated Overvotes	24,288	70,020

Sources: [a] "November 7, 2000 General Election Official Results," Florida Department of State. [b] "Florida Ballots Project Data Files," NORC.

Write-in Overvotes in Florida Counties with Optical Scan Machines, NORC Data

	Unambiguous		Ambiguous		Ratio: Write-in to Certified	
Tabulation	Bush	Gore	Bush	Gore	Bush	Gore
Central	251	419	162	567	0.0029	0.0087
Precinct	222	308	50	219	0.0003	0.0006

Write-in Overvotes in Florida Counties with Optical Scan Machines, NORC Data

	Unambiguous		Ambiguous		Ratio: Write-in to Certified		
County	Bush	Gore	Bush	Gore	Bush	Gore	Tabulation
Bradford	9	16	11	19	0.0037	0.0114	Central
Charlotte	62	107	31	77	0.0026	0.0062	Central
Franklin	2	3	3	5	0.0020	0.0039	Central
Gadsden	1	1	3	122	0.0008	0.0126	Central
Gulf	0	0	0	0	0.0000	0.0000	Central
Hamilton	0	0	5	8	0.0023	0.0046	Central
Hendry	5	4	7	2	0.0025	0.0019	Central
Jackson	1	0	12	44	0.0014	0.0064	Central
Lafayette	0	0	1	6	0.0006	0.0076	Central
Lake	158	258	50	177	0.0042	0.0119	Central
Levy	1	0	15	29	0.0023	0.0054	Central
Liberty	0	0	2	4	0.0015	0.0039	Central
Okeechobee	9	20	10	27	0.0038	0.0102	Central
Suwannee	2	5	9	31	0.0014	0.0088	Central
Taylor	1	5	3	16	0.0010	0.0079	Central

	Unambiguous		Ambiguous		Ratio		
County	Bush	Gore	Bush	Gore	Bush	Gore	Tabulation
Alachua	1	3	0	1	0.0000	0.0001	Precinct
Baker	1	1	1	0	0.0004	0.0004	Precinct
Bay	15	9	3	6	0.0005	0.0008	Precinct
Brevard	7	6	0	1	0.0001	0.0001	Precinct
Clay	5	3	1	2	0.0001	0.0003	Precinct
Columbia	0	0	1	0	0.0001	0.0000	Precinct
Escambia	44	108	25	144	0.0009	0.0062	Precinct
Manatee	109	146	2	11	0.0019	0.0032	Precinct
Monroe	0	1	0	2	0.0000	0.0002	Precinct
Okaloosa	32	16	0	5	0.0006	0.0012	Precinct
Orange	0	4	2	14	0.0000	0.0001	Precinct
Polk	2	3	5	23	0.0001	0.0003	Precinct
Santa Rosa	0	0	3	2	0.0001	0.0002	Precinct
St. Johns	3	2	4	7	0.0002	0.0005	Precinct
St. Lucie	2	2	0	0	0.0001	0.0000	Precinct
Walton	1	1	0	0	0.0001	0.0002	Precinct
Washington	0	1	3	1	0.0006	0.0007	Precinct

Allocated Overvotes in Florida Counties, 2000 Presidential Election, NORC Data

	Number of Allocated Ballots			
	Two Marks		Multiple	
Tabulation	Bush	Gore	Bush	Gore
Votomatic—Duval	4,868	8,480	1,512	5,617
Votomatic—Miami-Dade	1,932	5,103	1,235	5,731
Votomatic—Palm Beach	2,258	10,687	811	3,882
Votomatic—Other	2,419	8,472	1,456	5,603
Datavote—One Page	248	407	377	1,053
Datavote—Two Pages	385	390	317	533
Optical Central—One Column	262	557	441	908
Optical Central—Two Columns	1,996	2,998	1,195	3,096
Optical Precinct	510	942	436	1,120
Opt. Prec.—Columbia, Escambia	339	1,093	528	1,723
Hand (Union)	19	18	47	62

Allocated Overvotes in Florida Counties, 2000 Presidential Election, NORC Data

	Ratio of Allocated Ballots to Certified Vote Counts			
	Two Marks		Multiple	
Tabulation	Bush	Gore	Bush	Gore
Votomatic—Duval	0.032	0.079	0.010	0.052
Votomatic—Miami-Dade	0.007	0.016	0.004	0.017
Votomatic—Palm Beach	0.015	0.040	0.005	0.014
Votomatic—Other	0.002	0.008	0.001	0.005
Datavote—One Page	0.011	0.023	0.017	0.060
Datavote—Two Pages	0.019	0.038	0.015	0.052
Optical Central—One Column	0.005	0.015	0.009	0.025
Optical Central—Two Columns	0.021	0.039	0.013	0.040
Optical Precinct	0.001	0.001	0.000	0.001
Opt. Prec.—Columbia, Escambia	0.004	0.023	0.006	0.036
Hand (Union)	0.008	0.013	0.020	0.044

- **Are Many Marks a Vote?**
- **a simple model with "true voters" and "random voters"**
  - **true voters always vote to convey a specific voting intention, even though they sometimes make mistakes**
  - **random voters simply make marks at random**
- **Assume**
  - **all voters who mark only one candidate for president are true voters**
  - **but only a fraction of the voters who make multiple marks for president are true voters**

- **Assume**
  - **all voters who mark only one candidate for president are true voters**
  - **but only a fraction of the voters who make multiple marks for president are true voters**
- **the conditional Senate voting behavior of the one-mark voters, given their presidential choices, is the standard for the behavior of the true voters in each county**
- **discrepancies between that standard and the conditional Senate voting behavior of the two-mark or multiple-mark voters are due to the presence of random voters in those groups**

Senate Voting Behavior Given Presidential Vote, Ballot Image Data

	Proportion with Major Party Senate Vote (P_1, P_2)					
	One Mark		Two Marks		Multiple	
County	Bush	Gore	Bush	Gore	Bush	Gore
Broward	0.96	0.95	0.69	0.81	0.39	0.45
Highlands	0.96	0.95	0.78	0.78	0.46	0.59
Hillsborough	0.95	0.94	0.67	0.76	0.37	0.46
Lee	0.96	0.94	0.74	0.79	0.42	0.36
Marion	0.96	0.96	0.61	0.77	0.47	0.43
Miami-Dade	0.89	0.89	0.62	0.69	0.54	0.56
Palm Beach	0.95	0.93	0.81	0.87	0.64	0.66
Pasco	0.95	0.94	0.70	0.82	0.53	0.51
Pinellas	0.95	0.94	0.82	0.81	0.54	0.50
Sarasota	0.95	0.93	0.65	0.73	0.37	0.41

Senate Voting Behavior Given Presidential Vote, Ballot Image Data

	Proportion with Same-party Senate Vote (S_1, S_2)					
	One Mark		Two Marks		Multiple	
County	Bush	Gore	Bush	Gore	Bush	Gore
Broward	0.86	0.94	0.74	0.95	0.75	0.92
Highlands	0.88	0.89	0.75	0.80	0.88	0.93
Hillsborough	0.85	0.93	0.72	0.93	0.63	0.94
Lee	0.91	0.83	0.85	0.77	0.81	0.66
Marion	0.85	0.92	0.72	0.82	0.52	0.79
Miami-Dade	0.92	0.93	0.85	0.89	0.80	0.90
Palm Beach	0.87	0.92	0.77	0.90	0.68	0.84
Pasco	0.84	0.91	0.61	0.88	0.69	0.85
Pinellas	0.84	0.92	0.72	0.87	0.74	0.90
Sarasota	0.89	0.89	0.72	0.75	0.77	0.78

- **a simple model with "true voters" and "random voters"**
  - **let P_1 denote the observed proportion of one-mark voters who cast a Senate vote for one of the major party candidates**
  - **let P_2 denote the observed proportion of two-mark voters who do so**

- **Assume:**
  - P_1 **is the rate at which all true voters vote for a major party candidate**
  - H **denotes the unknown rate at which random voters vote for a major party candidate**
  - P_2 **is an average of the rates** P_1 **and** H**, weighted by the unknown proportion of true voters among the two-mark voters**
  - **let** β **denote that proportion**

$$P_2 = \beta P_1 + (1 - \beta)H$$

- **for the additional information needed to find β...**
  - **let S_1 denote the observed proportion of one-mark Bush voters who vote for McCollum instead of Nelson**
  - **let S_2 denote the observed proportion of two-mark Bush voters who do so**

- **Assume:**
  - S_1 **is the rate at which all true Bush voters choose McCollum over Nelson**
  - R **denotes the unknown rate at which random voters who happen to have voted for either McCollum or Nelson end up voting for McCollum**
  - S_2 **is an average of the rates** S_1 **and** R**, weighted by the unknown proportion of true voters among the two-mark Bush voters who also voted for either McCollum or Nelson**
  - **let** α **denote that proportion**

$$S_2 = \alpha S_1 + (1 - \alpha)R$$

- **given**

$$P_2 = \beta P_1 + (1 - \beta) H \tag{1}$$

$$S_2 = \alpha S_1 + (1 - \alpha) R \tag{2}$$

- **solve for** β

- **given**

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  - **equation** (1) **implies** $\alpha = \beta P_1 / P_2$

- **given**

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$$S_2 = \alpha S_1 + (1 - \alpha)R \tag{2}$$

- **solve for β**
  - **α is the proportion of true voters among the two-mark Bush voters who also voted for either McCollum or Nelson**
  - **equation (1) implies $\alpha = \beta P_1 / P_2$**
  - **substituting for α, equation (2) can be solved for β**

$$\beta = \frac{P_2(S_2 - R)}{P_1(S_1 - R)}$$

- **computing β**

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- **then it is reasonable to set $R = 1/2$**
- **P_1, P_2, S_1 and S_2 are all observed**
- **so the stated model with equation (3) gives a practical procedure for computing the proportion of true votes among the two-mark overvotes allocated to Bush**

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- **P_1, P_2, S_1 and S_2 are all observed**
- **so the stated model with equation (3) gives a practical procedure for computing the proportion of true votes among the two-mark overvotes allocated to Bush**
- **it is straightforward to apply the procedure both to the overvotes allocated to Gore and to the allocated multiple-mark overvotes.**

Estimated True Votes Among the Presidental Overvotes, Ballot Image Data

	Proportion True Votes			
	Two Marks		Multiple	
County	Bush	Gore	Bush	Gore
Broward	0.48	0.87	0.28	0.45
Highlands	0.53	0.63	0.47	0.68
Hillsborough	0.44	0.81	0.15	0.51
Lee	0.65	0.70	0.33	0.19
Marion	0.40	0.61	0.03	0.30
Miami-Dade	0.58	0.69	0.43	0.58
Palm Beach	0.63	0.89	0.33	0.57
Pasco	0.24	0.82	0.31	0.47
Pinellas	0.54	0.76	0.40	0.50
Sarasota	0.39	0.51	0.27	0.31

Estimated True Votes Among the Presidental Overvotes, Ballot Image Data

	Estimated True Votes Among the Overvotes					
	Two Marks		Multiple		Total	
County	Bush	Gore	Bush	Gore	Bush	Gore
Broward	211	2,676	84	945	295	3,620
Highlands	25	48	16	47	41	95
Hillsborough	146	913	33	492	179	1,404
Lee	144	387	29	32	173	420
Marion	57	161	1	50	59	211
Miami-Dade	1,112	3,536	512	3,319	1,623	6,855
Palm Beach	1,435	9,522	254	2,133	1,689	11,654
Pasco	59	602	55	182	114	784
Pinellas	260	1,224	98	497	357	1,720
Sarasota	63	117	16	41	79	159
Total	3,512	19,185	1,098	7,738	4,610	26,922

Estimated True Votes Among the Presidental Overvotes, NORC Data

	Proportion True Votes			
	Two Marks		Multiple	
Tabulation	Bush	Gore	Bush	Gore
Votomatic	0.48	0.70	0.28	0.42
Votomatic—Duval	0.74	0.85	0.48	0.82
Datavote—One Page	0.32	0.82	0.06	0.74
Datavote—Two Pages	0.58	0.73	0.33	0.72
Optical Central—One Column	0.70	0.87	0.71	0.78
Optical Central—Two Columns	0.33	0.78	0.15	0.71
Optical Precinct	0.53	0.81	0.19	0.66
Opt. Prec.—Columbia, Escambia	0.42	0.86	0.36	0.81

Estimated True Votes Among the Presidental Overvotes, NORC Data

	Estimated True Votes Among the Overvotes					
	Two Marks		Multiple		Total	
Tabulation	Bush	Gore	Bush	Gore	Bush	Gore
Votomatic	3,184	16,944	980	6,421	4,164	23,364
Votomatic—Duval	3,586	7,168	728	4,609	4,314	11,777
Datavote—One Page	71	284	20	603	91	887
Datavote—Two Pages	225	283	106	385	331	668
Optical Central—One Column	185	485	314	709	499	1,194
Optical Central—Two Columns	653	2,331	180	2,209	833	4,541
Optical Precinct	285	807	92	893	378	1,701
Opt. Prec.—Columbia, Escambia	141	936	188	1,397	329	2,333
Total	8,330	29,238	2,608	17,226	10,939	46,465

- **Florida 2000: overvotes**
- **WHAT IF BETTER ADMINISTRATIVE PROCEDURES HAD BEEN USED?**
  - **if none of the administrative problems had occurred, then just based on the allocated overvotes that would not have occurred, Gore would have gained a net of more than 35,000 votes**
  - **if the best type of vote tabulation system used in the state in 2000—precinct-tabulated optical scan ballots with the warn-and-correct systems operational—had been used everywhere in Florida, Gore would have won by more than 30,000 votes**

- **Bush v. Gore**
  - **certiorari granted due to "unconstitutional" legislative action by the Florida Supreme Court**
  - **7–2 on "equal protection" threats in the recount**
  - **5–4 on decision to award the election to Bush**

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  - **7–2 on "equal protection" threats in the recount**
  - **5–4 on decision to award the election to Bush**
- **evaluation (by me and most—not all—legal scholars)**
  - **thoroughly bogus actions by the court**
  - **nothing but a partisan power grab**
  - **see Hasen's article for a somewhat more balanced review**

- **"The Court's decision in Bush v Gore has been regarded in many quarters as a travesty of constitutional law incapable of rational defense. Recently, for example, 585 law professors have signed a public letter attacking a conservative and mean-spirited Court for its devious and hypocritical judicial activism." (Epstein 2001, 13)**

- **"The Court's decision in Bush v Gore has been regarded in many quarters as a travesty of constitutional law incapable of rational defense. Recently, for example, 585 law professors have signed a public letter attacking a conservative and mean-spirited Court for its devious and hypocritical judicial activism." (Epstein 2001, 13)**
- **the equal protection argument is "a confused nonstarter at best, which deserves much of the scorn that has been heaped upon it" (Epstein 2001, 14)**
- **Article II, Section I, Clause 2: "Each State shall appoint, in such Manner as the Legislature Thereof May Direct," the electors... (Rehnquist, Scalia, Thomas)**

- election reform
- Help America Vote Act of 2002 (HAVA)
  - money for new machines
  - Election Administation Commission

- **election reform**
- **Help America Vote Act of 2002 (HAVA)**
  - **money for new machines**
  - **Election Administation Commission**
- **late and inadequate**
  - **standards "are not intended to define appropriate election administration practices" (FEC 2002)**
  - **underfunded**
  - **goals set for 2006 not 2004**
- **see the Election Reform Information Project.** `http://electionline.org/` **for updated information**

- **is new technology better?**
- **electronic touch screen systems**
  - **Diebold's incompetent software**
  - **needed: voter verifiable paper audit trails (VVPAT) to allow audits and manual recounts**
  - **but it is a question whether VVPAT solves the security problems**
  - **see** `http://www.verifiedvoting.org/` **for up to date information**

- **2004 Election**
- **major controversies fueled by discrepancies between exit polls and election outcome**
- **judgment: the exit polls had a widespread Democratic bias**

- 2004 Election: Florida
  - in Florida, "the disturbing fact is that a repetition of the problems of 2000 now seems likely" (Jimmy Carter op-ed)
  - actually, no: Florida comprehensively overhauled their election system after 2000
  - all votes are precinct tabulated
  - some counties use optical scan machines and the rest use direct record electronic (DRE) touchscreen machine
- after 2004, there were assertions that BOTH kinds of machines were hacked

- **2004 Election: Florida**
- **after 2004, assertions that optical scan machines were hacked**
- **evidence was disparity between registration and voting**
- **the answer is that the discrepancies reflect historical voting patterns (see** `http://macht.arts.cornell.edu/wrm1/commondreams/commondreams.html`**)**

- **2004 Election: Florida**
- **after 2004, assertions that DRE machines were hacked**
- **current evidence from ballot and machine-level data shows only minor problems**
- **the test involves testing whether all the voting machines used to count the votes in a precinct recorded the same distribution of votes among candidates and among ballot initiatives**

- **2004 Election: Florida candidates and amendments**

  Kerry **Democratic presidential candidate**

  Castor **Democratic U.S. Senate candidate**

  1. **Parental Notification of a Minor's Termination of Pregnancy**
  2. **Constitutional Amendments Proposed by Initiative**
  3. **The Medical Liability Claimant's Compensation Amendment**
  4. **Authorizes Miami-Dade and Broward County Voters to Approve Slot Machines in Parimutuel Facilities**
  5. **Florida Minimum Wage Amendment**
  6. **Repeal of High Speed Rail Amendment**
  7. **Patients' Right to Know About Adverse Medical Incidents**
  8. **Public Protection from Repeated Medical Malpractice**

Miami-Dade Election Day Test Results (Based on False Discovery Rates)

	number of precincts	number rejects	rejected precincts (tail prob)
Kerry-Castor	726	2	247 (1e-04), 551 (1e-04)
Kerry (w nonv)	726	4	243 (0), 378 (0), 246 (1e-04), 518 (1e-04)
Castor (w nonv)	728	0	
Kerry (no nonv)	726	3	378 (0), 246 (.00018), 518 (.00020)
Castor (no nonv)	726	0	
Amendement 1	732	1	907 (4e-05)
Amendement 2	729	0	
Amendement 3	730	2	18 (0), 590 (1e-04)
Amendement 4	730	0	
Amendement 5	716	1	28 (6e-05)
Amendement 6	734	0	
Amendement 7	718	0	
Amendement 8	728	0	

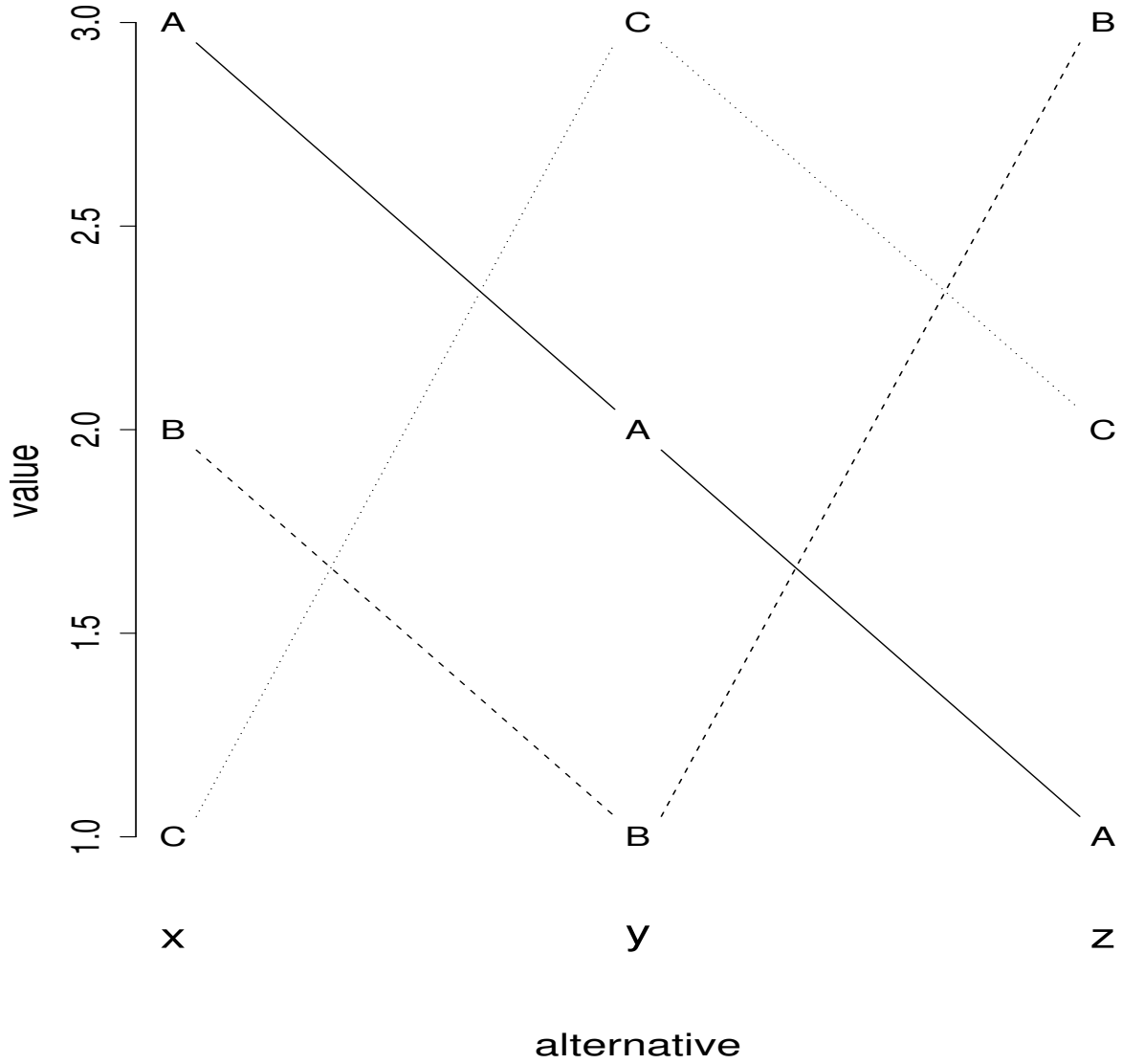
- 2004 Election: Florida
- after 2004, assertions that DRE machines were hacked
- current evidence from ballot and machine-level data shows only minor problems
- the test involves testing whether all the voting machines used to count the votes in a precinct recorded the same distribution of votes among candidates and among ballot initiatives
- with seemingly minor exceptions, the tests succeed using the votes for Kerry and Castor and for the ten statewide amendments
- not much sign of tampering

- 2004 Election: Ohio
- the Electoral Votes reported from Ohio were challenged in Congress
- Conyers report
- DNC report
  - voting experience survey
  - provisional ballot survey
  - precinct study: machine allocation, turnout, Issue 1, vote misallocation?
- shortages and misallocations of voting machines caused the worst problems in the form of long waits that deprived many voters of their chances to vote
- there was not widespread misallocation of votes from Kerry to Bush

- **support for Issue 1 (anti-gay marriage amendment) was correlated with increases on the order of one percent in voter turnout, which favored Bush**

- the spatial model
  - are preferences single peaked?
  - example: NO (even after reordering)

- **the spatial model**
  - **are preferences single peaked?**
  - **example: NO (even after reordering)**
  - **preferences ($x > y$ means x is preferred to y):**
    - **person A:** $x > y > z$
    - **person B:** $z > x > y$
    - **person C:** $y > z > x$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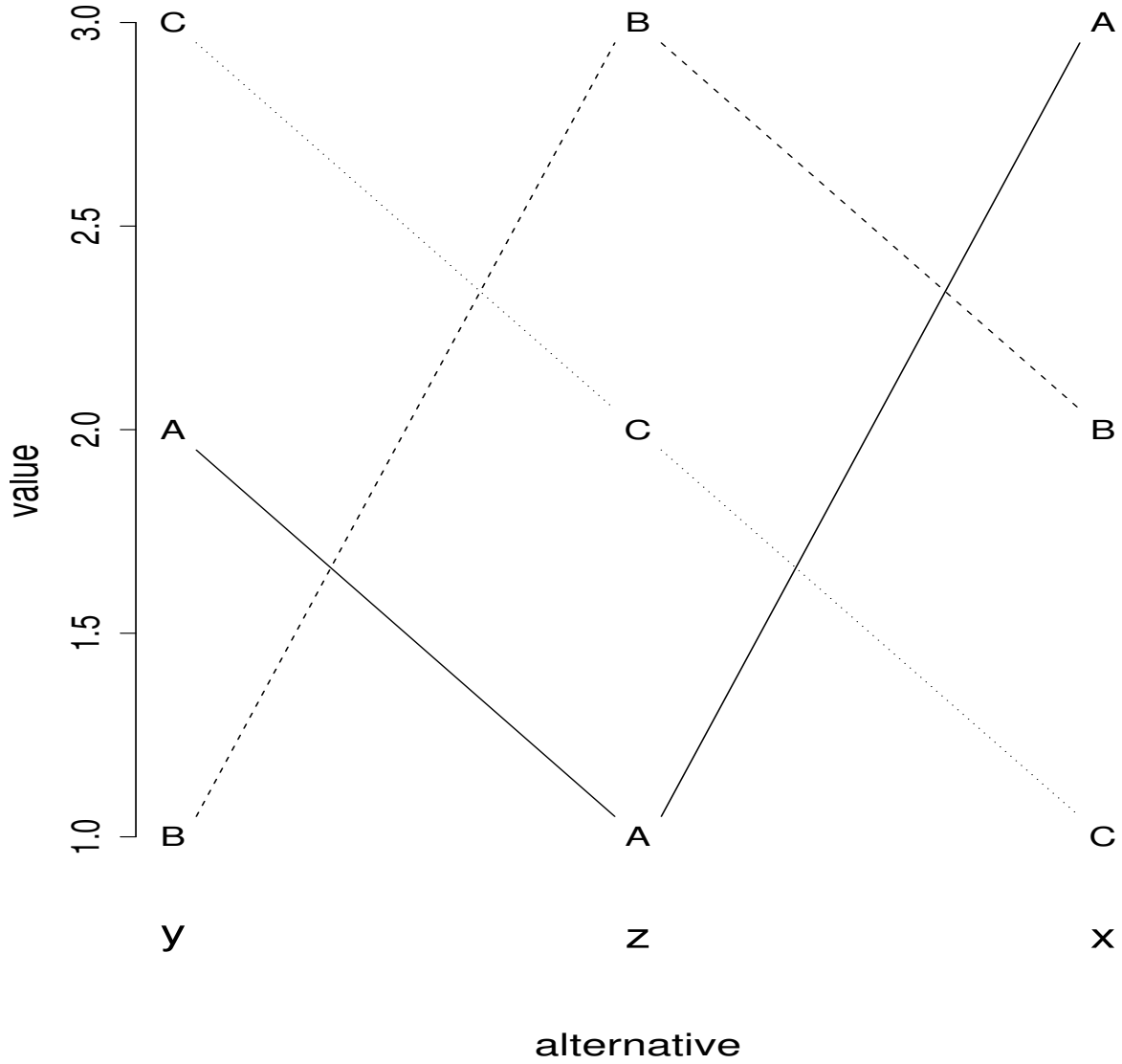
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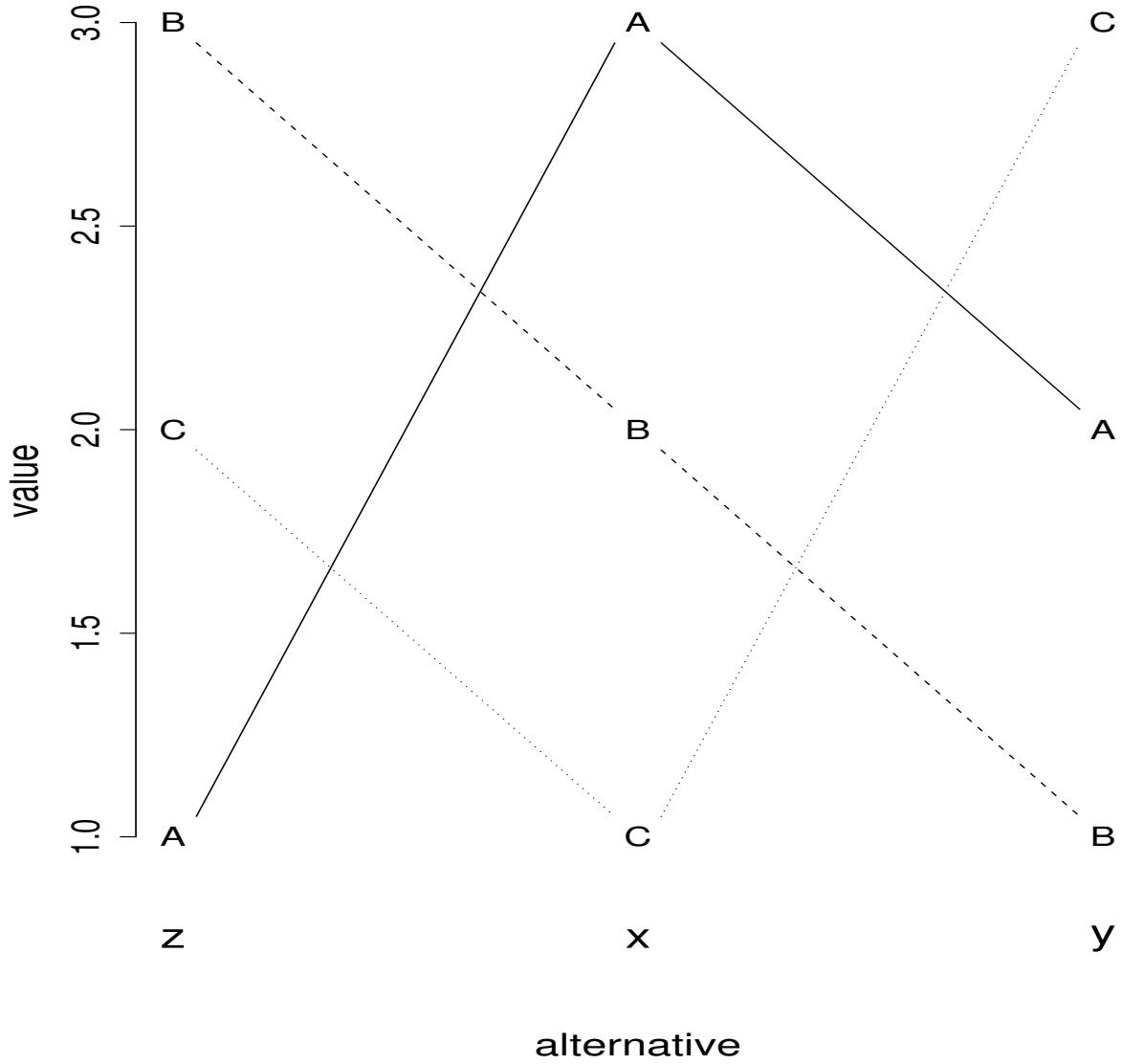
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  - **are preferences single peaked?**
  - **example: YES**

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    - **person D:** $x > y > z$
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    - **person F:** $y > z > x$

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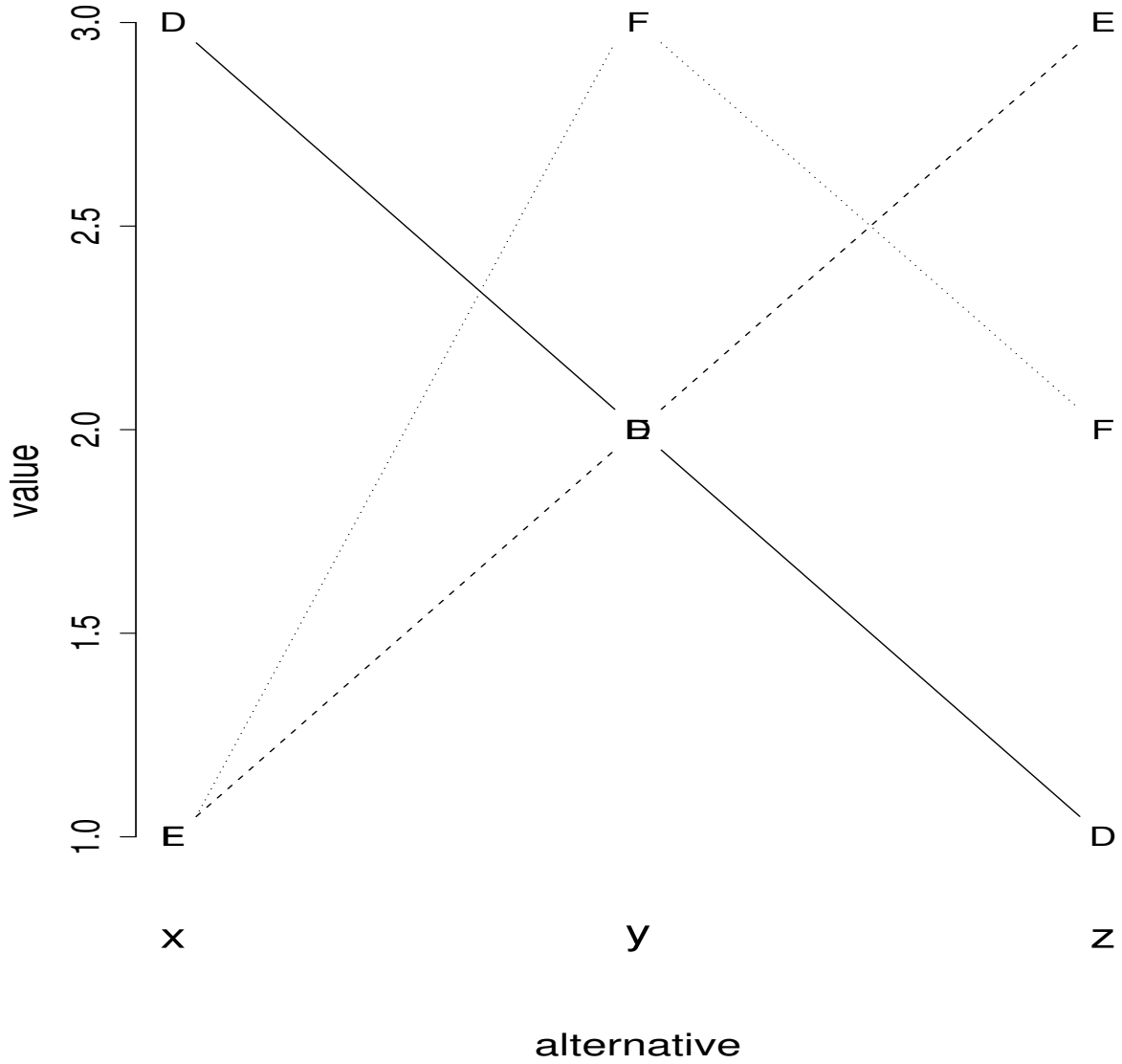
  - **preferences:**
    - **person D:** $x > y > z$
    - **person E:** $z > y > x$
    - **person F:** $y > z > x$
  - **each person has an IDEAL POINT**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  - example: NO (when alternatives are not ordered appropriately)

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  - **example: NO (when alternatives are not ordered appropriately)**
  - **preferences (same as before):**
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    - **person E:** $z > y > x$
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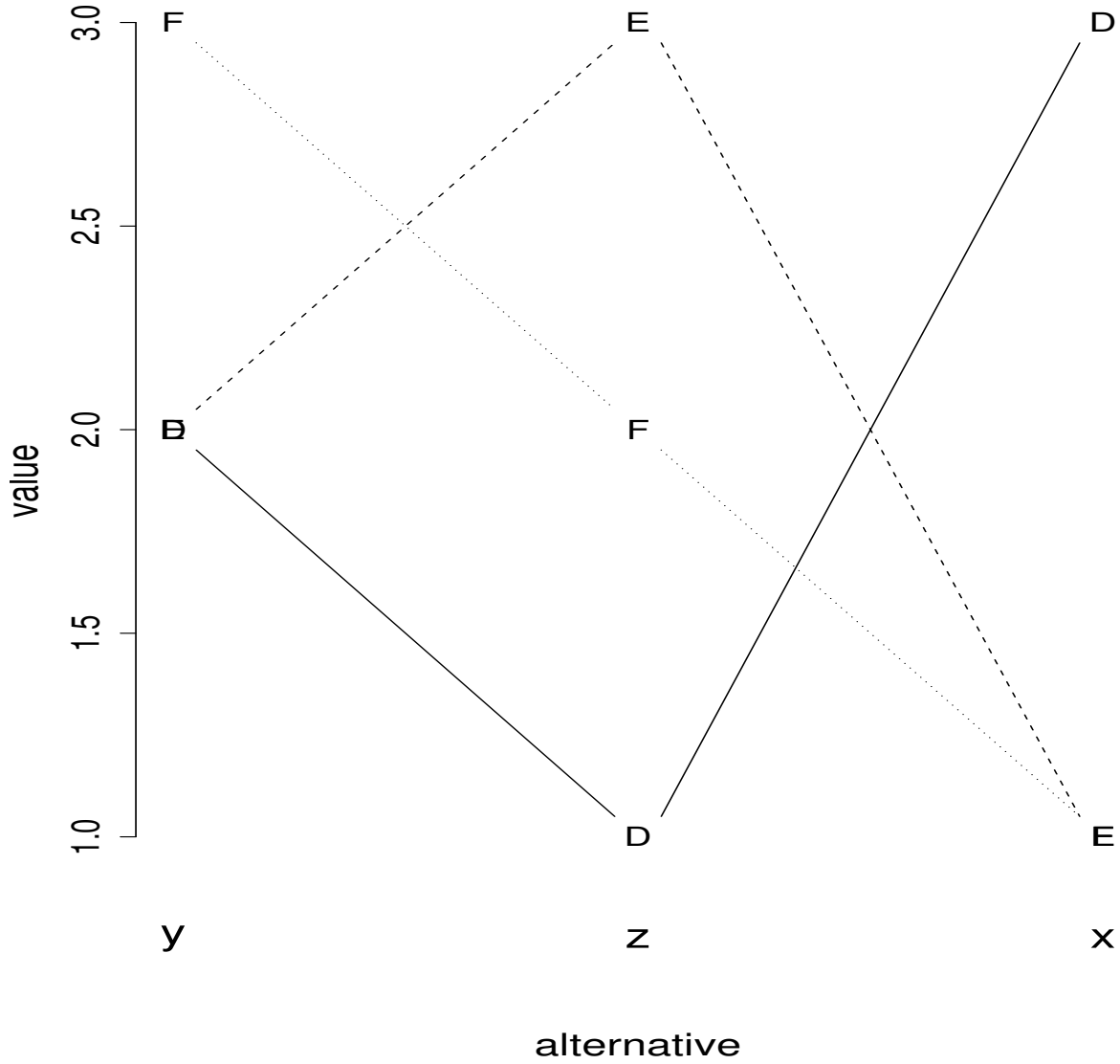
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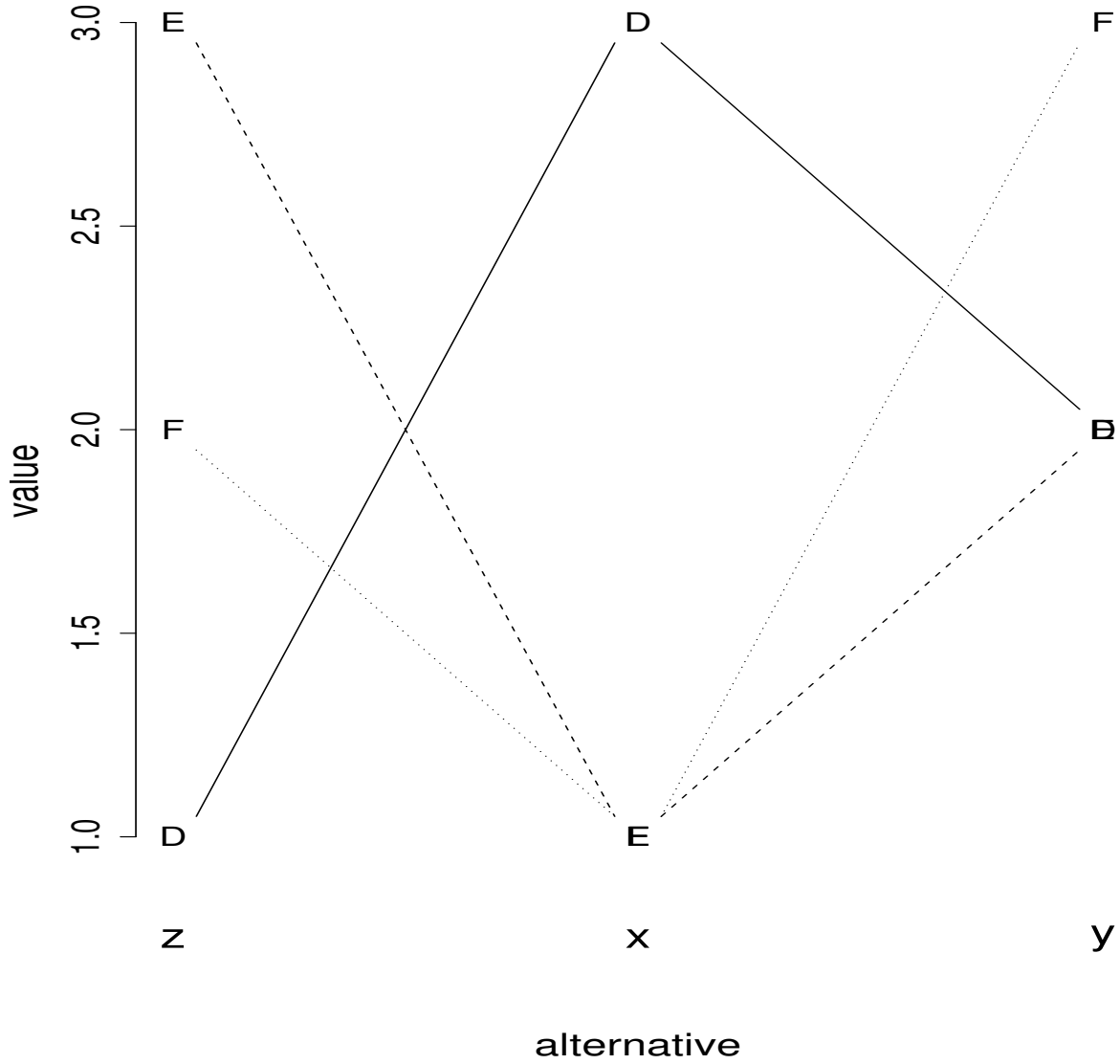
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  - **there is a one-dimensional spatial model when preferences are single peaked**

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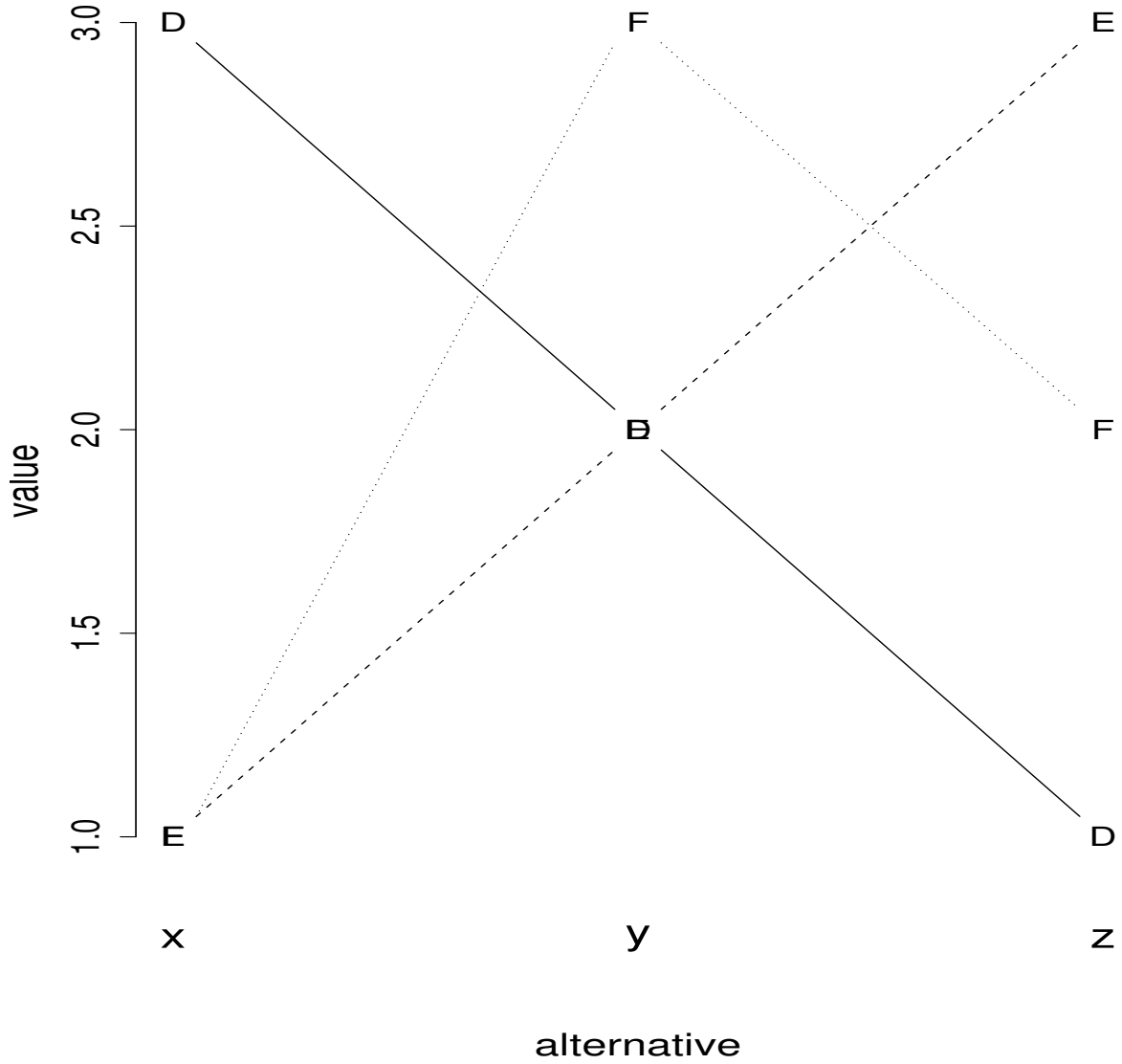
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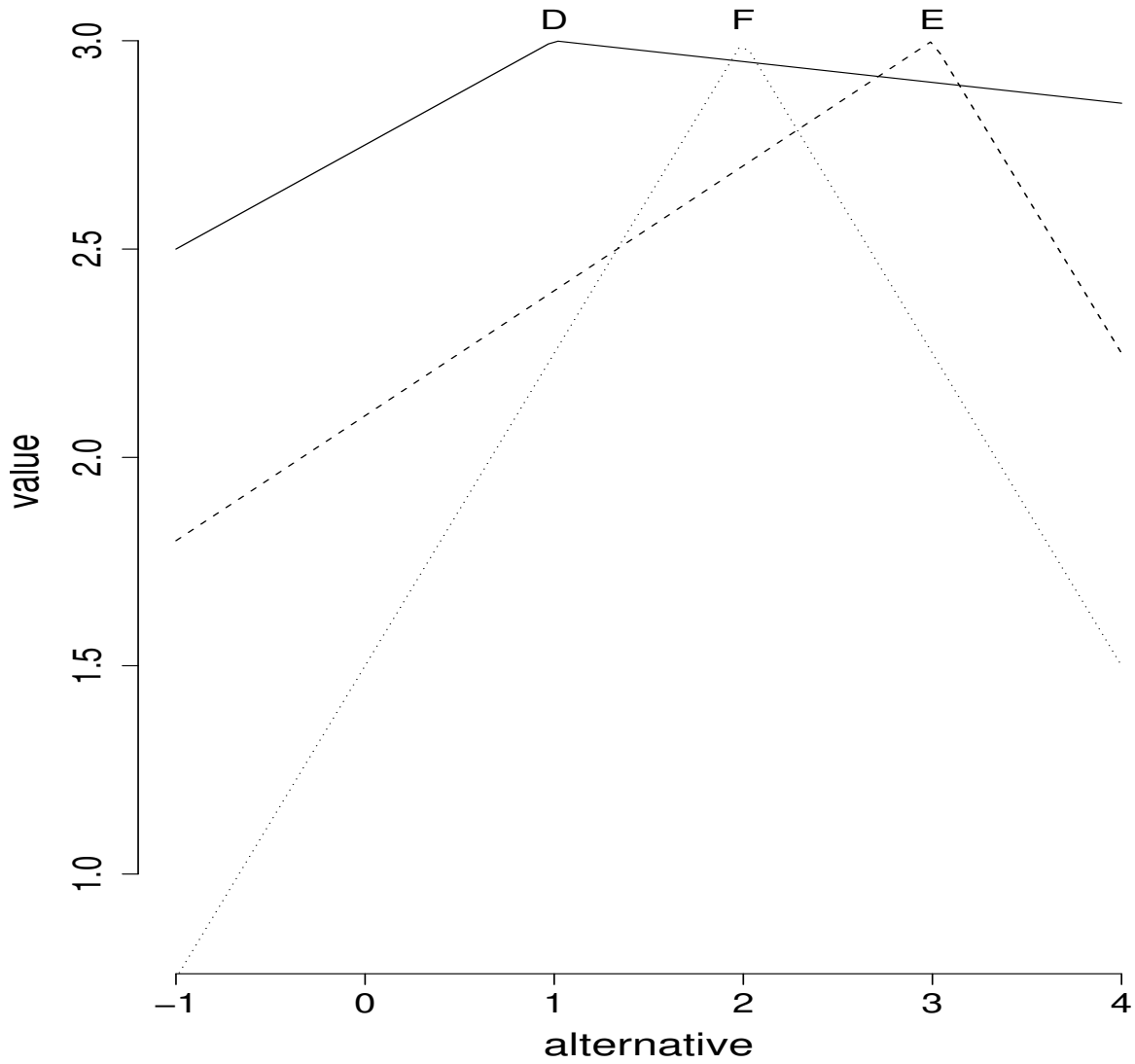
- **which alternative wins in a series of pairwise votes with single-peaked preferences?**
  - **with single-peaked preferences, the alternative that coincides with the median voter's ideal point beats every other alternative**
  - **this is the MEDIAN VOTER THEOREM**

- **the spatial model**
- **single-peaked preferences and measures of distance**
  - **tent metrics**
  - **example with asymmetries and different distances for different people**

- the spatial model
- single-peaked preferences and measures of distance
  - tent metrics
  - example with asymmetries and different distances for different people
- which alternative wins in a series of pairwise votes?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- **the spatial model**
- **single-peaked preferences and measures of distance**
  - **tent metrics:** $d = -b|x_k - x_i|$
  - **example with symmetry and same distances for different people**

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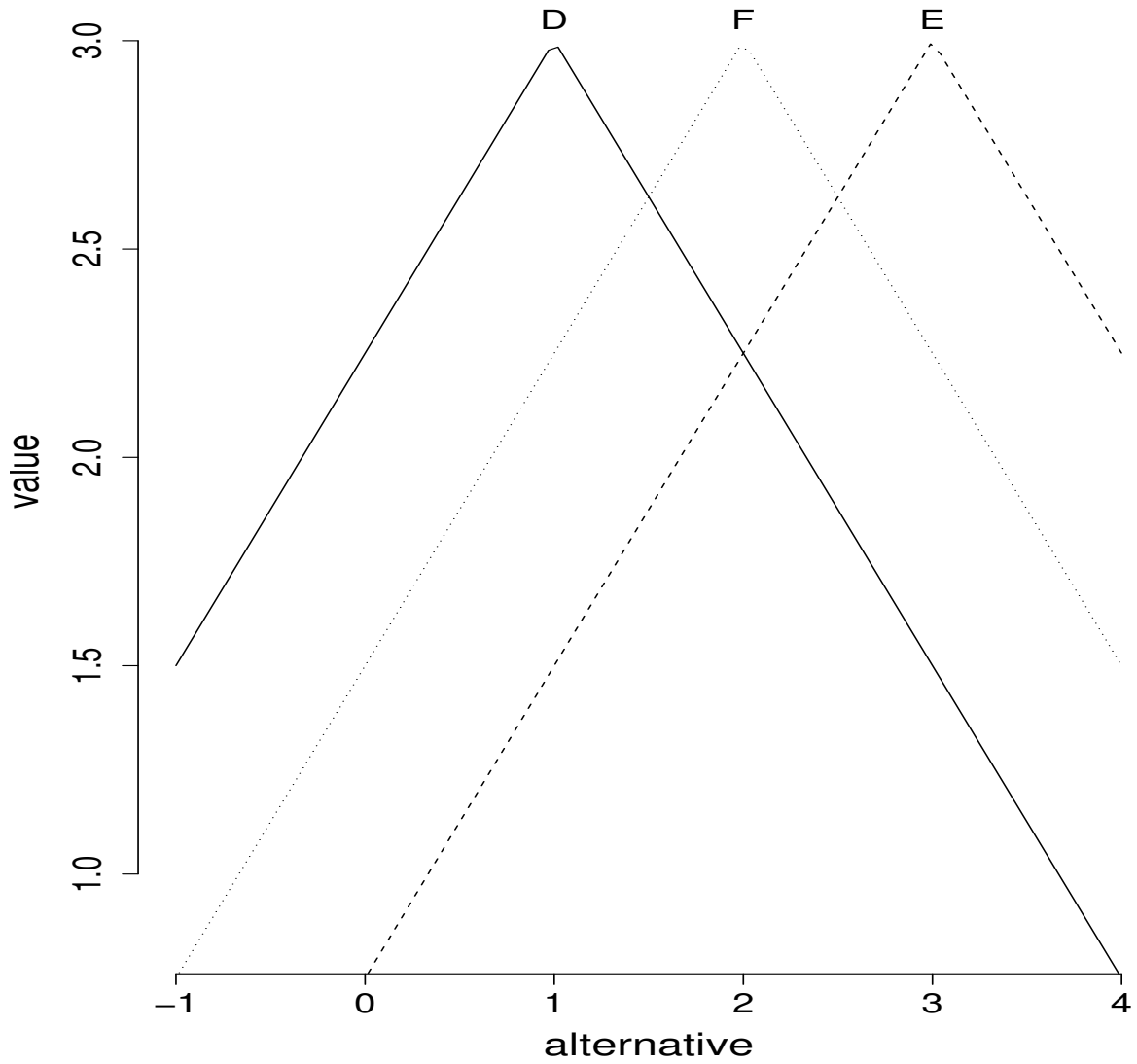
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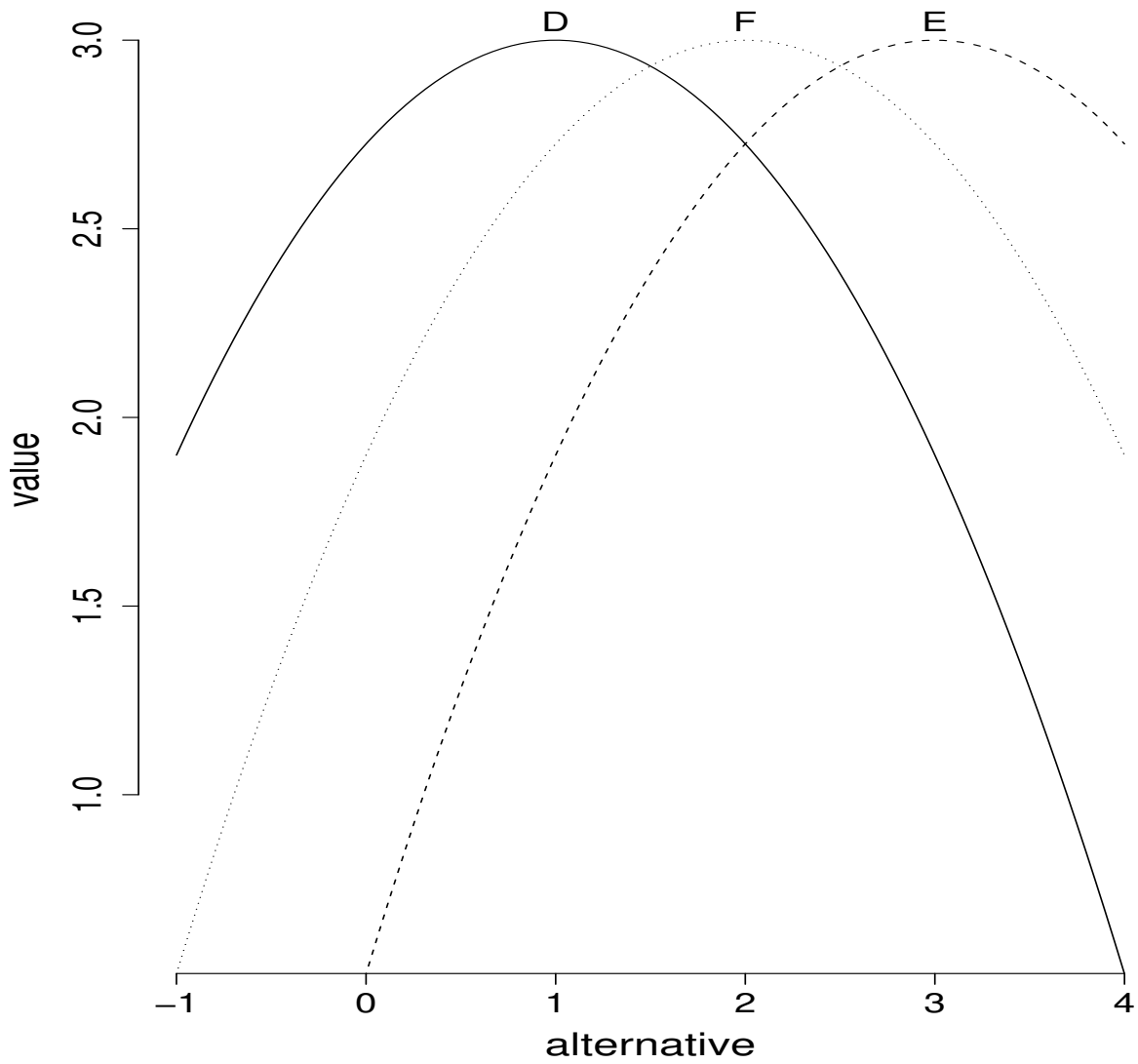
- **the spatial model**
- **single-peaked preferences and measures of distance**
  - **euclidean metrics:** $d = -b(x_k - x_i)^2$
  - **symmetry**
  - **example with same distances for different people**

- **the spatial model**
- **single-peaked preferences and measures of distance**
  - **euclidean metrics:** $d = -b(x_k - x_i)^2$
  - **symmetry**
  - **example with same distances for different people**
- **which alternative wins in a series of pairwise votes?**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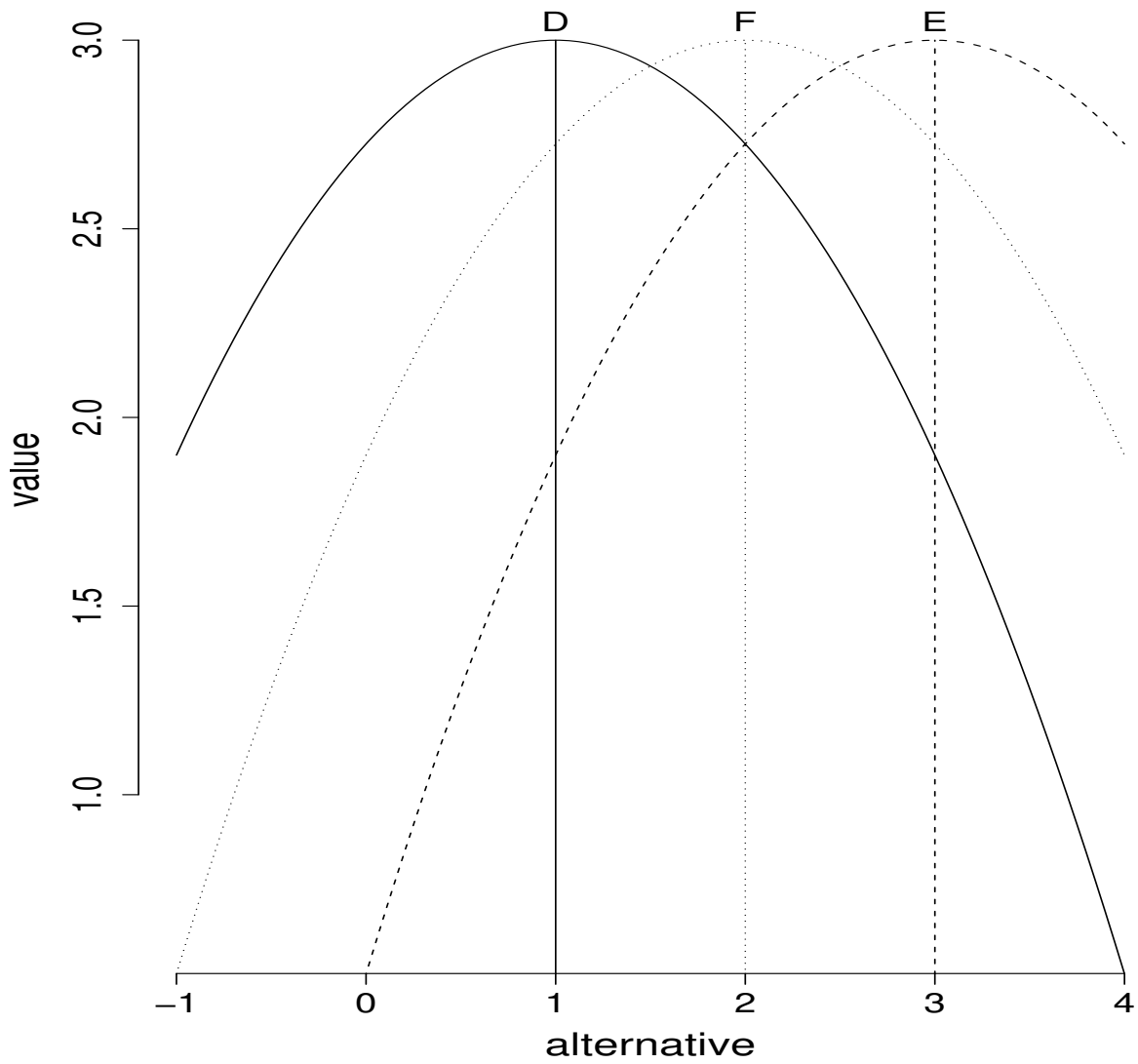
- **the spatial model**
- **with symmetric single-peaked preferences**
- **which is to say, in a pure one-dimensional spatial model...**

- **the spatial model**
- **with symmetric single-peaked preferences**
- **which is to say, in a pure one-dimensional spatial model...**
- **all information about the chooser's preferences that is relevant for choice behavior is summarized by the chooser's ideal point**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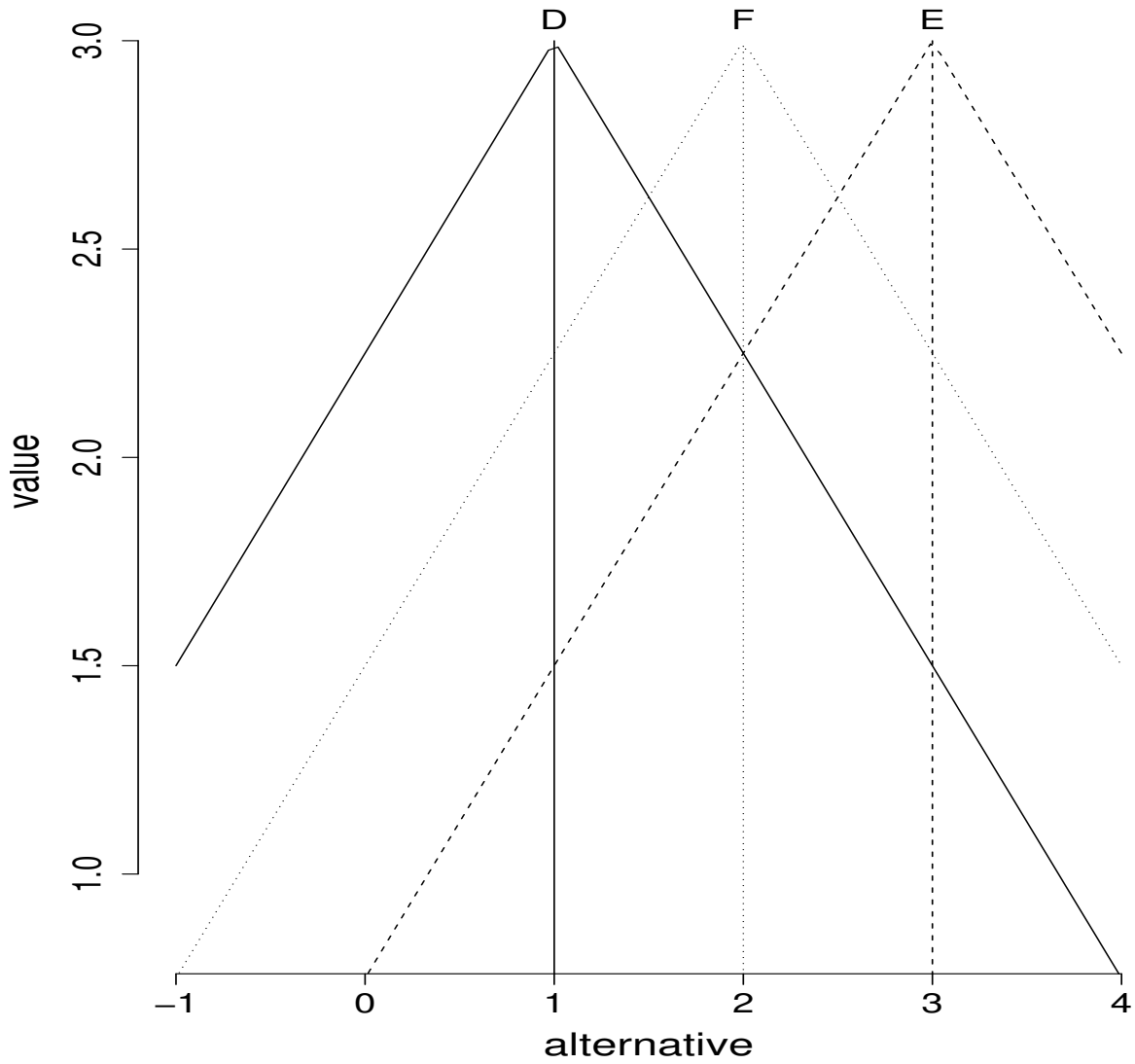
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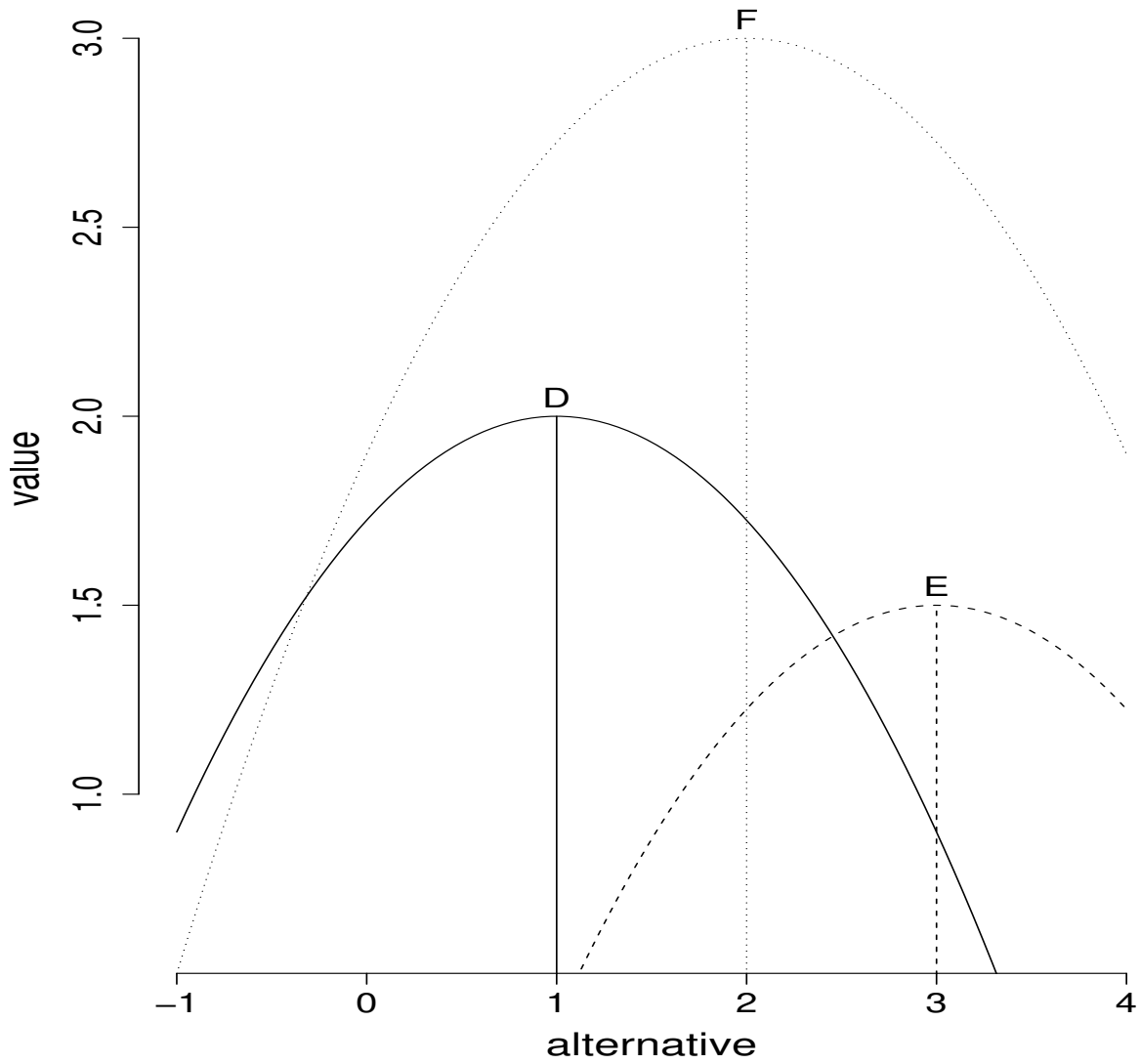
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- **the spatial model**
- **representing a continuum of voters with symmetric, single-peaked preferences**
- **in other words, a one-dimensional spatial electorate**

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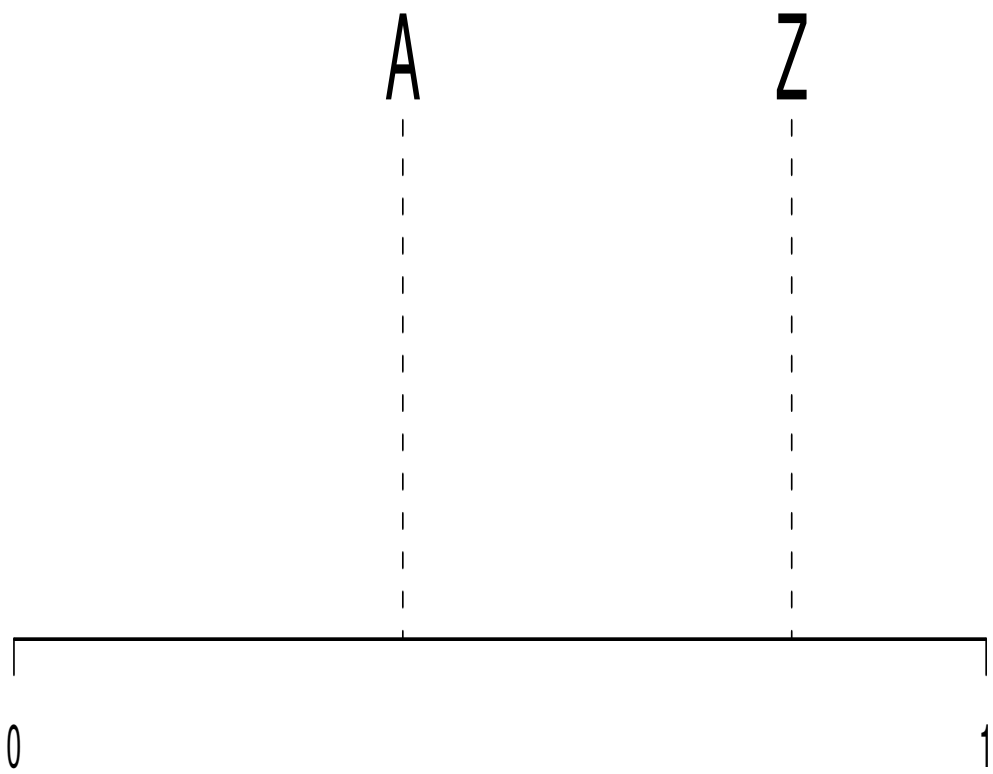
- **the spatial model**
- **a one-dimensional spatial electorate**
- **adding party "policy" locations**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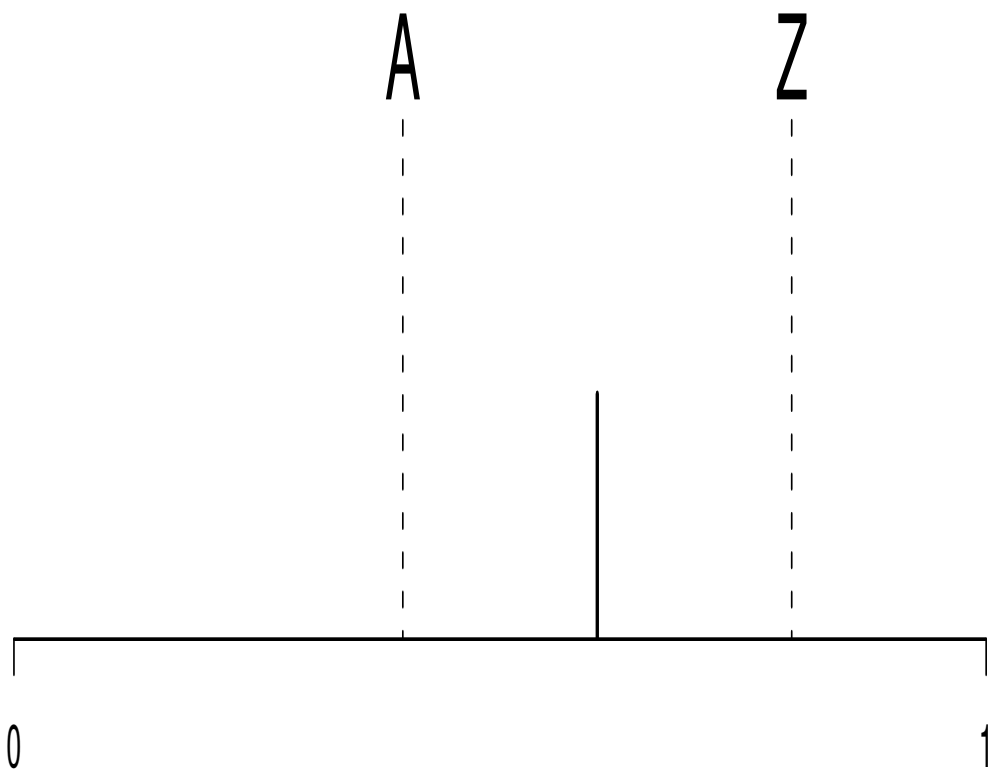
- **the spatial model**
- **a one-dimensional spatial electorate**
- **adding party "policy" locations**
- **counting votes**
  - **assume: everyone votes in accord with his or her preferences, which means everyone votes for the closest alternative**
  - **if two alternatives are equally close, the voter chooses each alternative with probability $1/2$**
    - **i.e., the voter flips a (fair) coin**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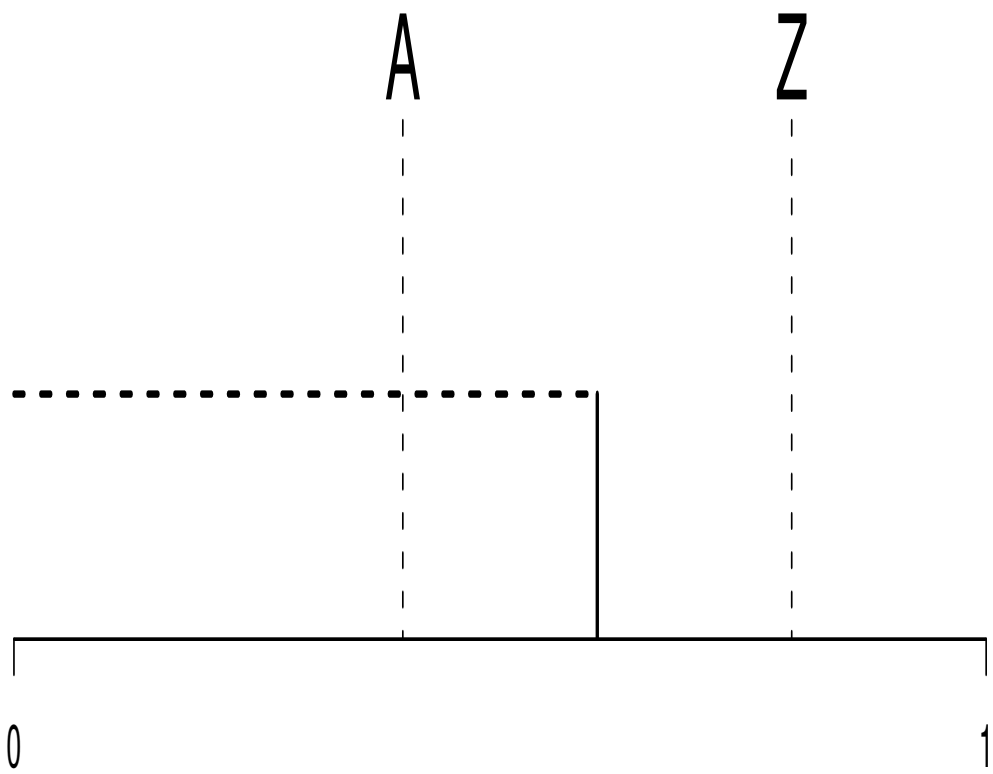
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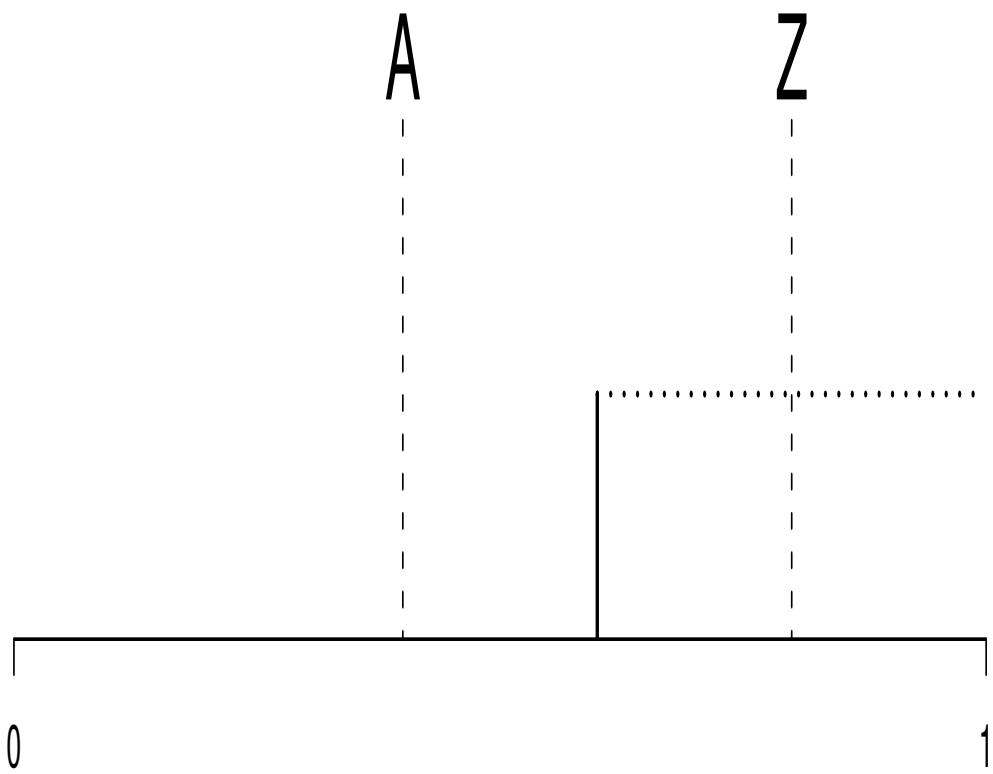
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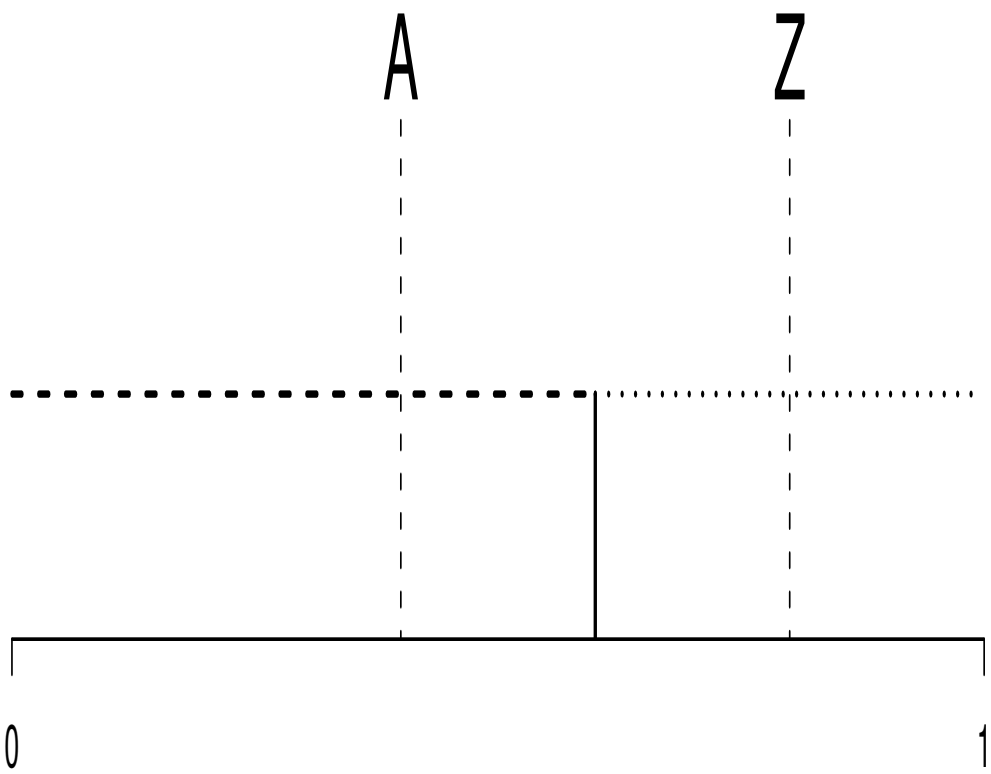
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- **a one-dimensional spatial electorate**
- **where will two parties locate?**

- a one-dimensional spatial electorate
- where will two parties locate?
- assume:
  - parties care only about winning the election
  - the voters act purely in accord with one-dimensional spatial preferences

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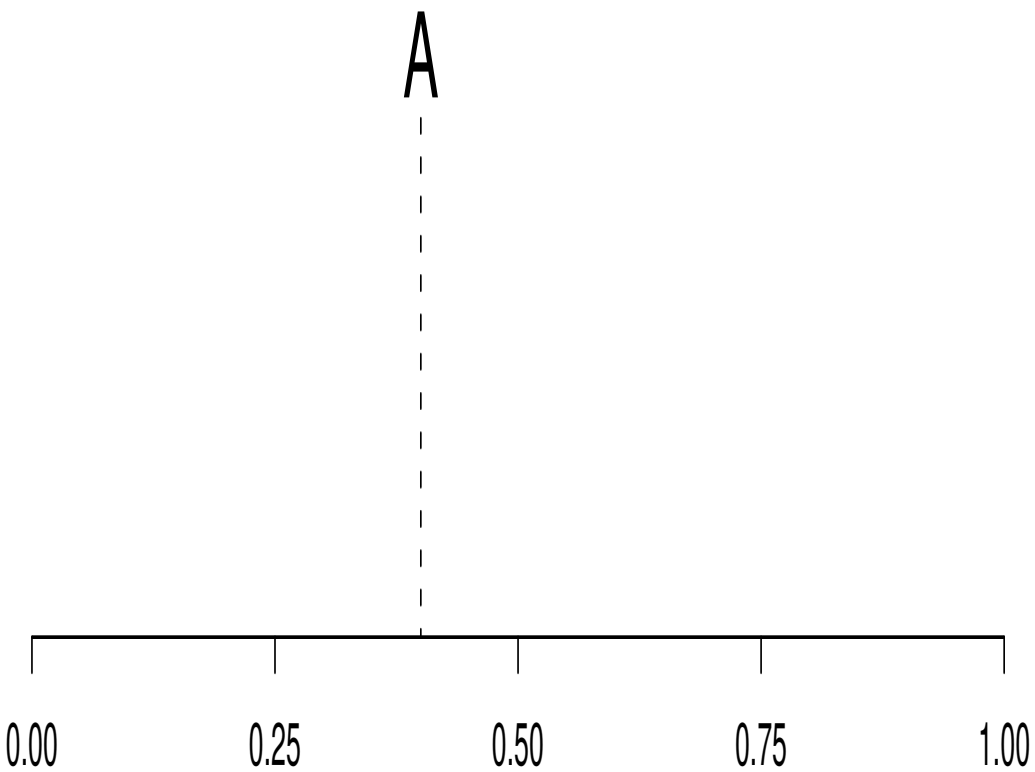
- a one-dimensional spatial electorate
- where will two parties locate?
- assume:
  - parties care only about winning the election
  - the voters act purely in accord with one-dimensional spatial preferences
- examples of inferior choices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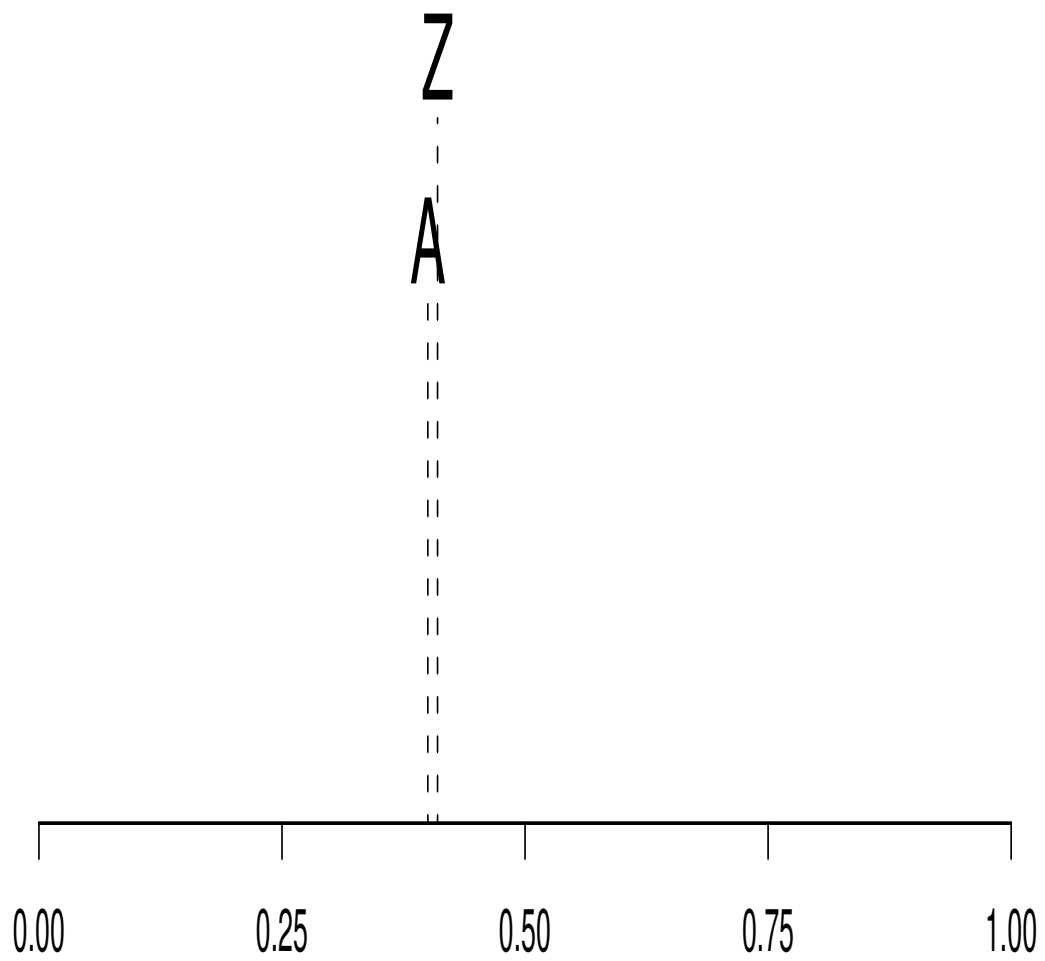
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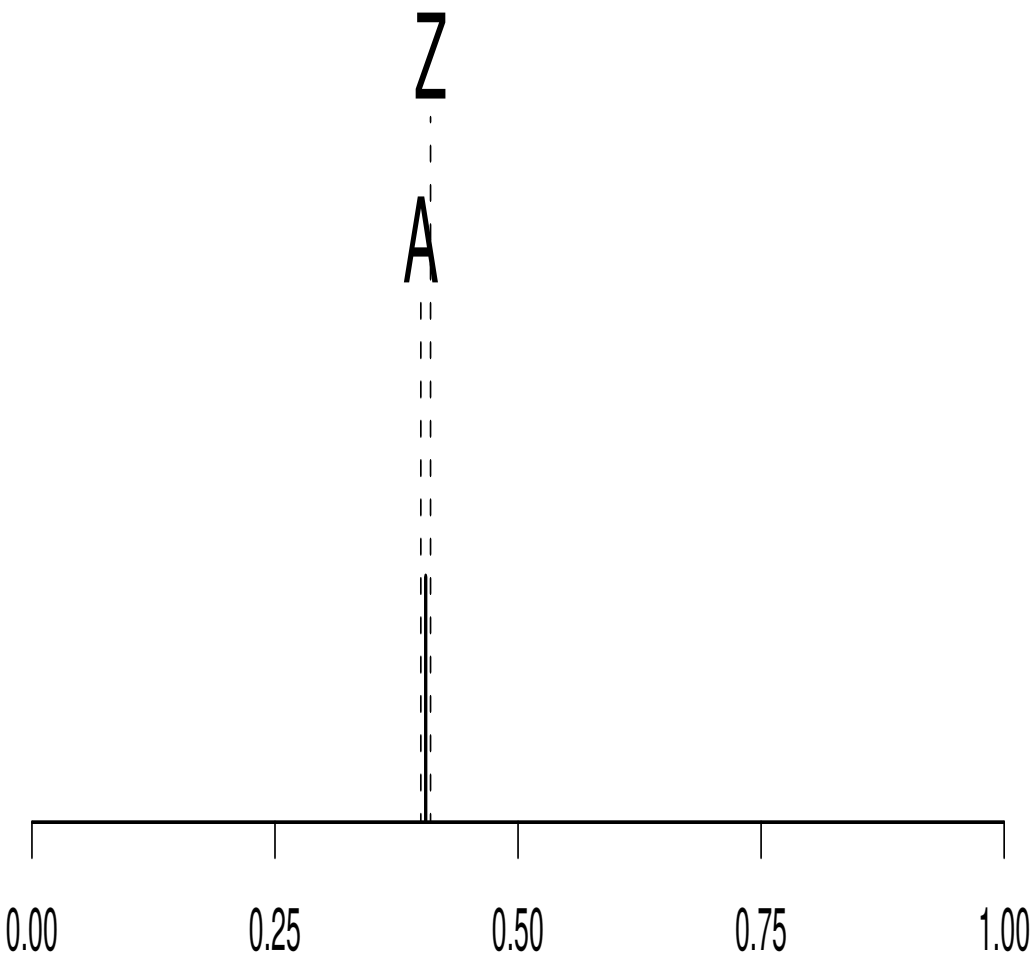
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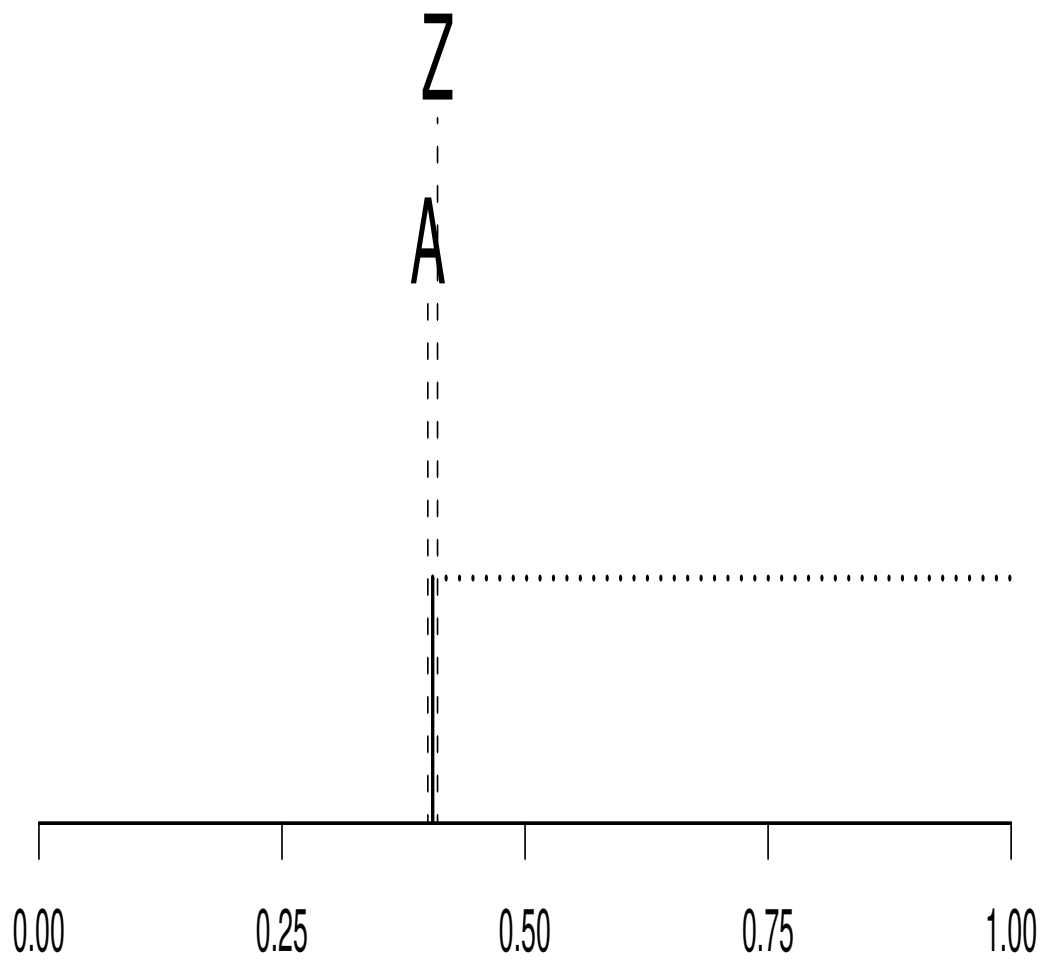
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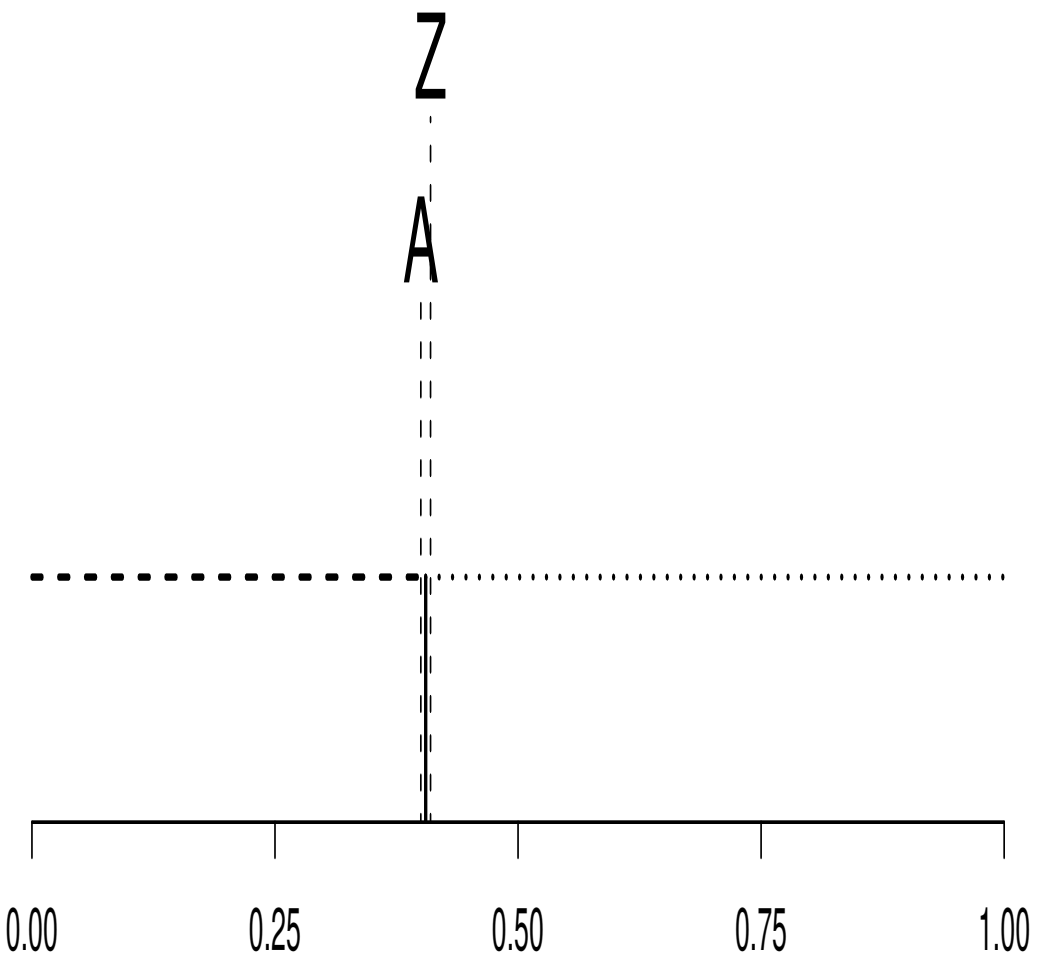
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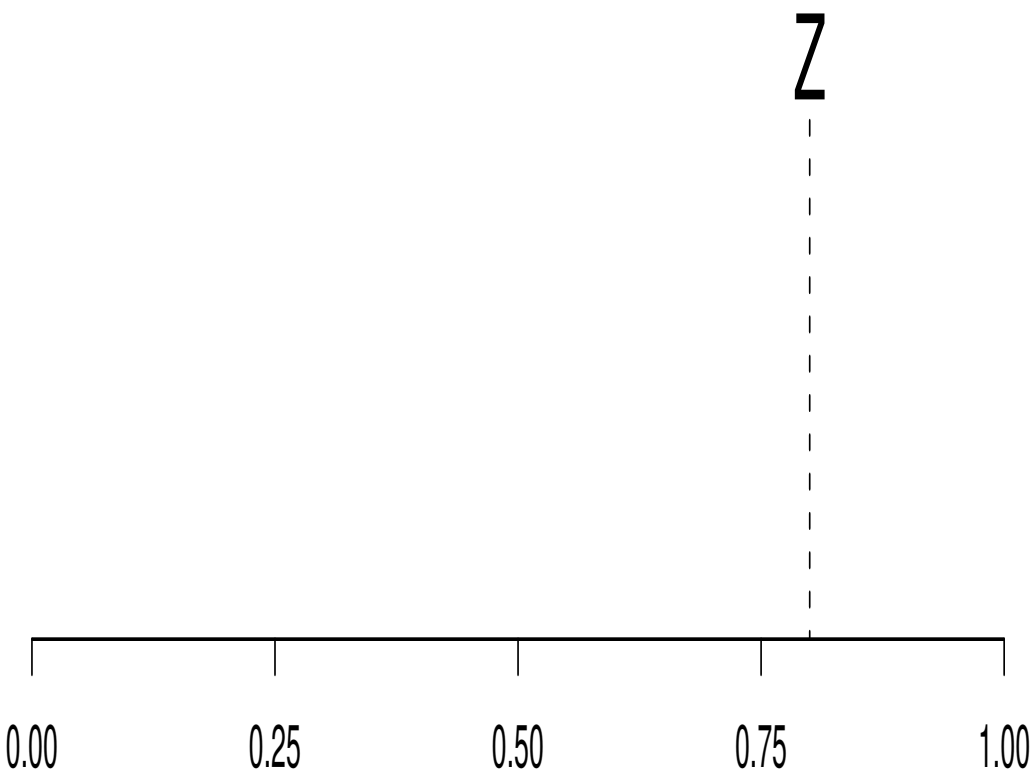
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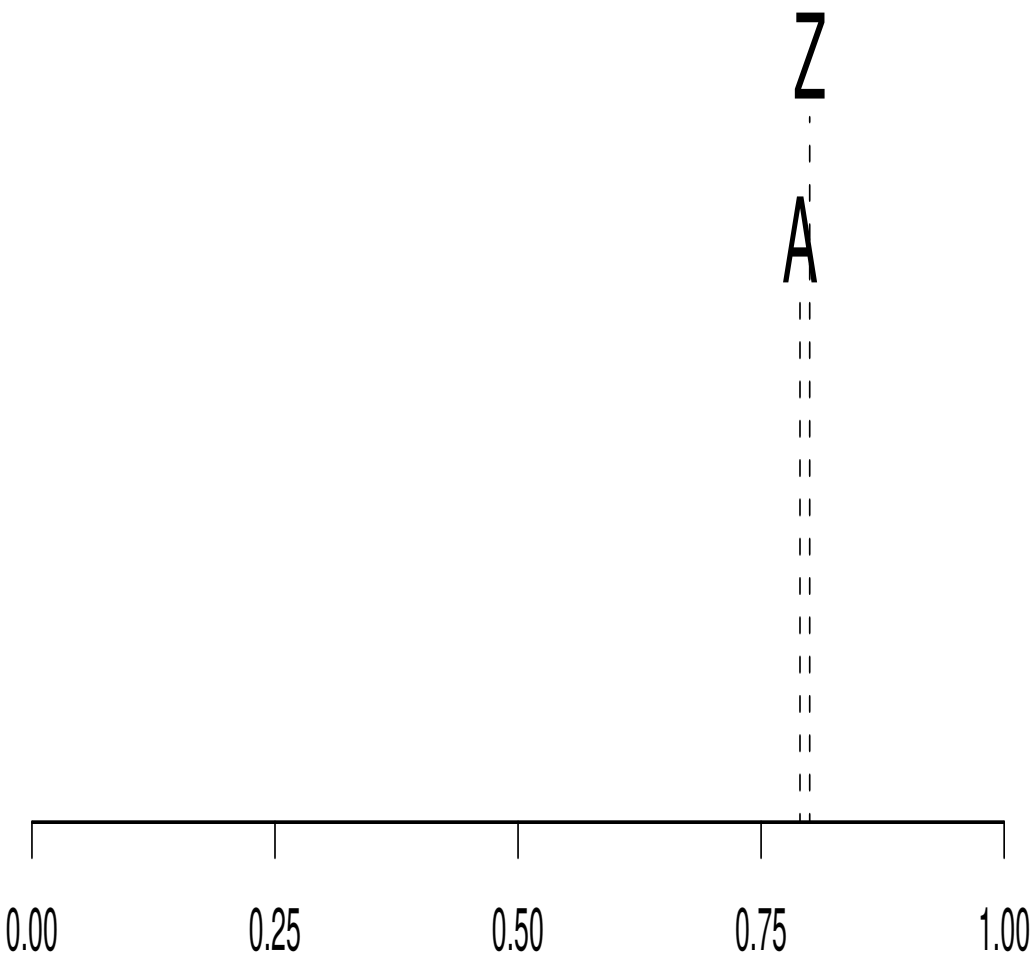
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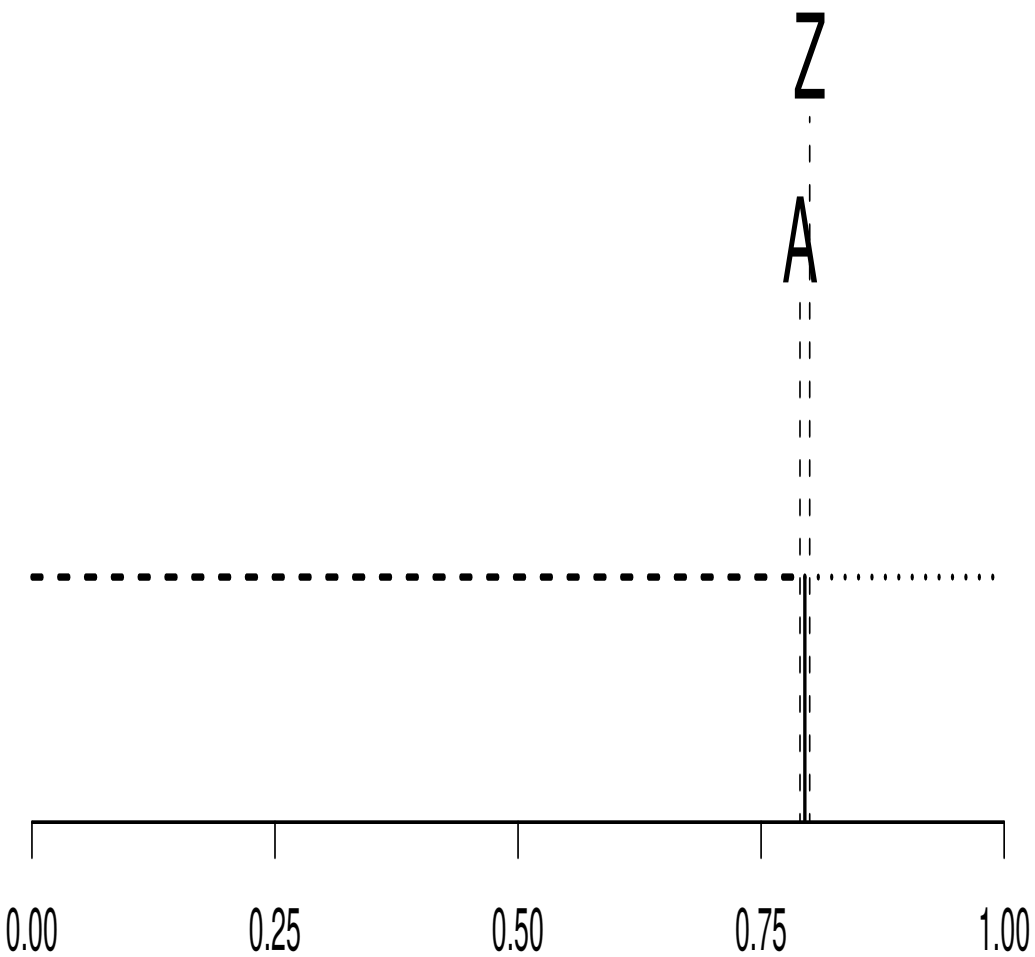
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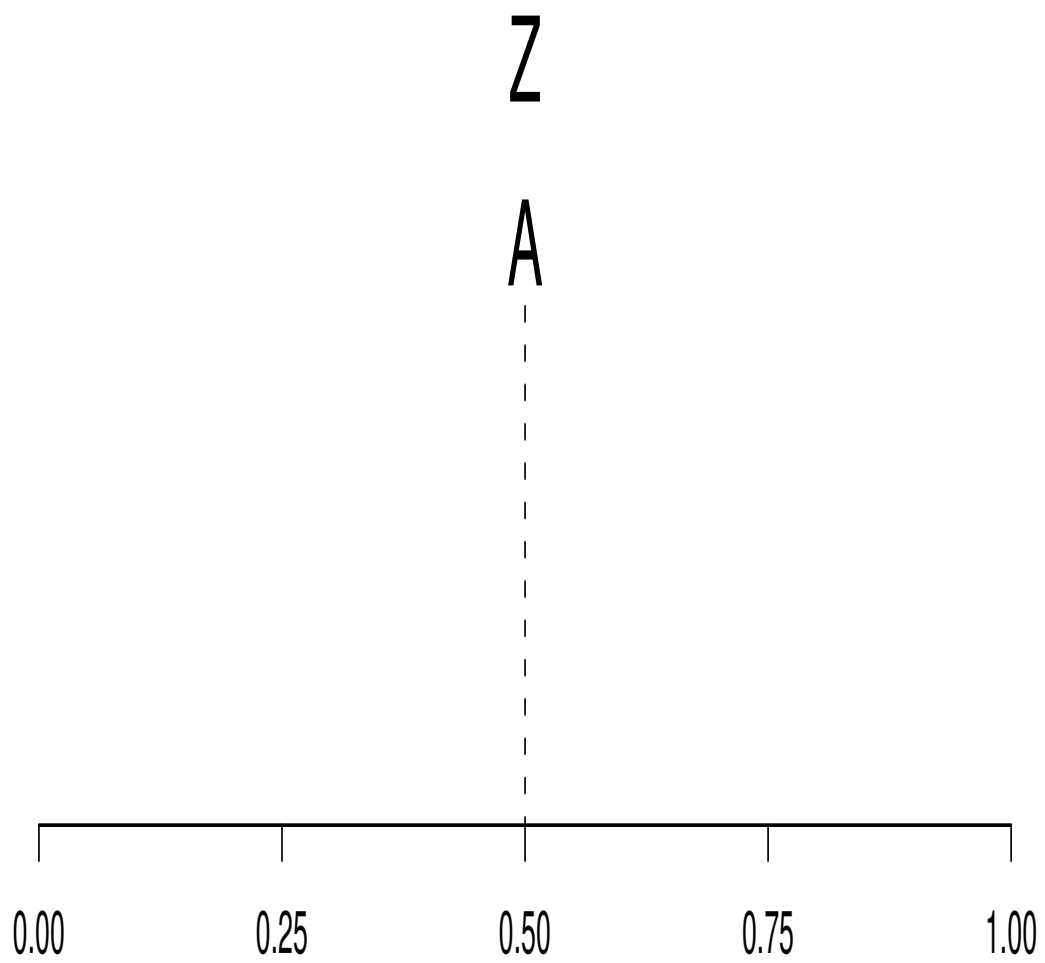
- a one-dimensional spatial electorate
- where will two parties locate?
- assume:
  - parties care only about winning the election
  - the voters act purely in accord with one-dimensional spatial preferences
- unique equilibrium result: median convergence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- **with a one-dimensional electorate, where will two parties locate?**
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  - **given that both are at the median, neither party can do better by choosing a different location**

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- sequential moves: the first party anticipates the second party's response
- simultaneous moves: each party anticipates the other's best response to every possible choice of location

- **why do parties diverge?**

- **why do parties diverge?**
- **a one-dimensional spatial model with different party motivations**

- **why do parties diverge?**
- **a one-dimensional spatial model with different party motivations**
- **assume parties care about winning and about policy**
- **result is equilibria with divergence (Roemer)**

- **why do parties diverge?**

- **why do parties diverge?**
- **other ways to go beyond a one-dimensional spatial model with winning-is-all motivations for parties**

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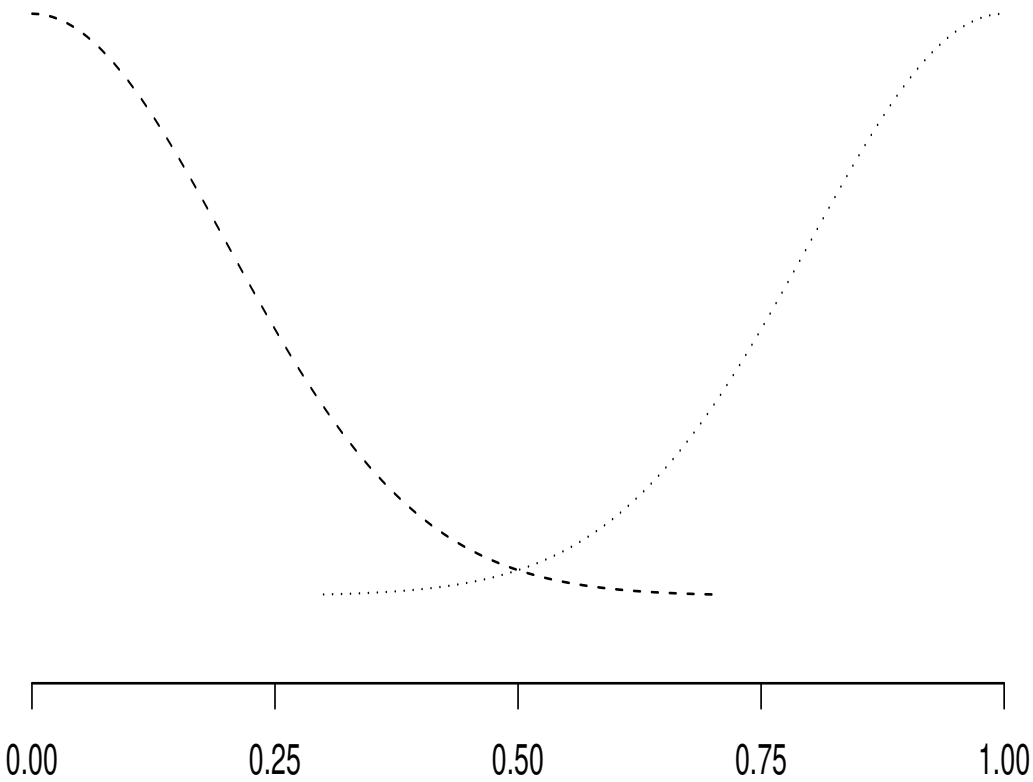
- **other ways to go beyond a one-dimensional spatial model with winning-is-all motivations for parties**
- **primary elections**

- **why do parties diverge?**
- **other ways to go beyond a one-dimensional spatial model with winning-is-all motivations for parties**
- **primary elections**
- **assume:**
  - **candidates have to win party primaries first**
  - **primary voters act purely in accord with one-dimensional spatial preferences**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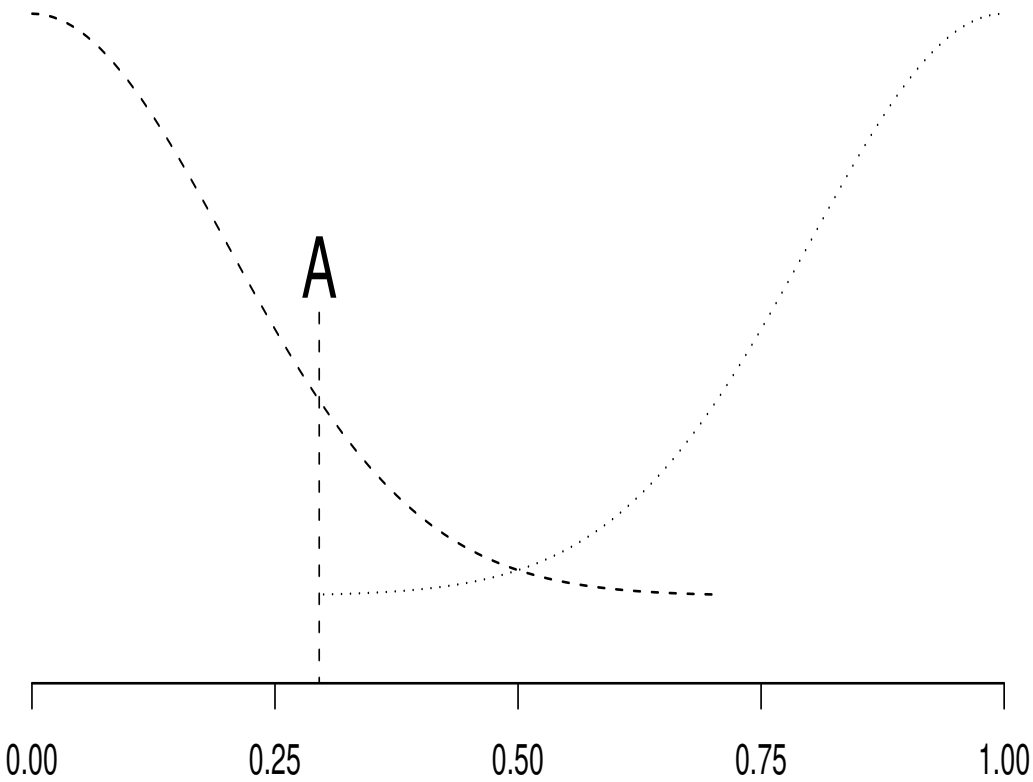
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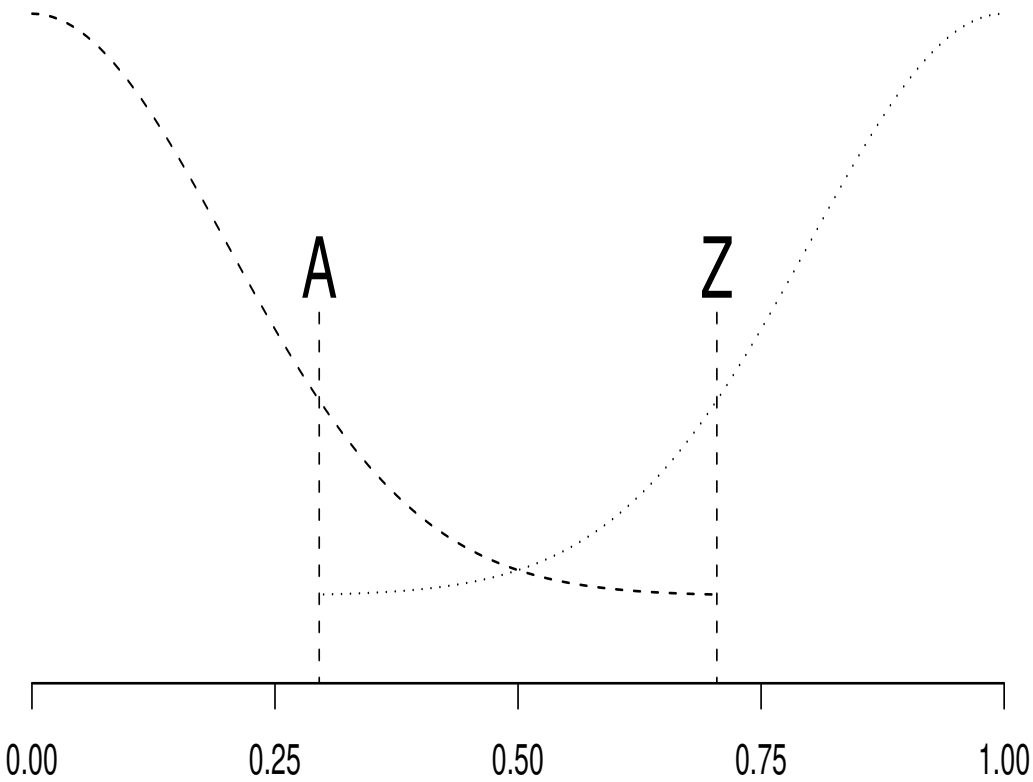
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- **why do parties diverge?**

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- **third parties and major party divergence**
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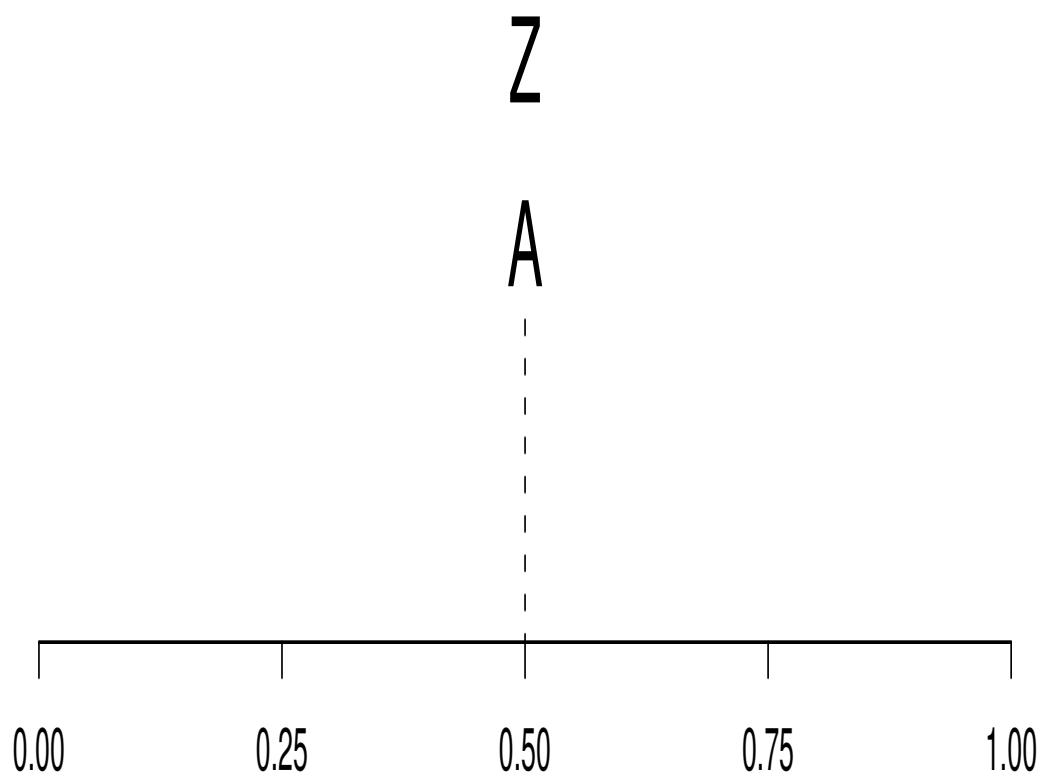
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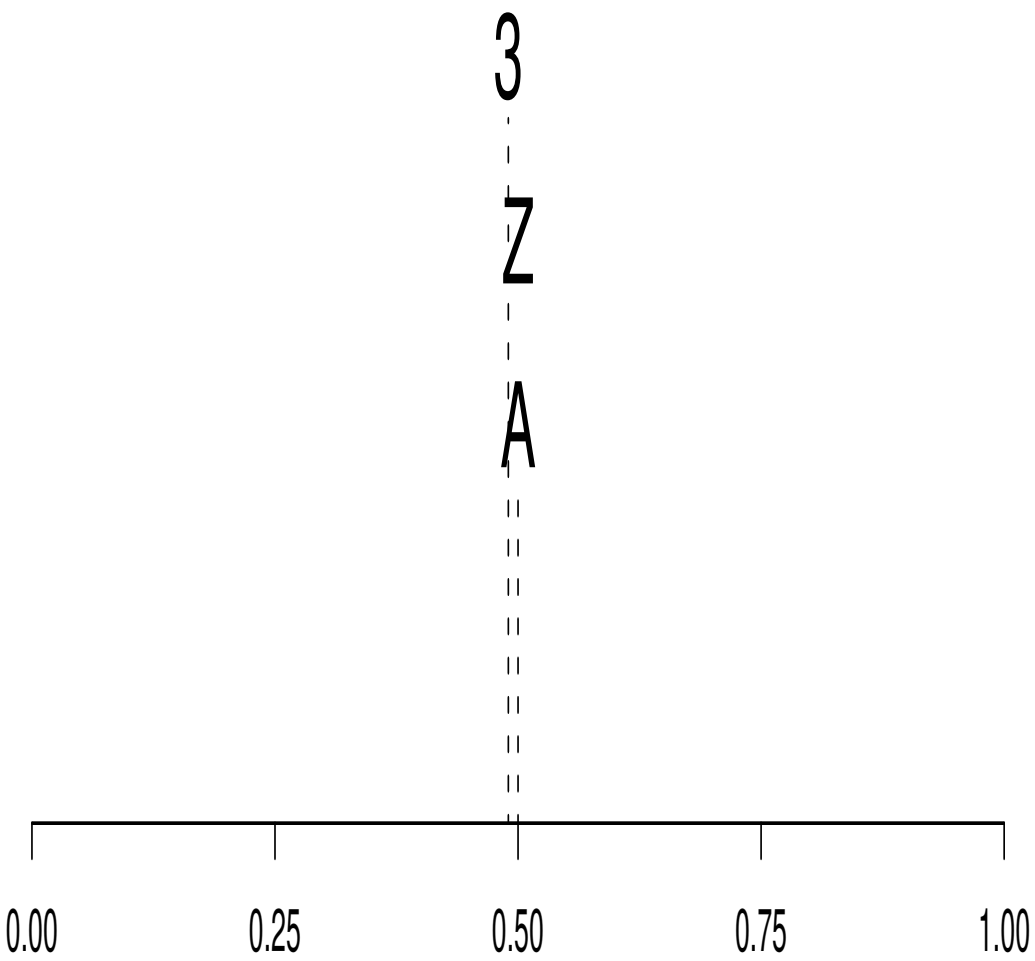
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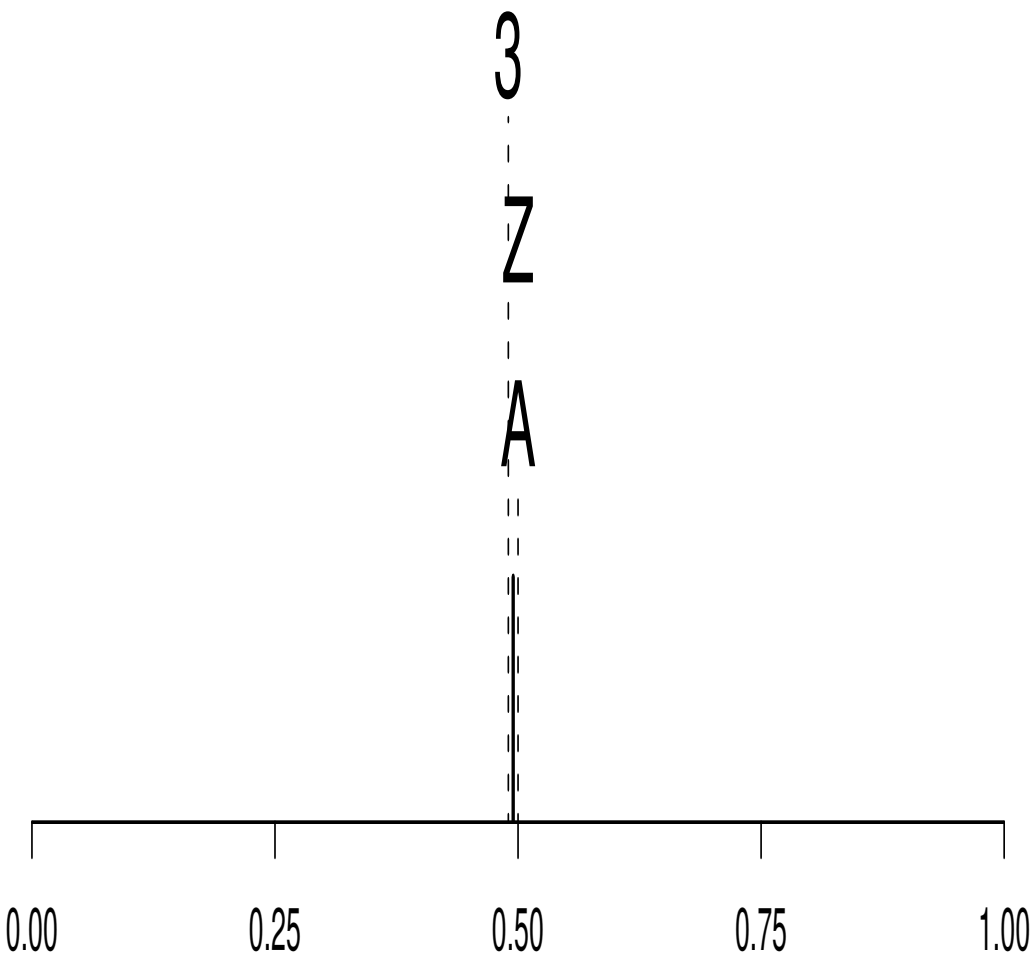
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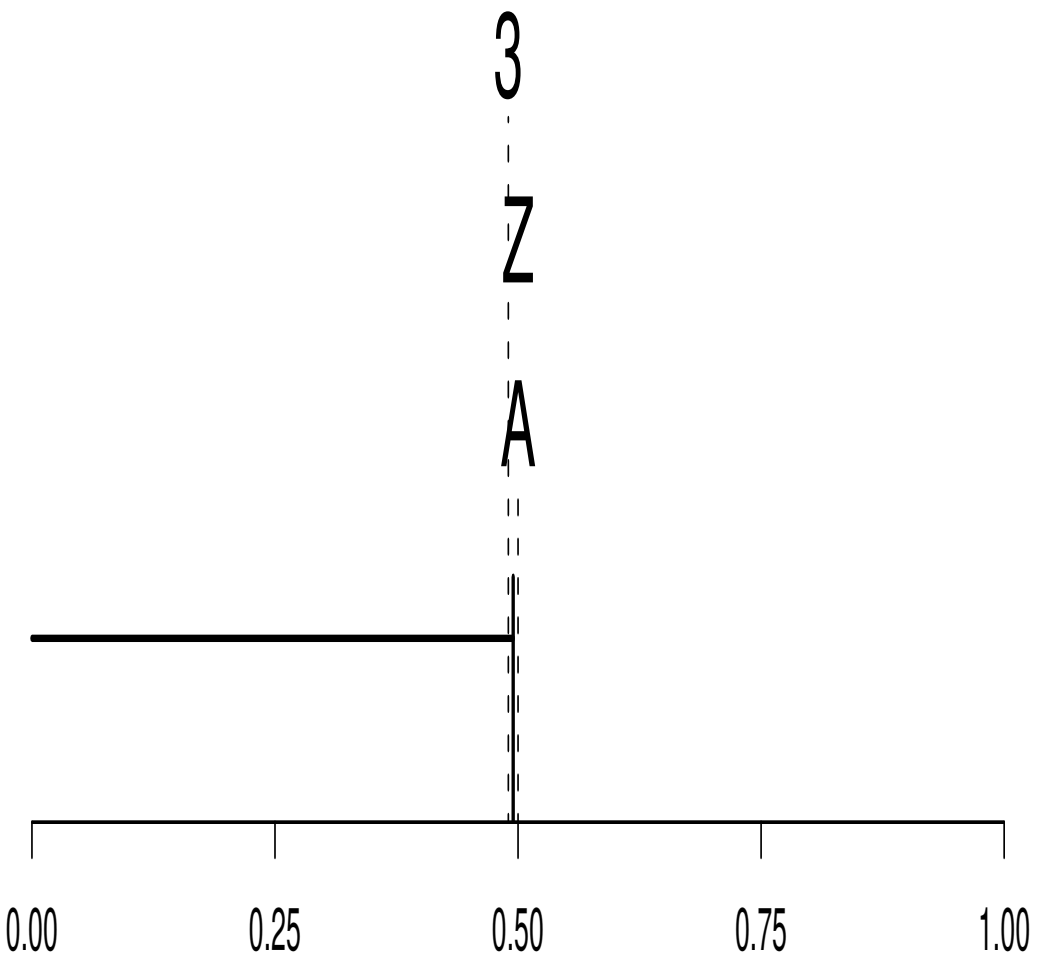
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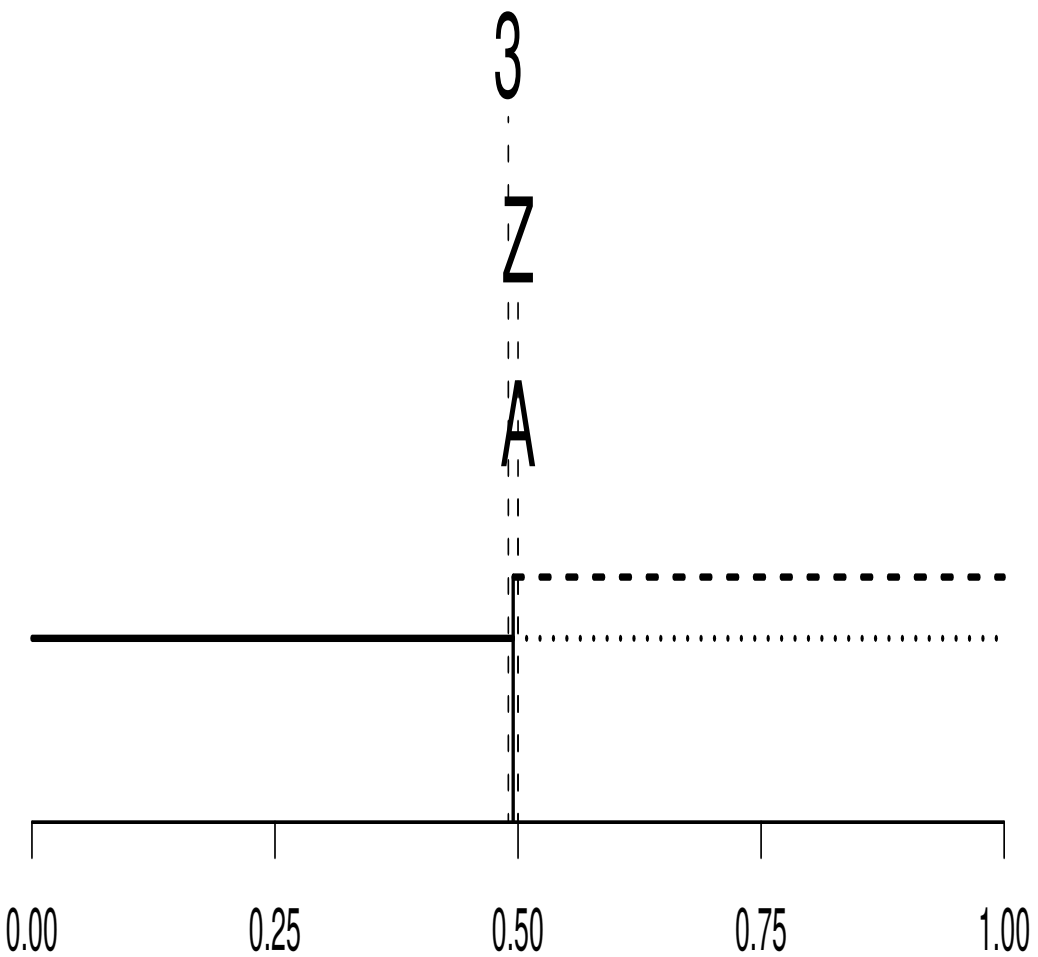
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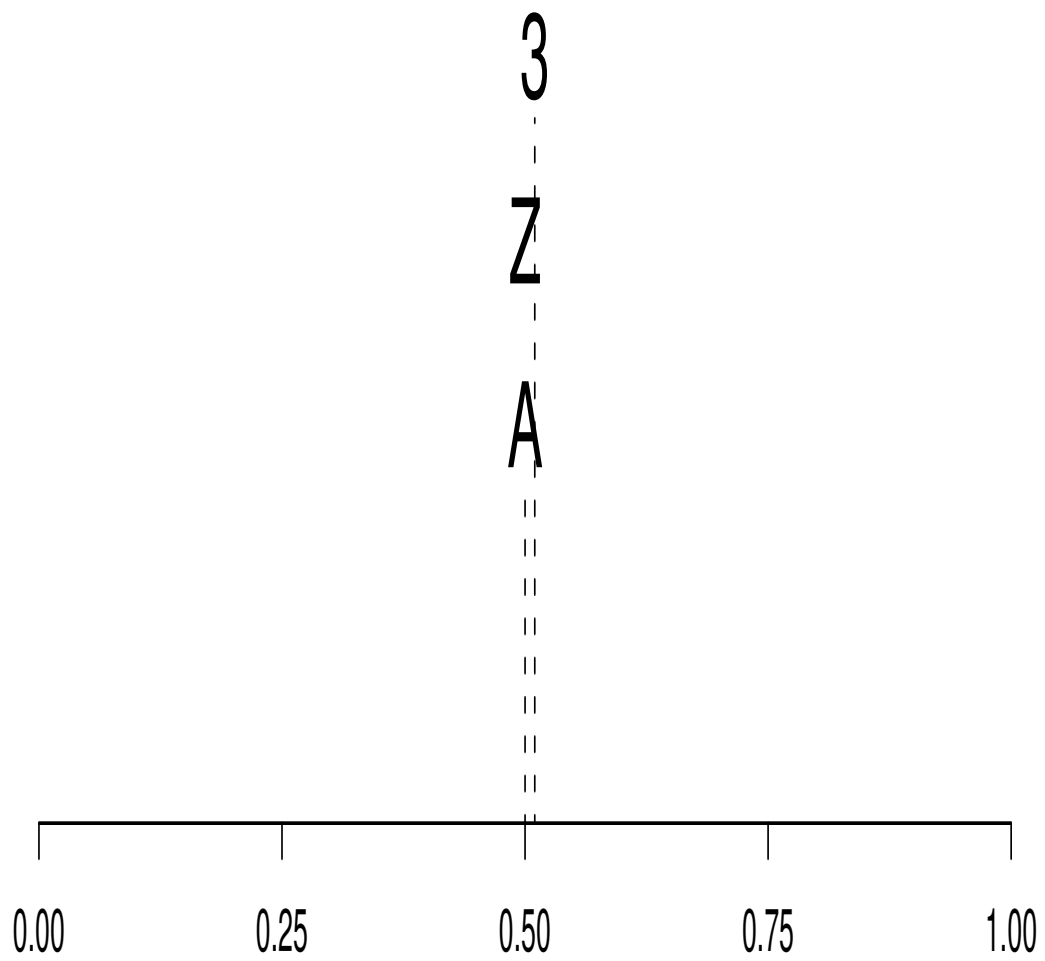
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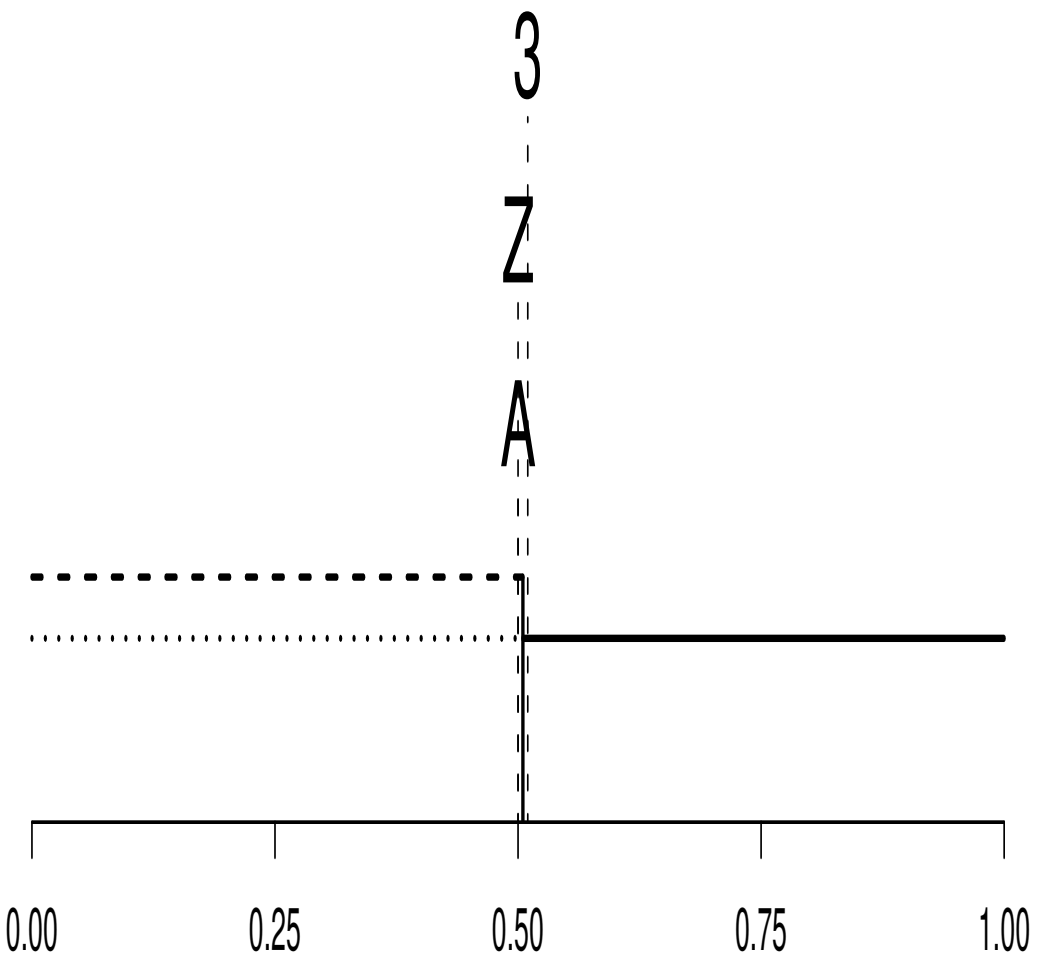
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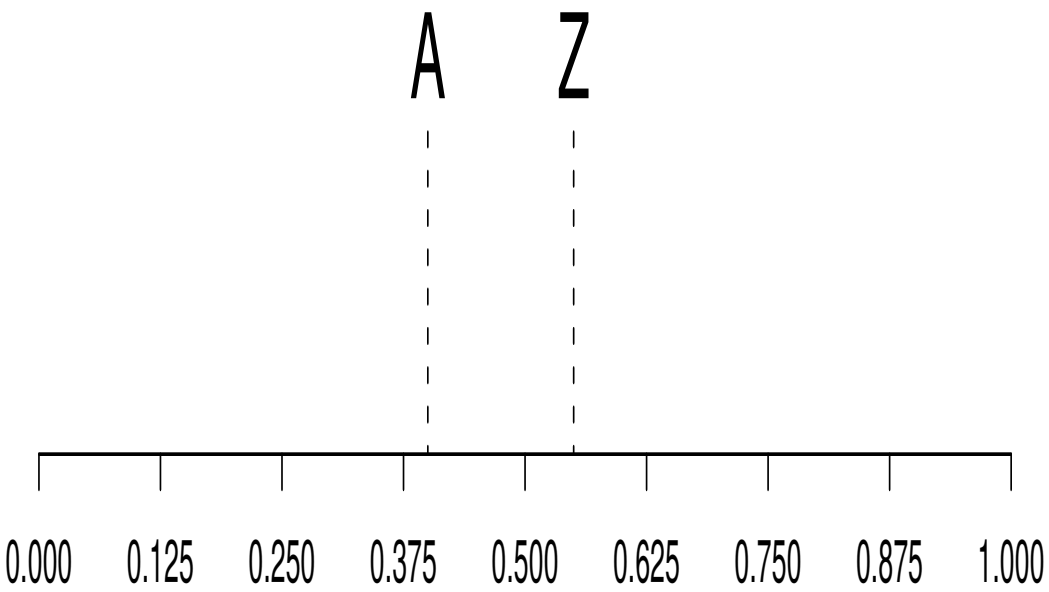
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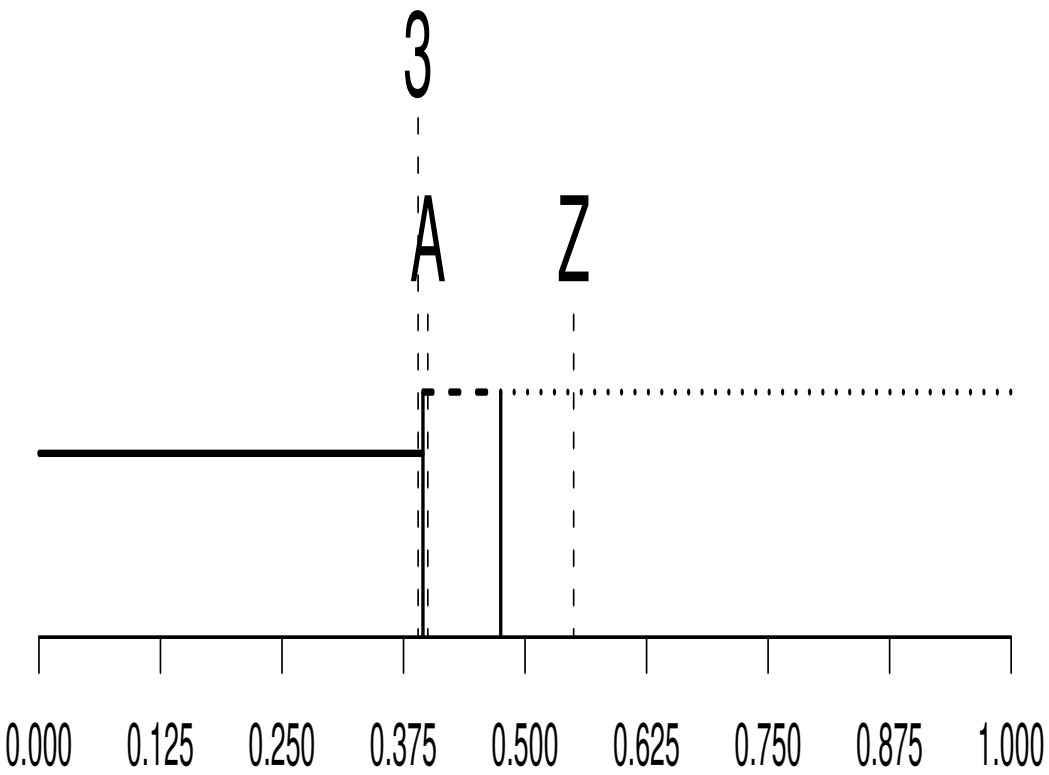
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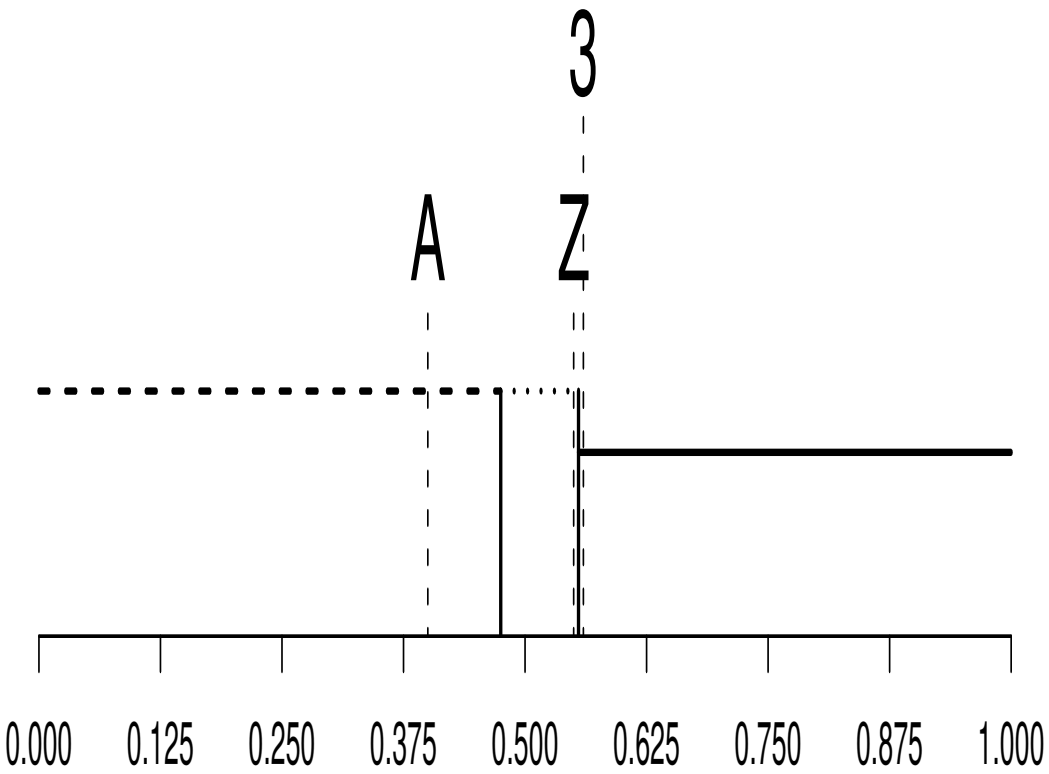
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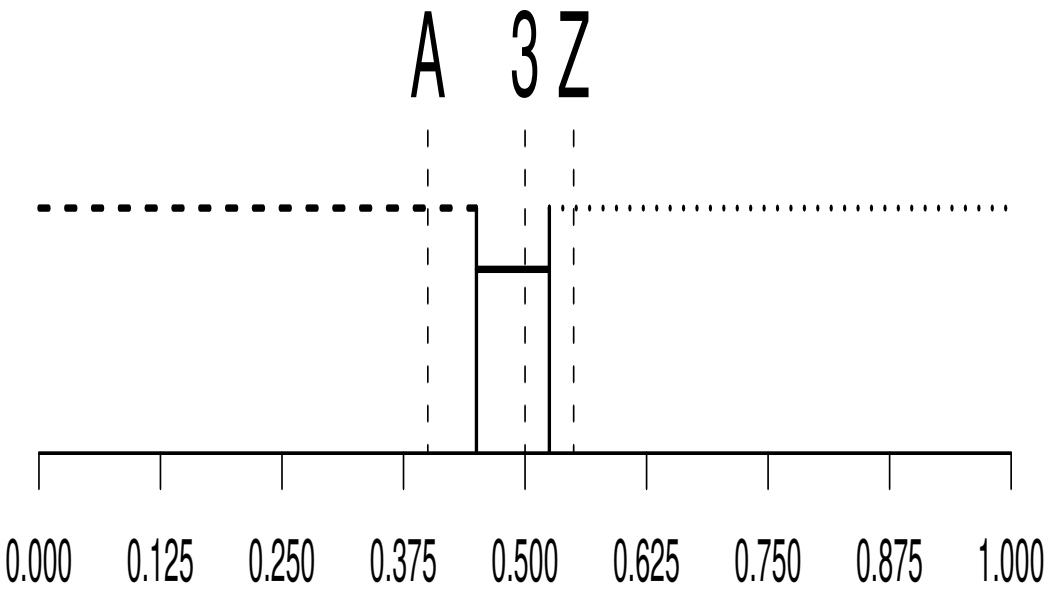
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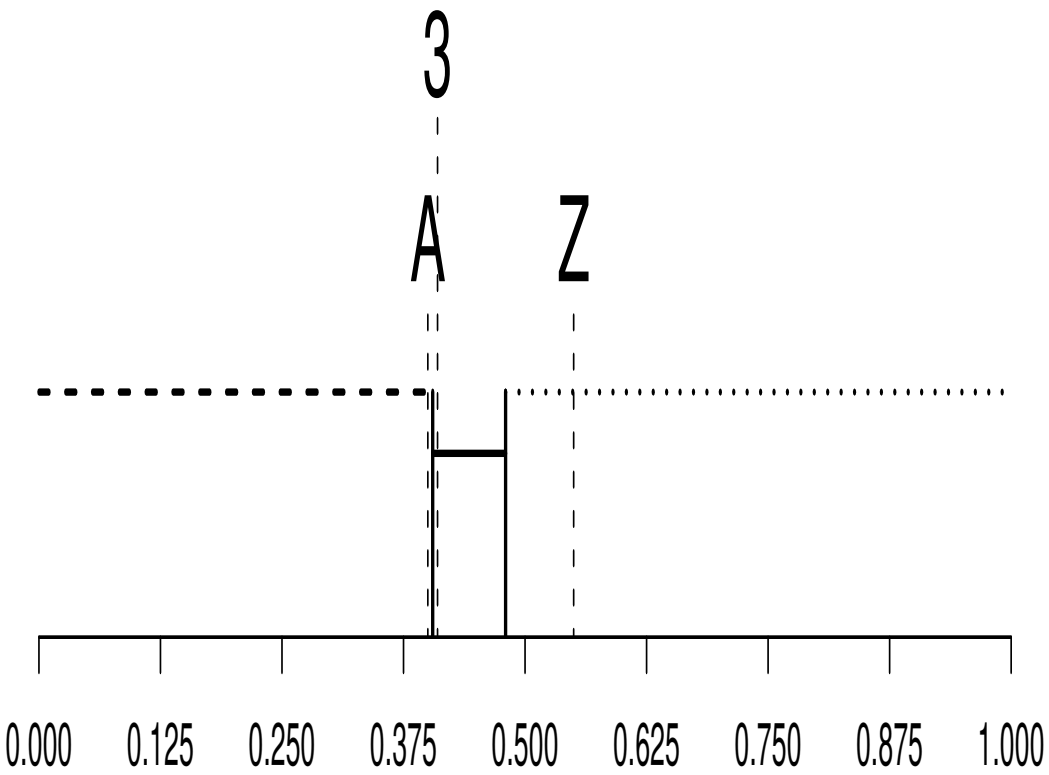
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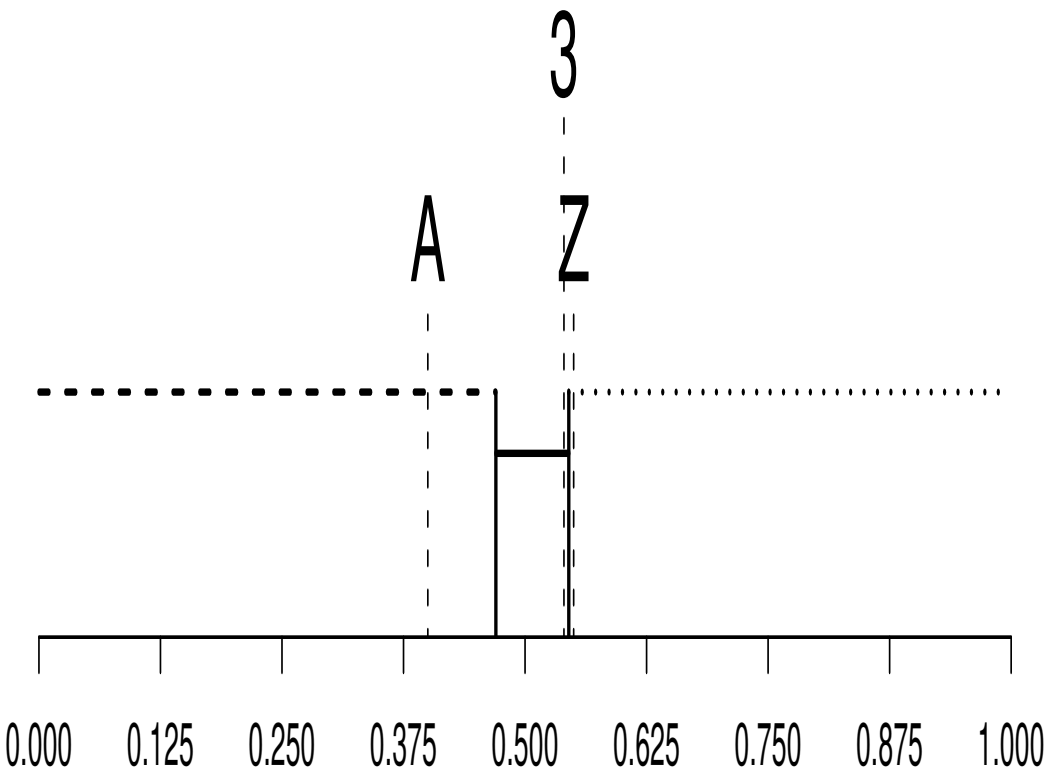
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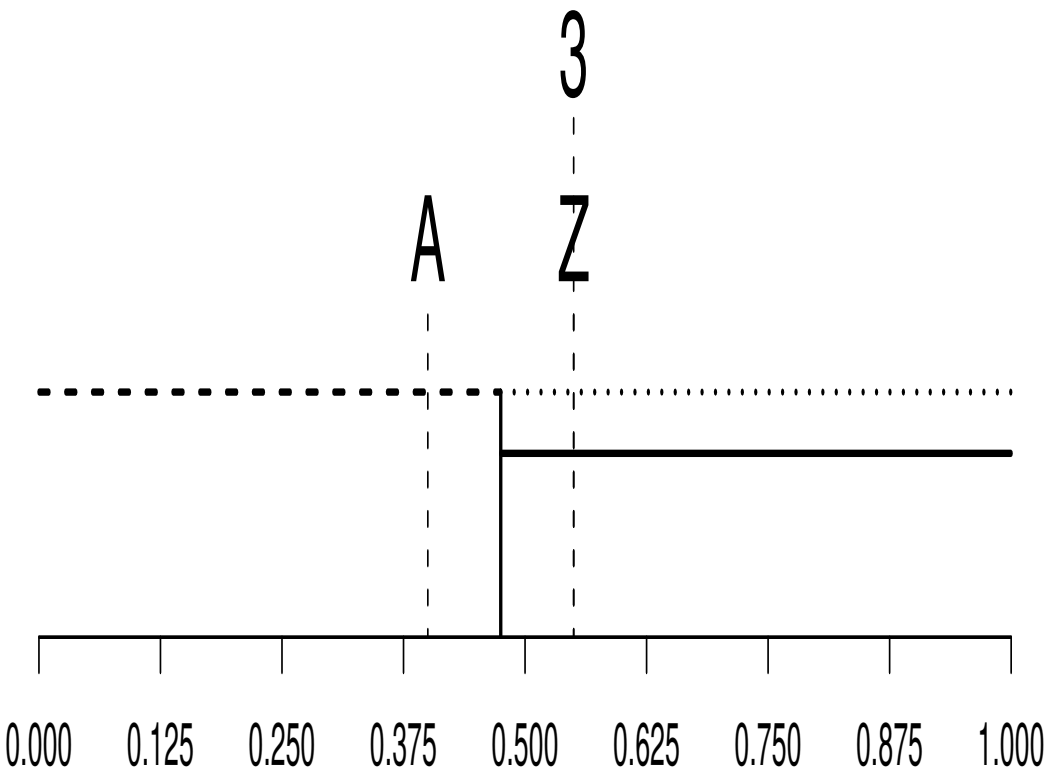
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- **are there positions where the major parties can avoid being outflanked?**

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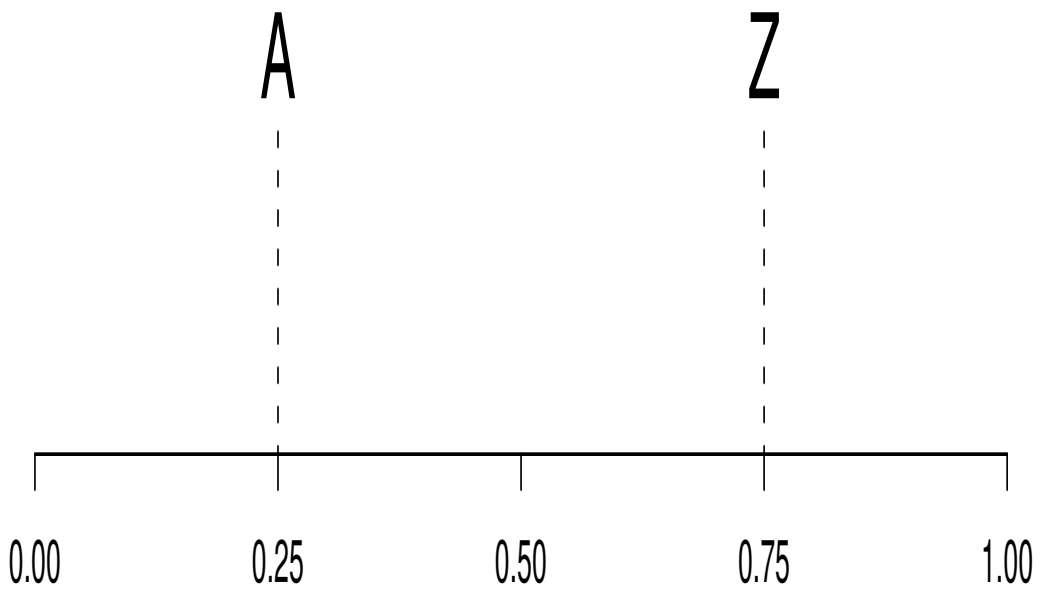
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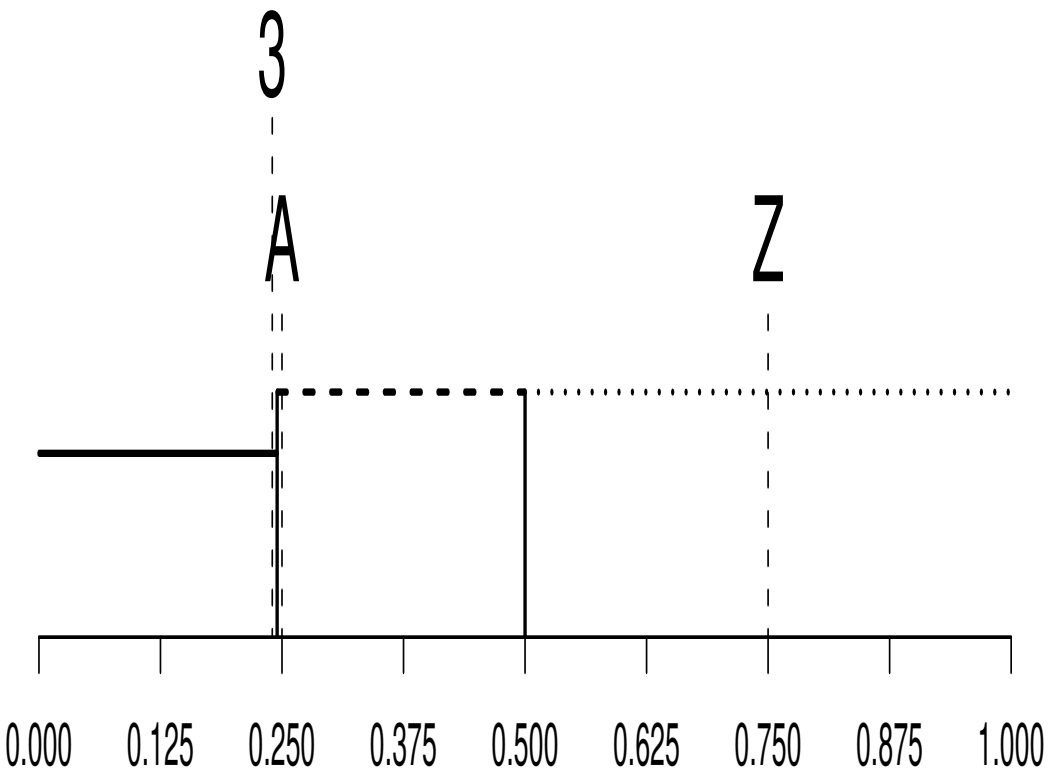
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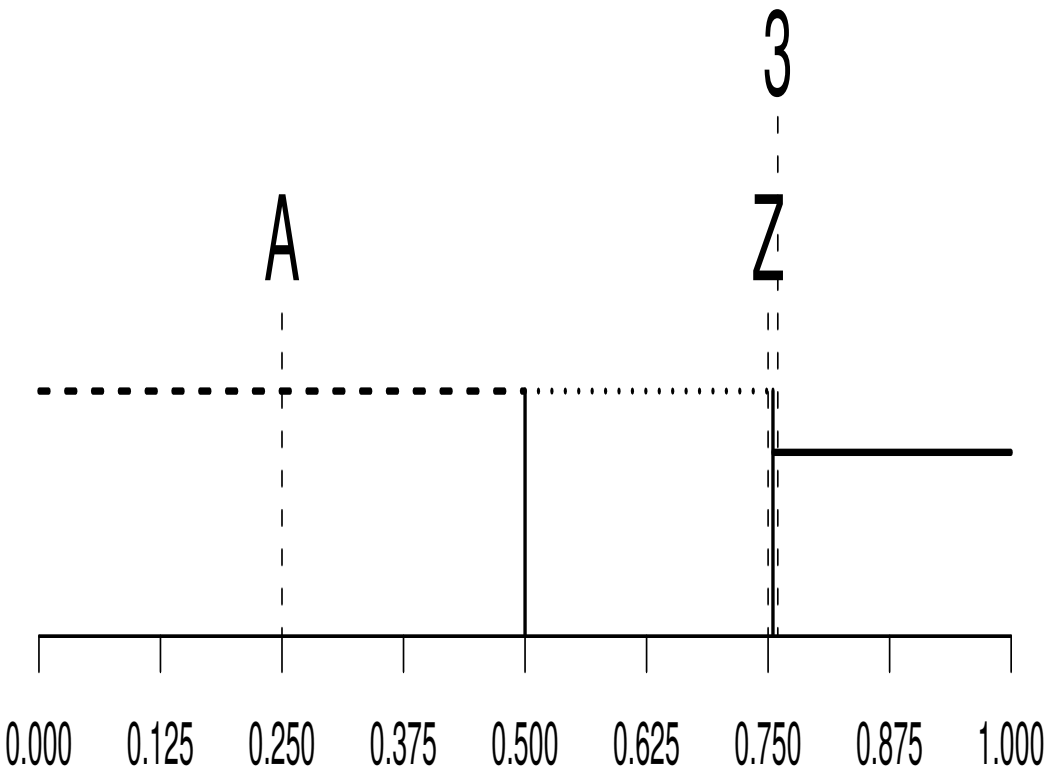
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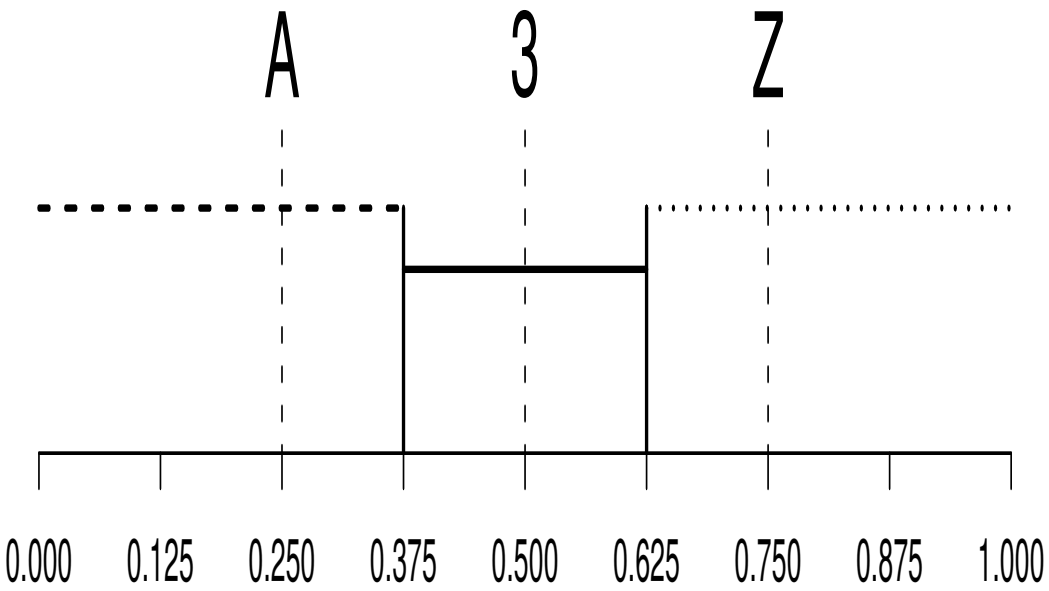
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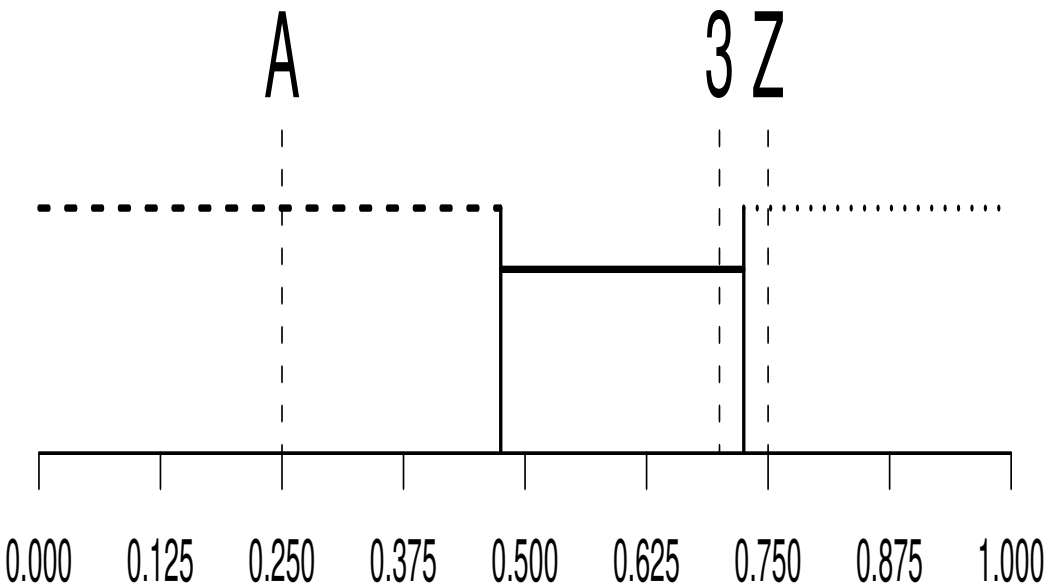
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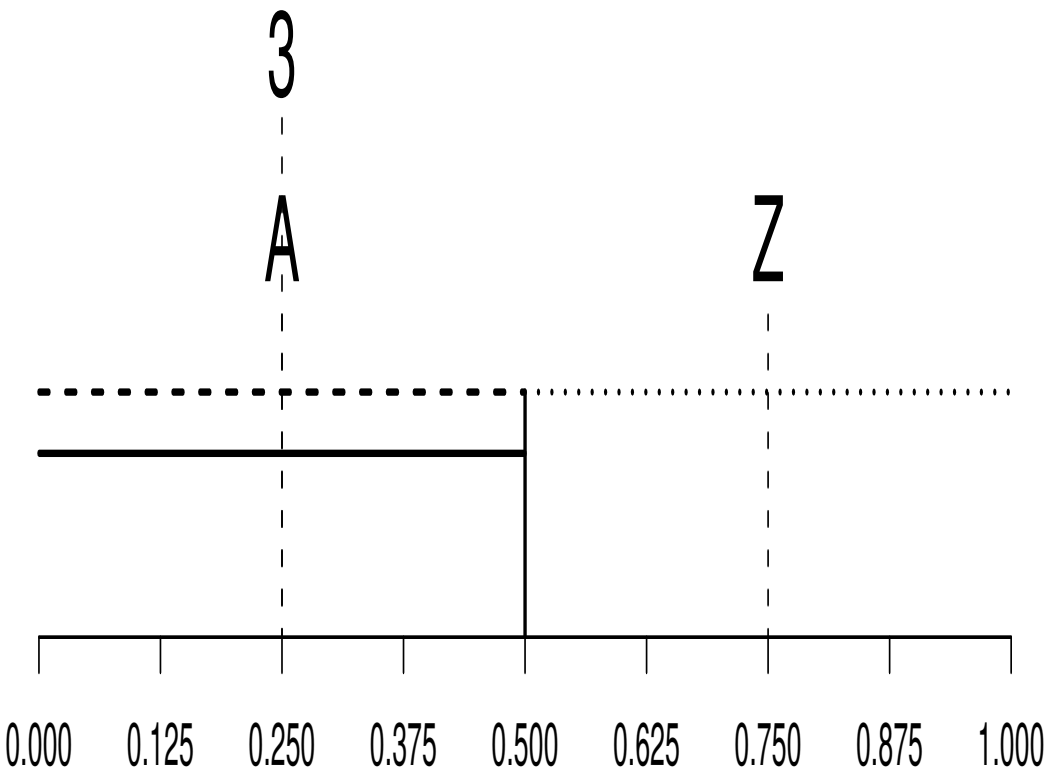
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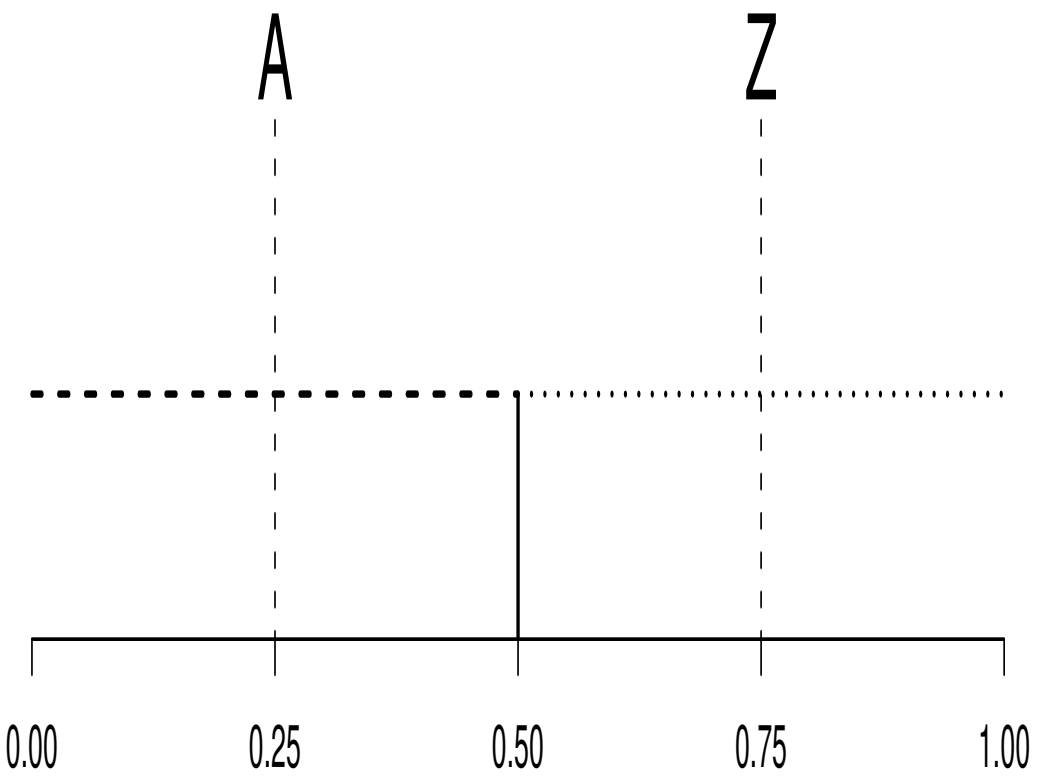
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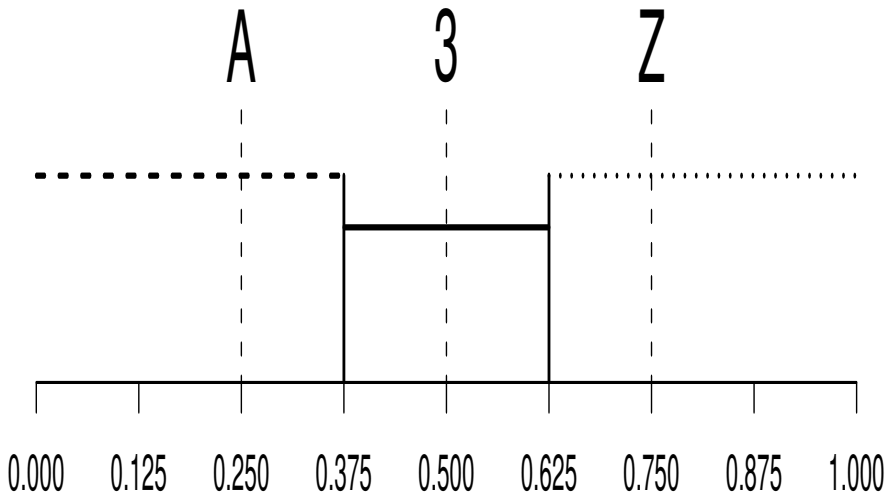
Perot in 1992?



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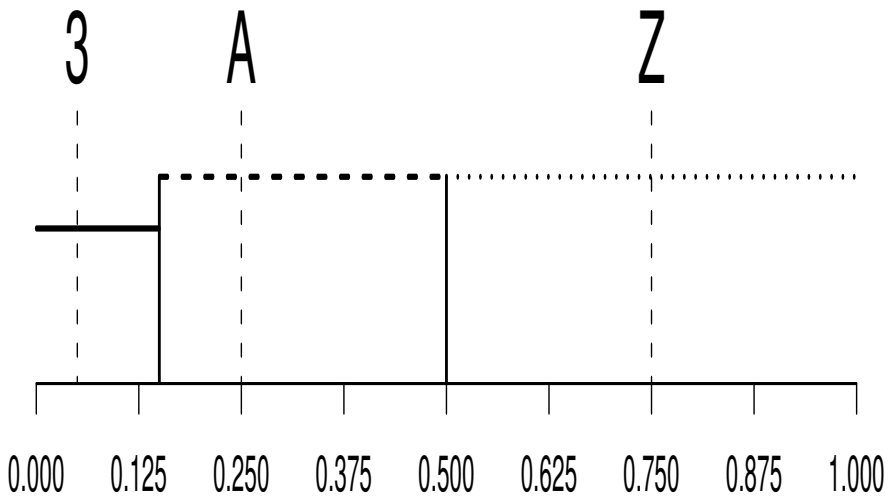
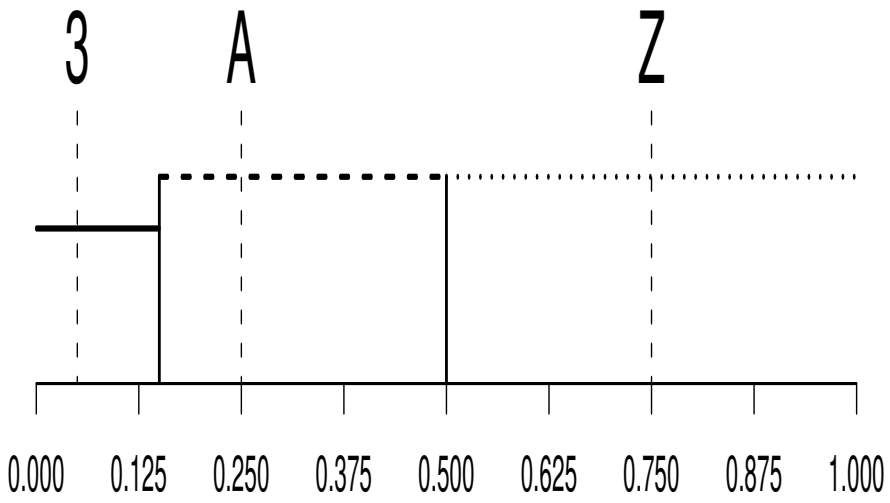
St. Ralph in 2000?



- **with plurality rule elections, strategic voters may cause the number of parties to be reduced**
- **that is, with strategic voters, only a limited number of parties may get votes**
- **example: consider again St. Ralph in 2000**

St. Ralph in 2000?



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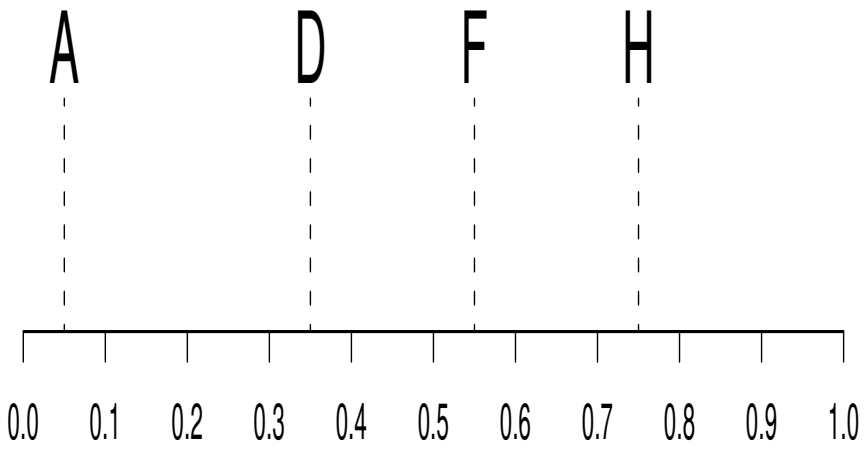
- **this is another path to Duverger's Law, driven by voters, not elites**

how many parties? start with 4



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- **exceptions:**
  - **a third party gets votes from those who have the two leading parties tied as the worst alternatives**
  - **if there are many ties in preferences, more than two parties may get a positive number of votes**
  - **if the distribution of initial preferences is nearly even, more than two parties may get a positive number of votes**

- **Duverger's Law with plurality rule elections**
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- **special thresholds may give some voters a reason to vote for a third party**
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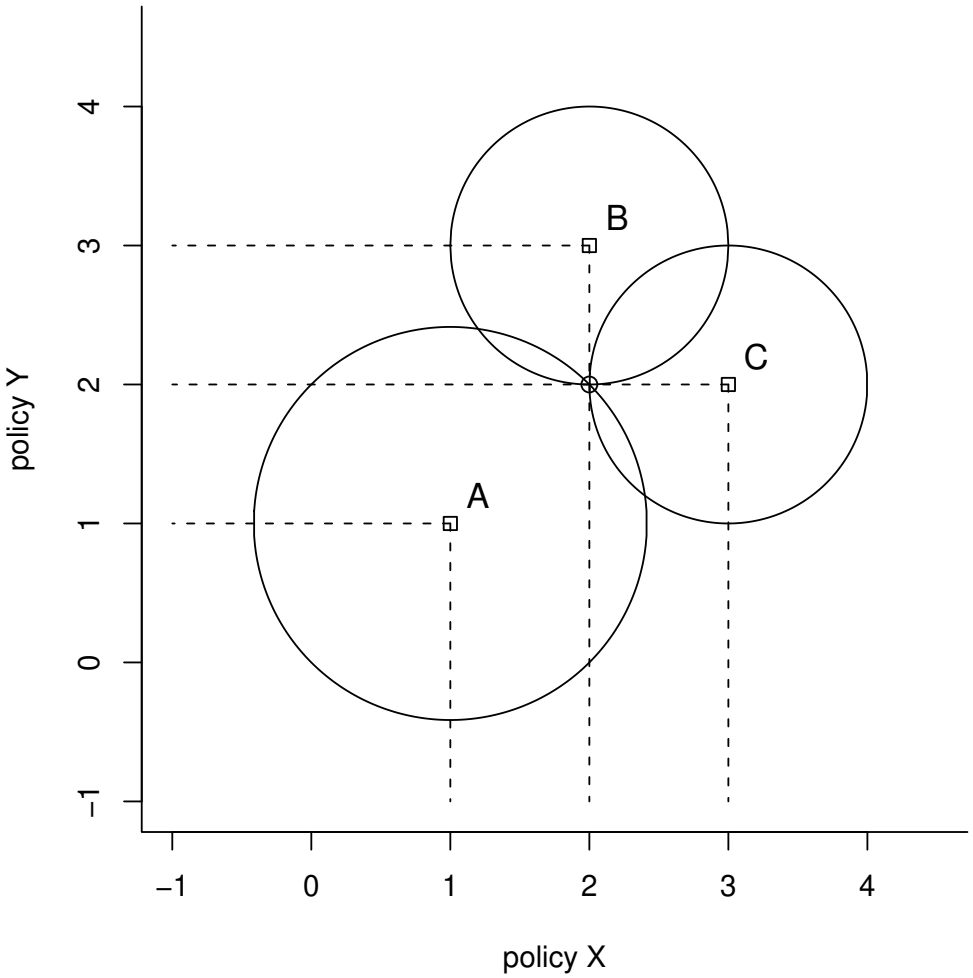
- **a two-dimensional spatial model**
- **two-dimensional separable euclidean preferences:**

  $$d = [(x_k - x_i)^2 + (y_k - y_i)^2]^{1/2}$$

- **an example with three voters**

Three Voters with Separable Euclidean Preferences



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- **with two-dimensional spatial preferences, in general the winset of any point x is not empty**
- **with separable preferences, the median on one dimension can be defeated by alternatives that shift along both dimensions**
- **with nonseparable preferences, a one-dimensional median is even more unstable**

- **two-dimensional nonseparable euclidean preferences:**

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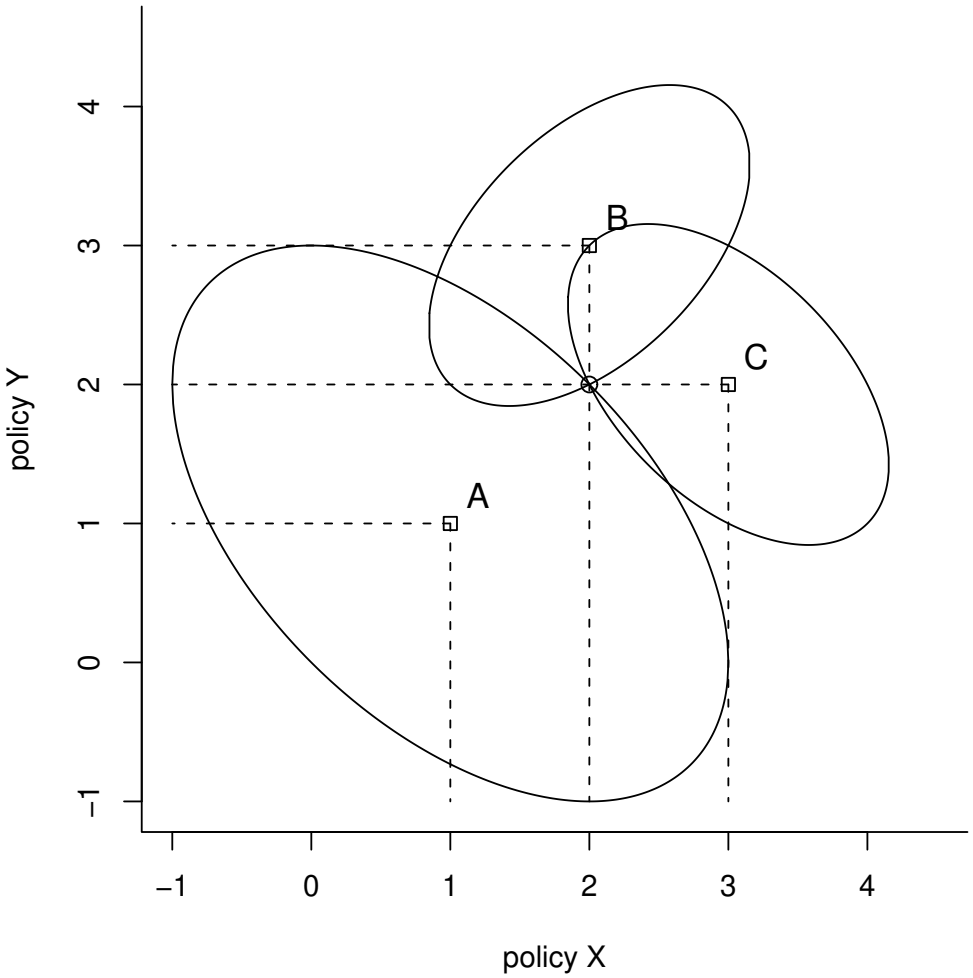

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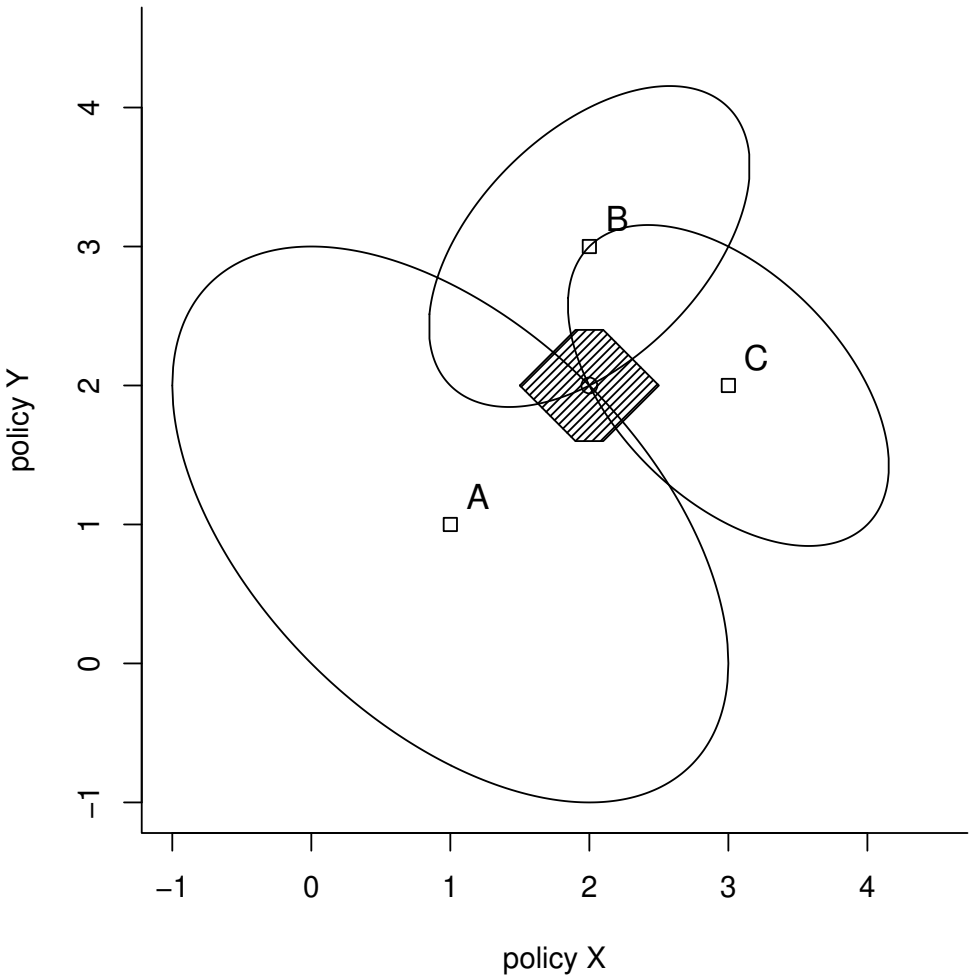
Strategy of Ambiguity



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- **response: the strategy of ambiguity**

- **the general implication for political strategy: almost every position in a multidimensional policy space can be defeated**
- **the strategy of matching**
- **response: the strategy of ambiguity**
- **the strategy of ambiguity fails, if voters are risk averse**

- **three types of negative campaigning**
  1. **highlighting nonspatial characteristics**

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- three types of negative campaigning
  1. highlighting nonspatial characteristics
  2. matching
  3. asserting the opponent is ambiguous ("flip-flop")

- **instability with multidimensional spatial preferences**
- **the chaos theorems**

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  - **there is a finite path of pairwise majority votes from any alternative to any other alternative, and back**
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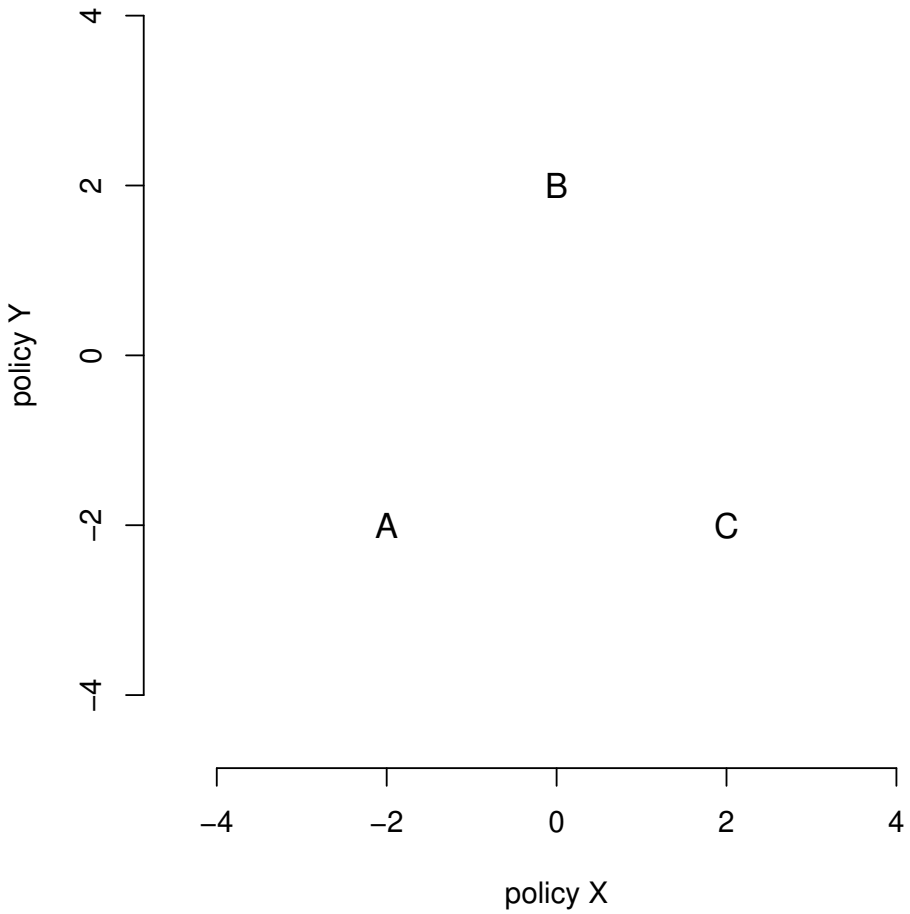
- the chaos theorems
  - there is a finite path of pairwise majority votes from any alternative to any other alternative, and back
  - power of the agenda setter given sincere voters
- an example with three voters

Three Voters



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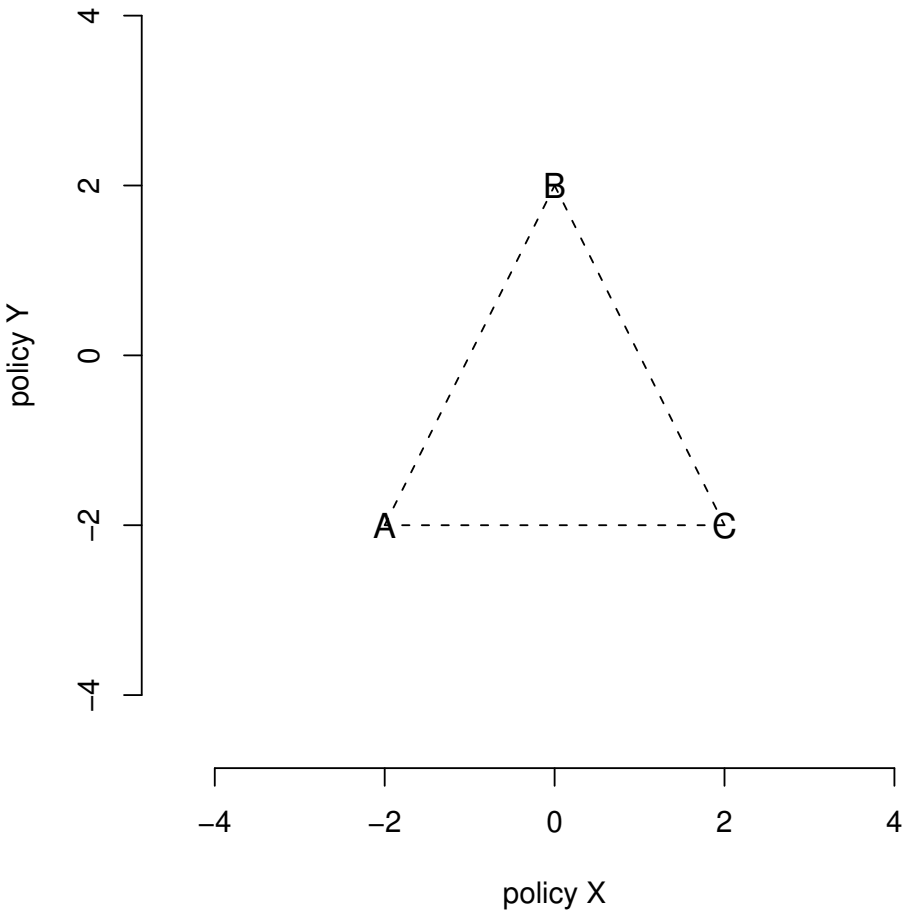
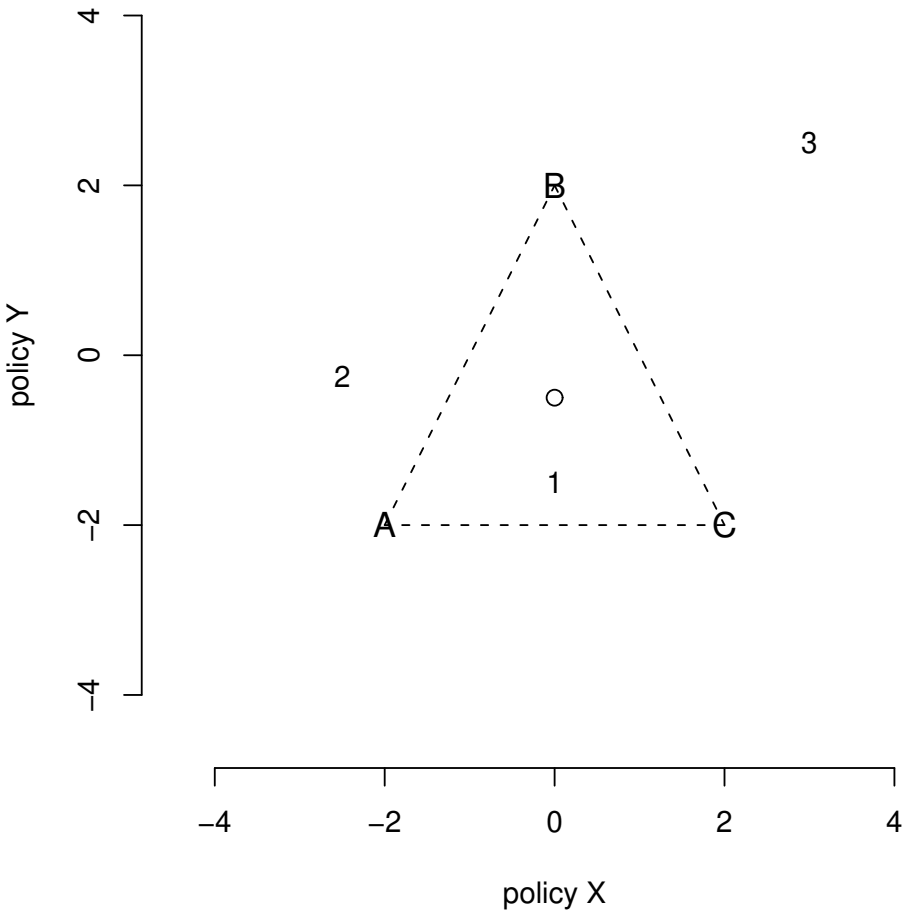
- **each point in the Pareto set**
  1. **is not unanimously inferior to any other point**
  2. **is unanimously superior to at least one other point**

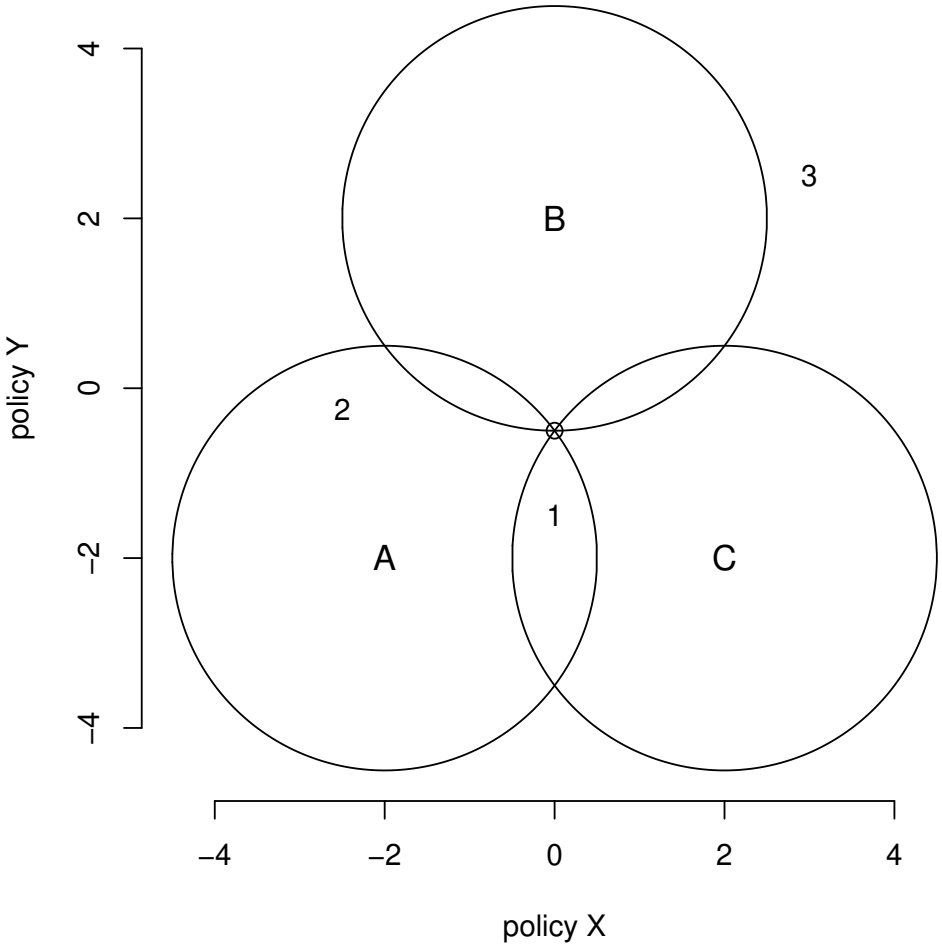
Three Voters with Pareto Set



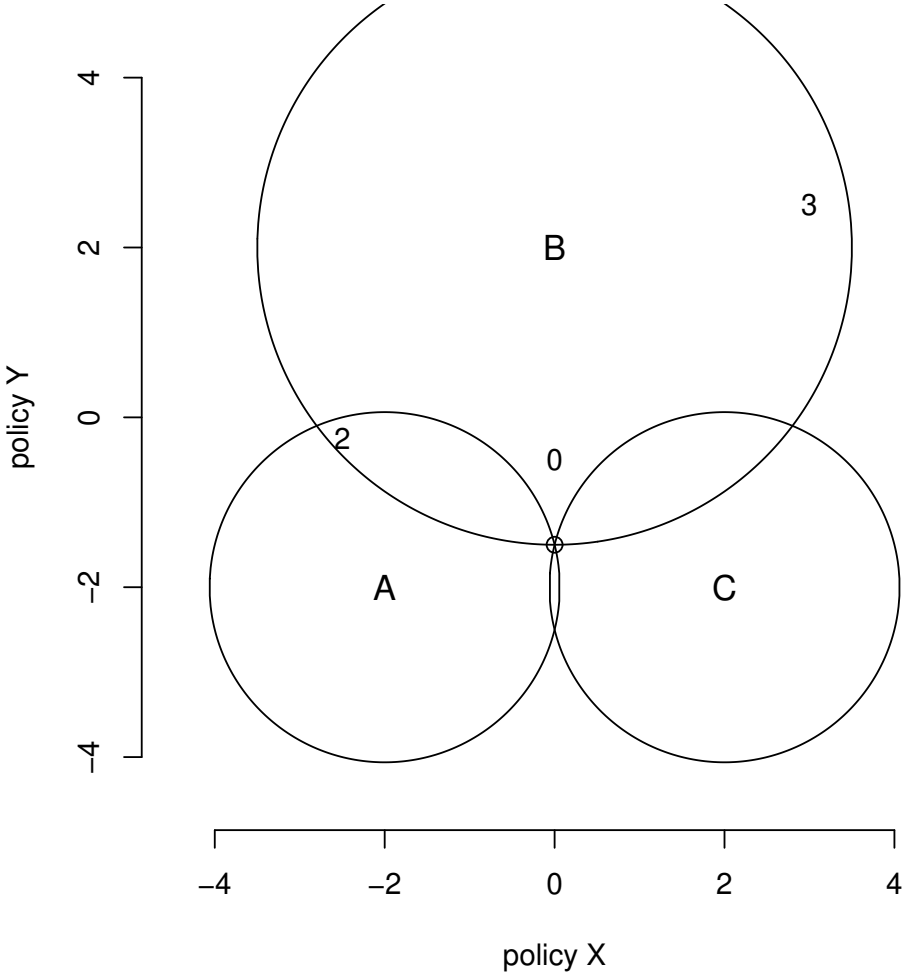
Three Voters Facing an Agenda



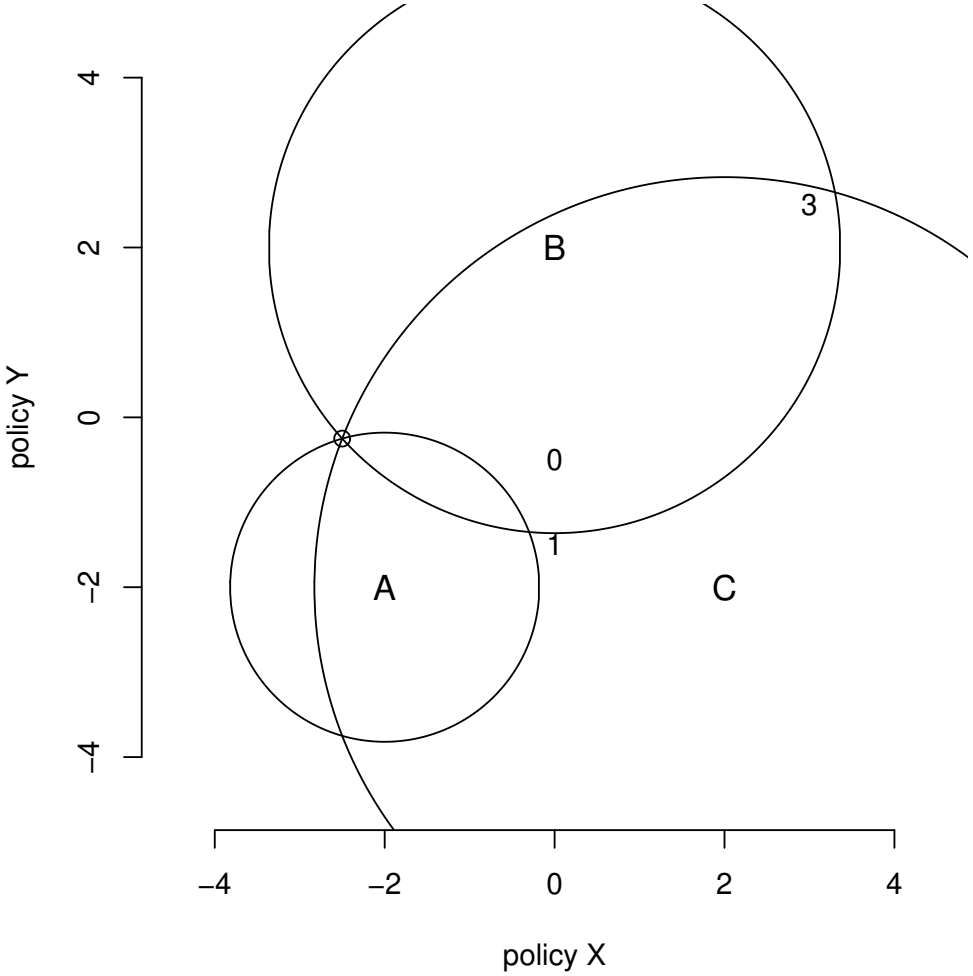
Indifference Curves At Status Quo



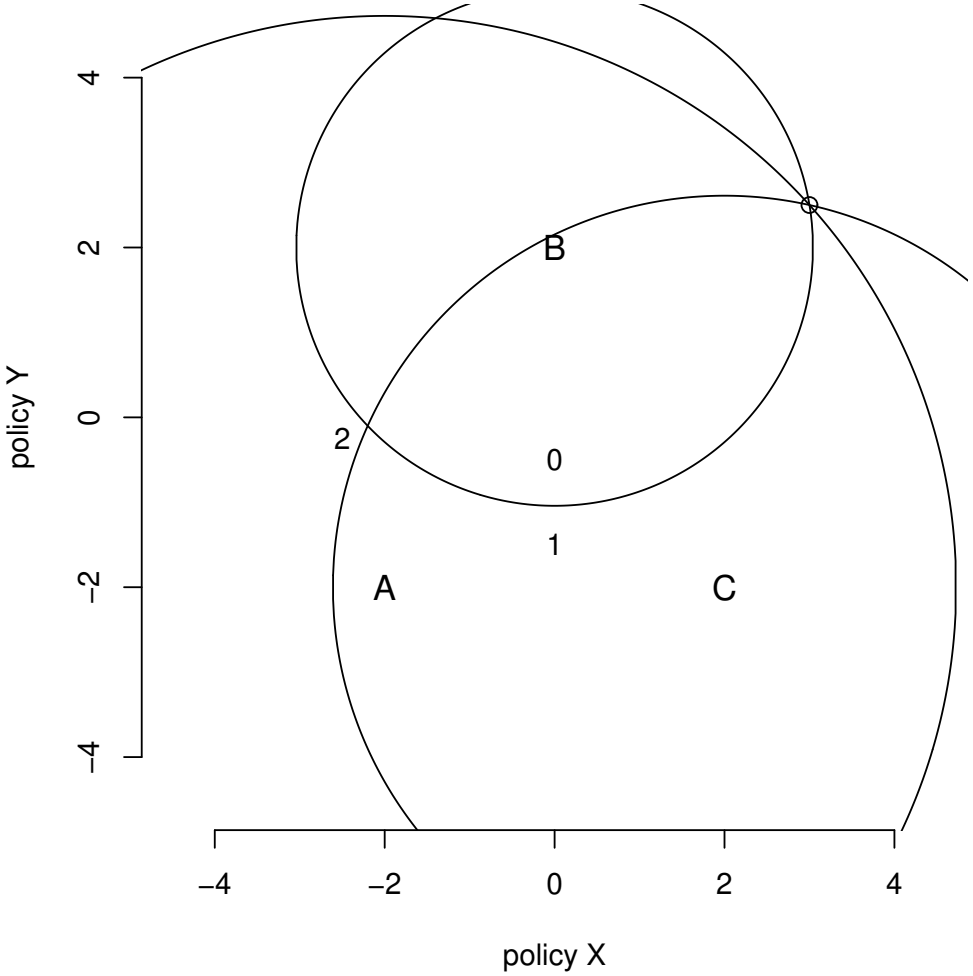
Indifference Curves At First Alternative



Indifference Curves At Second Alternative

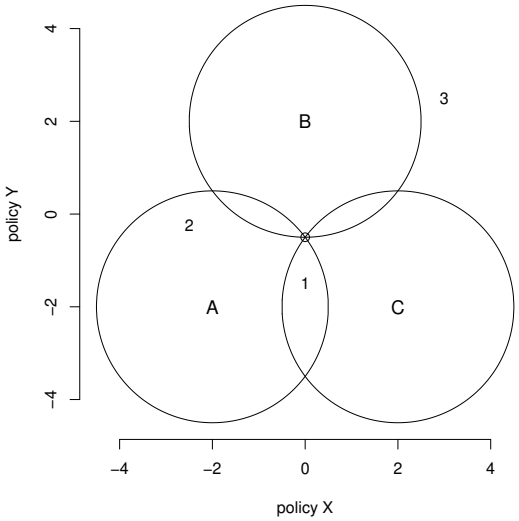


Indifference Curves At Third Alternative

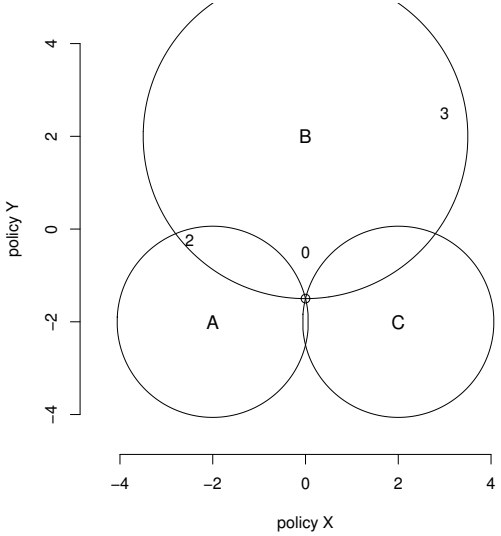


Indifference Curves at Each Point of the Agenda

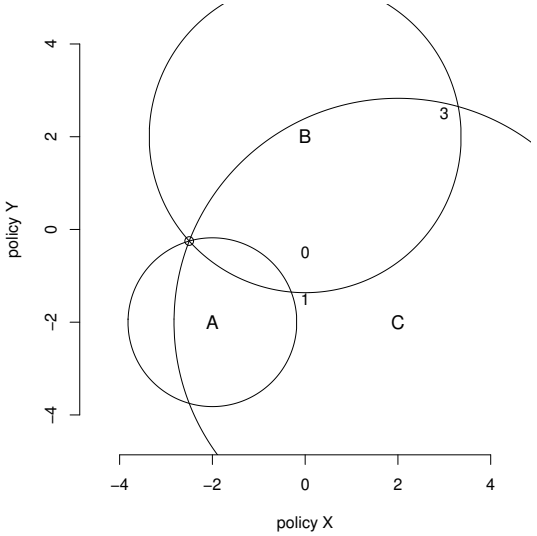
At Status Quo



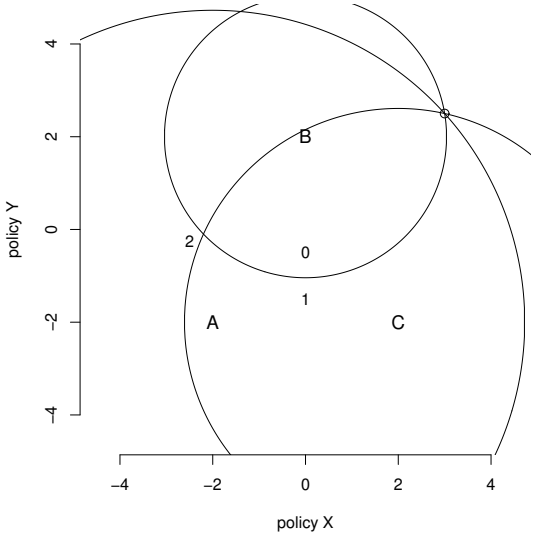
At First Alternative



At Second Alternative



At Final Alternative



- instability with multidimensional spatial preferences
- the chaos theorems
  - there is a finite path of pairwise majority votes from any alternative to any other alternative, and back
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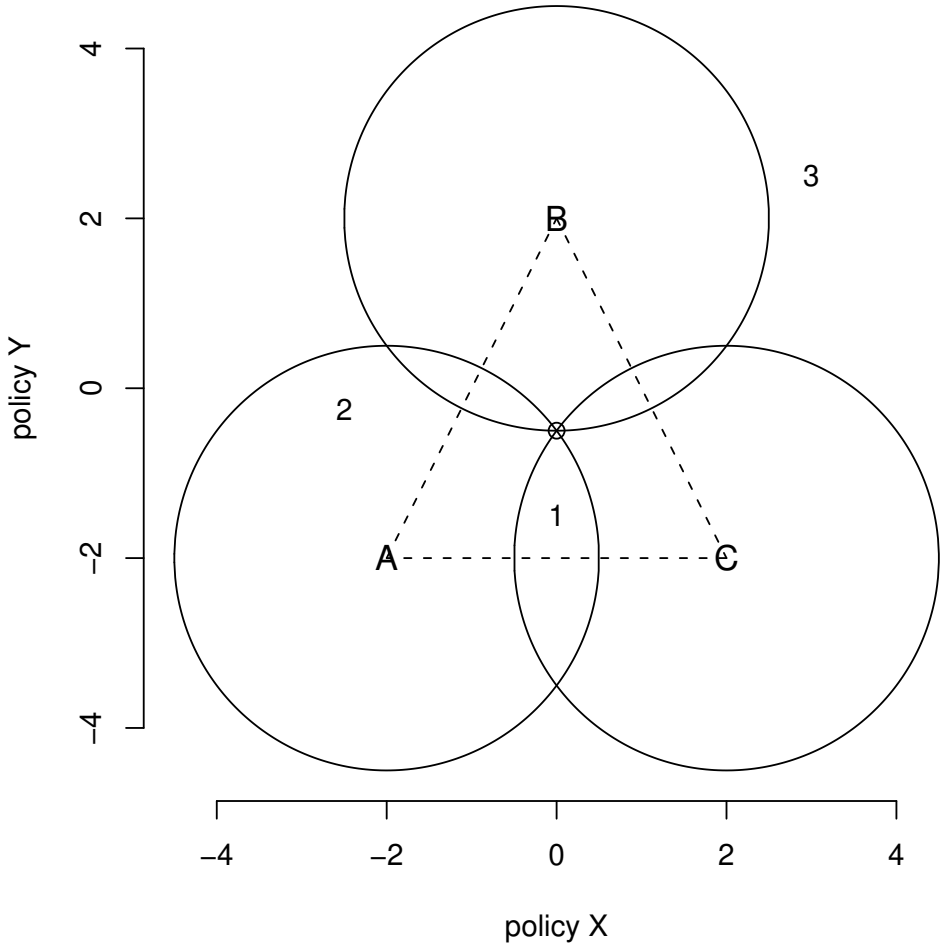
Indifference Curves At Status Quo, with Pareto Set



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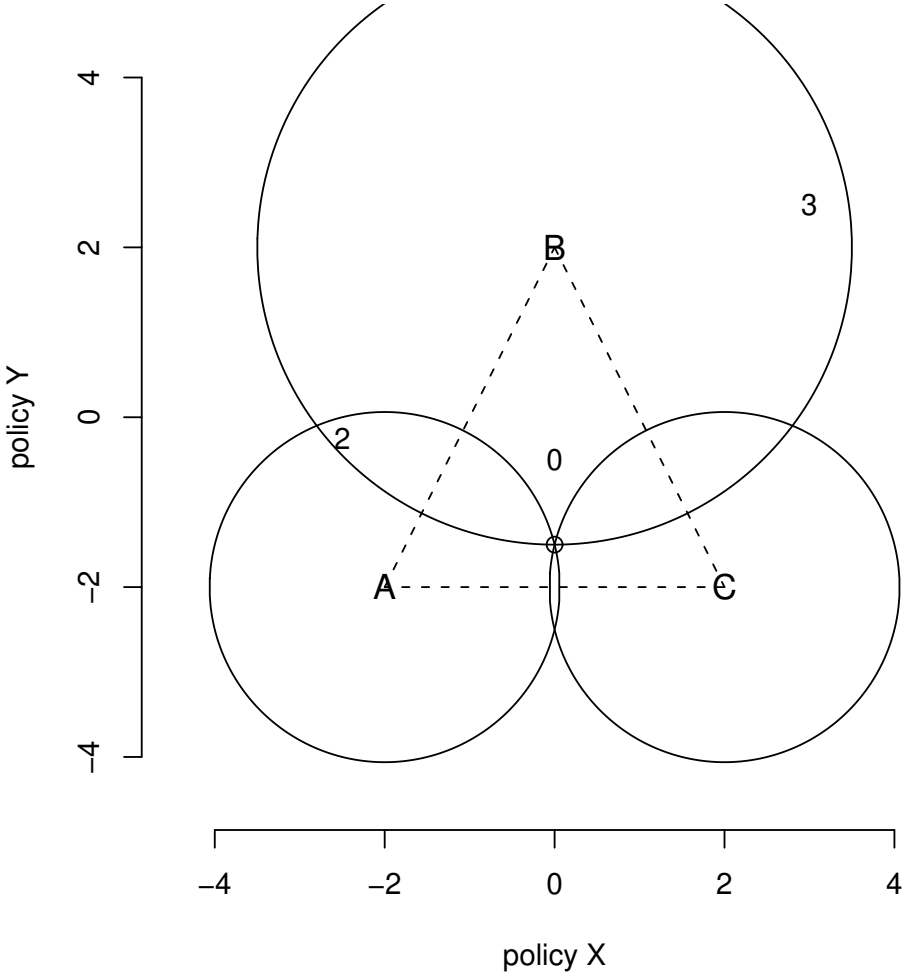

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- instability with multidimensional spatial preferences
- strategic voters can keep outcomes inside the Pareto set
  - technically, strategic voters can keep outcomes inside a smaller set, the "uncovered set"
- that's with a prespecified, public agenda
- one can get a similar result with an unknown agenda, if voters are risk averse
  - a voter does not support "extreme" alternatives that are very favorable to the voter if they are outside the Pareto set, due to the risk of getting outcomes that swing wildly far away

- **is turnout down?**
  - **yes, from 1960 until 2000 (with a bump up in 1992), if voting age population (VAP) is used**
  - **NO, if voting eligible population (VEP) is used**
  - **hence, the correct answer is NO (as per McDonald and Popkin)**

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  - **hence, the correct answer is NO (as per McDonald and Popkin)**
- **turnout was up substantially in 2004**
- **aggressive mobilization was one key there, although policy separation between the parties was also at an all-time high**
- **Bush (Rove's "72 hour campaign") seems to have outmobilized Kerry (MoveOn and ACT); clearly so in Ohio**

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- **but this does not explicitly incorporate the elector's own behavior or its consequences**

- **rational choice turnout models**
  - P: **probability that one's vote decides the election**
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  - **strategic abstention and strategic ignorance (Downs)**

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  - **“roll-off” (also a measure of the “residual vote”)**
  - **racially related (motivated?) abstention (Herron-Sekhon 2004)**
    - **“the African-American residual vote rate will shrink in contests with black candidates”**
    - **supporting evidence from 1998 in Cook County, Illinois**
    - **some evidence also of “discretionary residual votes” among white voters facing a strong black incumbent; others have argued for such demobilizing effects more generally.**

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- **the values** V_A**,** V_Z **and** C **do not necessarily indicate a rational choice.**
- **for example, they may summarize predispositions from unconsidered habits; in that case this formulation is a bit misleading**

- **define for each potential voter**
  - V_A**: value of candidate** A
  - V_Z**: value of candidate** Z
  - C**: net cost of voting**
- **general rules:**
  - **vote only if** $|V_A - V_Z| > C$
  - **choose** A **if** $V_A > V_Z$
  - **choose** Z **if** $V_Z > V_A$

- **vote choice models**
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  - **use the NES likes-dislikes items and party identification**

- **NES likes-dislikes items: parties**
  - **Is there anything in particular that you like about the Democratic party? What is that? Anything else [you like about the Democratic Party]?**
  - **Is there anything in particular that you don't like about the Democratic party? What is that? Anything else [you don't like about the Democratic Party]?**
  - **Is there anything in particular that you like about the Republican party? What is that? Anything else [you like about the Republican Party]?**
  - **Is there anything in particular that you don't like about the Republican party? What is that? Anything else [you don't like about the Republican Party]?**

- **NES likes-dislikes items: candidates**
  - **Is there anything in particular about (Democratic presidential candidate) that might make you want to vote for him? What is that? Anything else?**
  - **Is there anything in particular about (Democratic presidential candidate) that might make you want to vote against him? What is that? Anything else?**
  - **Is there anything in particular about (Republican presidential candidate) that might make you want to vote for him? What is that? Anything else?**
  - **Is there anything in particular about (Republican presidential candidate) that might make you want to vote against him? What is that? Anything else?**

- **"the simple act of voting" (Kelley-Mirer)**
- **consider the NES likes-dislikes items**
  - **record up to five "mentions" from each respondent**
- **compute**
  - $D_{pL} =$ **number of Dem party likes**
  - $D_{pD} =$ **number of Dem party dislikes**
  - $R_{pL} =$ **number of Rep party likes**
  - $R_{pD} =$ **number of Rep party dislikes**
  - $D_{cL} =$ **number of Dem candidate likes**
  - $D_{cD} =$ **number of Dem candidate dislikes**
  - $R_{cL} =$ **number of Rep candidate likes**
  - $R_{cD} =$ **number of Rep candidate dislikes**
- $S = D_{pL} + D_{cL} - D_{pD} - D_{cD} + R_{pD} + R_{cD} - R_{pL} - R_{cL}$

- **"the simple act of voting" (Kelley-Mirer)**
- **consider the NES likes-dislikes items**
  - **record up to five "mentions" from each respondent**
- **compute net score:**
- $S = D_{pL} + D_{cL} - D_{pD} - D_{cD} + R_{pD} + R_{cD} - R_{pL} - R_{cL}$
- **decision rule:**
  - **vote Dem if** $S > 0$
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- **performance: in NES data from 1952, 1956, 1960 and 1964 they correctly predicted about 88 percent of respondents' self-reports of their vote choices**

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- **concerns**

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- concerns
  - spuriousness: mentioned considerations may not faithfully represent the factors that changed voters' opinions
  - endogeneity due to rationalization: voters may decide who they will vote for then look for reasons to tell others
  - likes-dislikes are strongly correlated with partisanship, so maybe the model is basically party ID

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- **the Michigan model**

- **the Michigan model**
- **has party identification (party ID, PID) at its core**
- **claims voting decisions depend on party ID and other attitudes**

- NES standard question format:
  - "Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?"
  - (IF REPUBLICAN OR DEMOCRAT) "Would you call yourself a strong (REPUBLICAN/DEMOCRAT) or a not very strong (REPUBLICAN/DEMOCRAT)?"
  - (IF INDEPENDENT, OTHER [1966 and later: OR NO PREFERENCE]:) "Do you think of yourself as closer to the Republican or Democratic party?"
- result: seven-point index of party ID
  - Strong Democrat, Weak Democrat, Independent Democrat, Independent, Independent Republican, Weak Republican, Strong Republican
  - a scattering of people are Apolitical, identify with a third party (very rare), don't know or refuse to answer

NES Party Identification, Percentage within Study Year

PID	84	86	88	90	92	94	96	98	00	04
Strong Democrat	17	18	17	20	18	15	18	19	19	17
Weak Democrat	20	22	18	19	18	19	19	18	15	15
Independent Democrat	11	10	12	12	14	13	14	14	15	18
Independent	11	12	11	10	12	11	9	11	12	10
Independent Republican	12	11	13	12	12	12	12	11	13	12
Weak Republican	15	15	14	15	14	15	15	16	12	13
Strong Republican	12	10	14	10	11	15	12	10	12	16
Apolitical	2	2	2	2	1	1	1	2	1	0

NES Party ID item in 2004:

V043116 J1x. Summary: R party ID

PRE-ELECTION SURVEY:

QUESTION:

Generally speaking, do you usually think of yourself as a REPUBLICAN, a DEMOCRAT, an INDEPENDENT, or what?
Would you call yourself a STRONG [Democrat/Republican] or a NOT VERY STRONG [Democrat/Republican]?
Do you think of yourself as CLOSER to the Republican Party or to the Democratic party?

VALID CODES:

---

0. Strong Democrat (2/1/.)
1. Weak Democrat (2/5-8-9/.)
2. Independent-Democrat (3-4-5/./5)
3. Independent-Independent
   (3/./3-8-9 ; 5/./3-8-9 if not apolitical)
4. Independent-Republican (3-4-5/./1)
5. Weak Republican (1/5-8-9/.)
6. Strong Republican (1/1/.)
7. Other; minor party; refuses to say (9/./. ; 4/./3-8-9)

MISSING CODES:

---

8. Apolitical (5/./3-8-9 if apolitical)
9. DK (8/./.)

NOTES:

Code combinations in parentheses represent corresponding values in J1/J1a/J1b.

Code 8 (apolitical) was used if R was coded No preference in J1 and also showed little or no interest in politics in response to the following survey questions:

A1 (Pre) Interest in campaigns

A12 (Pre) Care about Congressional race outcome

C1a/C1b (Post) Voted

E4 (Post) Follow public affairs

Respondents coded 'no preference' in J1 who showed interest in politics were coded 3.

TYPE:

Numeric Dec 0

0	203
1	179
2	210
3	118
4	138
5	154
6	193
7	5
8	4
9	8

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  - a "socialized" attribute: early adult or even childhood acquisition that subsequently changes only rarely
    - childish habit? ("I'm a Democrat because my daddy was a Democrat" [American Voter])
  - retrospective treatment: a "running tally"; fully rational, even Bayesian update of the parties' records in office?
    - "contextual partisanship": responding to the current campaign, in particular to the candidates' positions
    - e.g., 1984 (Mondale versus Hart)

- **party ID and voting behavior in presidential elections**
- **the normal vote: regular frequencies of turning out and choosing candidates**

- party ID and voting behavior in presidential elections
- the normal vote: regular frequencies of turning out and choosing candidates
  - strong partisans are most likely to vote and highly loyal (about 98%)
  - weak partisans are slightly less likely to vote and somewhat less loyal (about 95% for Republicans, about 93% for Democrats)
  - leaners are somewhat less likely to vote than weak partisans, but no less loyal (Republicans) or more loyal (Democrats)
  - pure independents are much less likely to vote

- a normal vote analysis takes the party ID long-run frequencies as a baseline and then evaluations deviations from those as due to the effects of "short-term forces"
- short-term forces include a short list of other attitudes: domestic and foreign policy issues; characteristics of the candidates; economic evaluations

- **party ID and voting behavior in presidential elections**
- **the weighted-sum kind method: specify attitudes as a vector field, i.e., each person is a regression equation**
- **all attitudes, including party ID, are treated symmetrically**

- **each person is a (probit) regression equation**
- **define:**

$$y_i = \begin{cases} REP & \textbf{if } y_i^* > 0 \\ DEM & \textbf{if } y_i^* < 0 \end{cases}$$

$$y_i^* = b_0 + b_1 PID_i + b_2 POLD_i + b_3 POLR_i + b_4 CAND_i + b_5 CANR_i + b_6 ECON_i + e_i$$

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- **measure the attitudes with survey data, estimate the coefficients**
- **referring to**
  - **choose** A **if** $V_A > V_Z$
  - **choose** Z **if** $V_Z > V_A$

  $y_i^* = V_A - V_Z$

- each person is a (probit) regression equation
- an example: the Bush-Gore vote choice in 2000 (NES data)

- **questions to measure the variables:**

  y_i, vote choice (CF0704a) **"(IF R VOTED:) How about the election for President? Did you vote for a candidate for President? (IF YES:) Who did you vote for?"**

  PID (CF0301) **"Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?" (IF REPUBLICAN OR DEMOCRAT) "Would you call yourself a strong (REPUBLICAN/DEMOCRAT) or a not very strong (REPUBLICAN/DEMOCRAT)?" (IF INDEPENDENT, OTHER [1966 and later: OR NO PREFERENCE]:) "Do you think of yourself as closer to the Republican or Democratic party?"**

- **questions to measure the variables:**

  Intelligent Dem (CF0350) **"I am going to read a list of words and phrases people may use to describe political figures... Think about Al Gore. The first phrase is 'intelligent.' In your opinion, does the phrase 'intelligent' describe Al Gore extremely well, quite well, not too well or not well at all?"**

  Intelligent Rep (CF0362) **"I am going to read a list of words and phrases people may use to describe political figures... Think about George W. Bush. The first phrase is 'intelligent.' In your opinion, does the phrase 'intelligent' describe George W. Bush extremely well, quite well, not too well or not well at all?"**

- **questions to measure the variables:**

  National Economy (CF0872) **"What about the next 12 months? ALL YEARS EXC. 2000: VERSION 1: Do you expect the economy, in the country as a whole, to get better, stay about the same, or get worse? VERSION 2: Do you expect the economy, in the country as a whole, to get worse, stay about the same, or get better?"**

- **questions to measure the variables:**

  Libcon Self (CF0803) **"(ALL YEARS EXC. 2000 TELEPHONE:) We hear a lot of talk these days about liberals and conservatives. Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale, or haven't you thought much about this? (7-POINT SCALE SHOWN TO R) (2000 TELEPHONE) When it comes to politics, do you usually think of yourself as extremely liberal, liberal, slightly liberal, moderate or middle of the road, slightly conservative, extremely conservative, or haven't you thought much about this?"**

- **questions to measure the variables:**

  Libcon Dem (CF9088) **"We hear a lot of talk these days about liberals and conservatives. Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place Al Gore on this scale? (7-POINT SCALE SHOWN TO R)"**

  Libcon Rep (CF9096) **"Where would you place George Bush on this scale? (7-POINT SCALE SHOWN TO R)"**

- **response codes used to measure the variables:**

  $\mathrm{vote\ choice}$ **Democrat, 1; Republican, 2**

  PID **create a set of "dummy variables"**

  - **PID: strong Dem (1 if Strong Democrat, 0 otherwise)**
  - **PID: weak Dem (1 if Weak Democrat, 0 otherwise)**
  - **PID: lean Dem (1 if Democrat leaner, 0 otherwise)**
  - **PID: Independent (1 if Pure Independent, 0 otherwise)**
  - **PID: lean Rep (1 if Republican leaner, 0 otherwise)**
  - **PID: weak Rep (1 if Weak Republican, 0 otherwise)**
  - **PID: strong Rep (1 if Strong Republican, 0 otherwise)**

- **response codes used to measure the variables:**

  Intelligent Dem, Intelligent Rep **Not well at all, 0; Not too well, 1; Quite well, 2; Extremely well, 4**

  National Economy **Better, 1; Same, 0; Worse,** -1

  Libcon Self, Libcon Dem, Libcon Rep **Extremely liberal, 1; Liberal, 2; Slightly liberal, 3; Moderate, middle of the road, 4; Slightly conservative, 5; Conservative, 6; Extremely conservative, 7**

  Dem Distance $|$(**Libcon Self**) $-$ (**Libcon Dem**)$|$

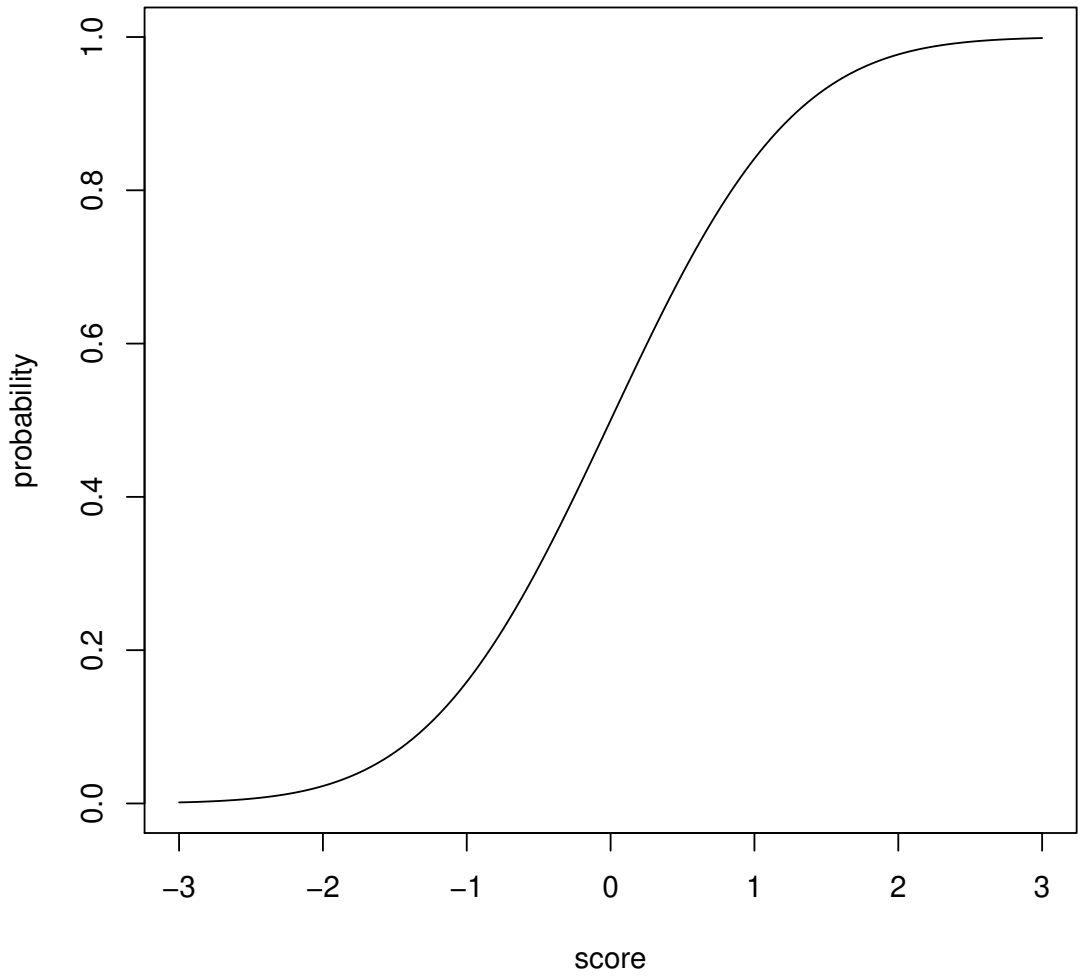
  Rep Distance $|$(**Libcon Self**) $-$ (**Libcon Rep**)$|$

- **each person is a (probit) regression equation**
- **an example: the Bush-Gore vote choice in 2000 (NES data)**
- **define:**

$$
\begin{aligned}
y_i^* = {} & b_0 + b_1(\textbf{PID: weak Dem})_i + b_2(\textbf{PID: lean Dem})_i \\
& + b_3(\textbf{PID: Independent})_i + b_4(\textbf{PID: lean Rep})_i \\
& + b_5(\textbf{PID: weak Rep})_i + b_6(\textbf{PID: strong Rep})_i \\
& + b_7(\textbf{Intelligent Dem})_i + b_8(\textbf{Intelligent Rep})_i \\
& + b_9(\textbf{Dem Distance})_i + b_{10}(\textbf{Rep Distance})_i \\
& + b_{11}(\textbf{National Economy})_i + e_i
\end{aligned}
$$

$$
y_i = \begin{cases} REP & \textbf{if } y_i^* > 0 \\ DEM & \textbf{if } y_i^* < 0 \end{cases}
$$

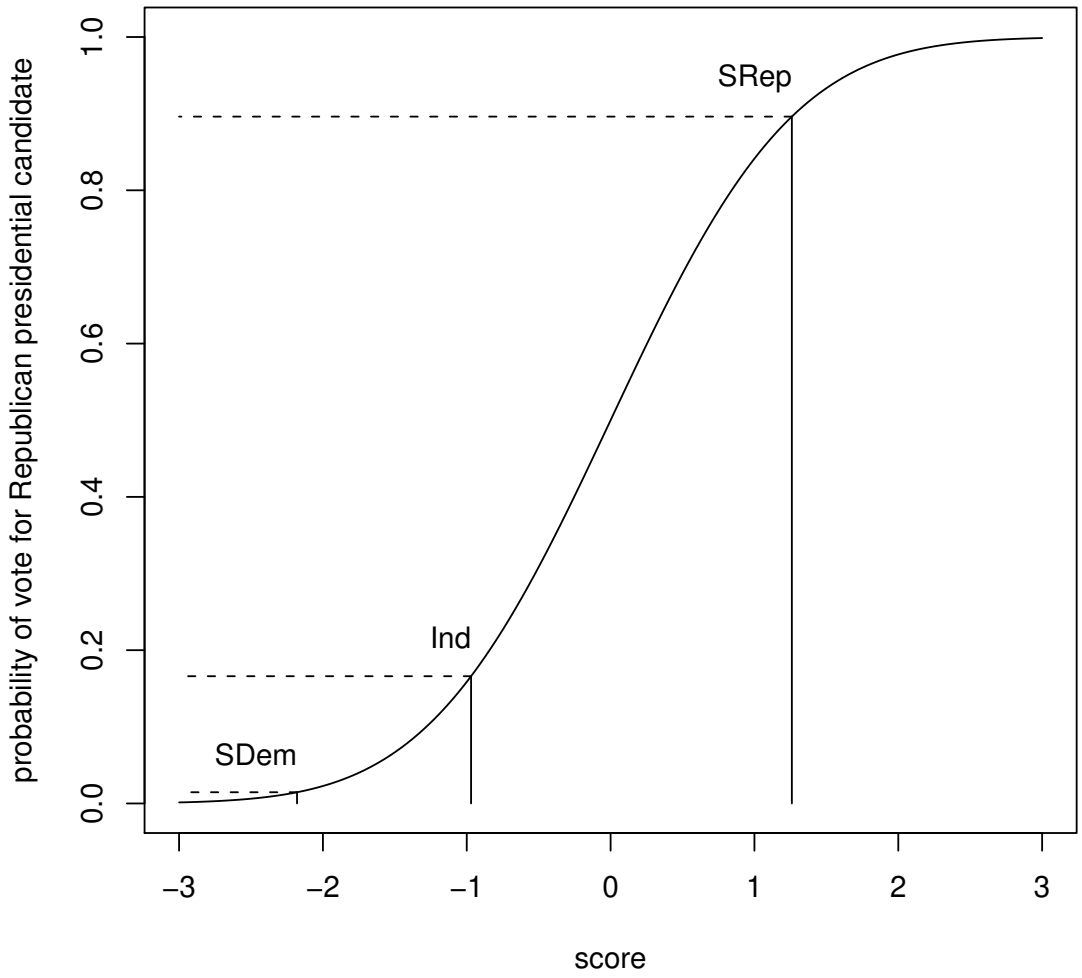
Probit Regression Scores and Corresponding Probability



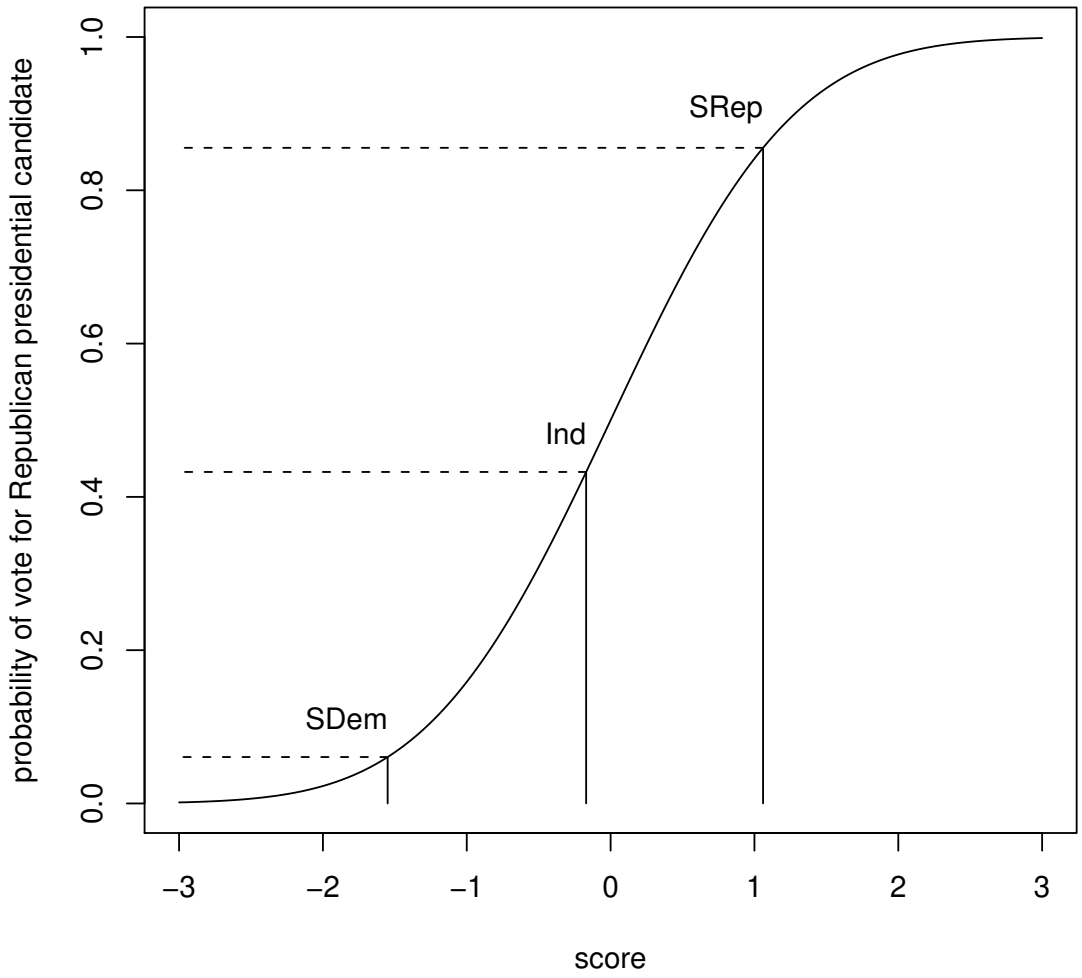
2000 Presidential Vote Choices (NES, Probit)

	Estimate	SE	t-stat.
(Intercept)	−2.18	.64	−3.4
PID: weak Dem	1.04	.48	2.1
PID: lean Dem	1.49	.47	3.2
PID: Independent	1.21	.51	2.4
PID: lean Rep	2.73	.47	5.8
PID: weak Rep	2.65	.48	5.5
PID: strong Rep	3.44	.56	6.1
Intelligent Dem	−0.34	.14	−2.4
Intelligent Rep	0.66	.15	4.5
Dem Distance	0.23	.08	2.8
Rep Distance	−0.43	.09	−4.5
National Economy	−0.13	.17	−0.8

Probit Regression Probabilities, 2000 Presidential Votes



Probit Regression Probabilities, 2004 Presidential Votes



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    - **for analysts: models! statistics! ick!**

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NES Libcon Self Placements, Percentage within Study Year

Self-placement	'84	'86	'88	'90	'92	'94	'96	'98	'00
Extremely Liberal	3	1	3	1	3	1	1	3	3
Liberal	10	8	9	10	11	8	9	9	12
Slightly Liberal	13	15	13	12	14	9	13	12	12
Moderate, Middle of Road	33	37	31	36	32	34	32	36	32
Slightly Conservative	20	20	21	21	21	18	20	19	16
Conservative	19	17	20	15	18	25	20	17	21
Extremely Conservative	3	3	4	3	4	4	4	3	4

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  - **endogeneity: are the opinions causes or consequences of the vote choice?**

- **vote choice models**
  - **choose A if $V_A > V_Z$**
  - **choose Z if $V_Z > V_A$**
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    - **examples:**
    - **candidate traits (intelligent, strong leader, etc.)**
    - **economic performance (complicated: growth, unemployment, inflation, income)**

- **distinguish spatial from nonspatial characteristics of candidates**
- **one spatial dimension:**
  - **voter i's ideal point:** x_i
  - **candidates' positions:** x_A, x_Z
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$$V_{Ai} = -|x_i - x_A| + w_A + e_{Ai}$$
$$V_{Zi} = -|x_i - x_Z| + w_Z + e_{Zi}$$

- **distinguish spatial from nonspatial characteristics of candidates**
- **several (m) spatial dimensions:**
  - **voter i's ideal point:** $(x_{1i}, \ldots, x_{mi})$
  - **candidates' positions:** $(x_{1A}, \ldots, x_{mA})$, $(x_{1Z}, \ldots, x_{mZ})$
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$$V_{Ai} = -\left[\sum_{k=1}^{m}(x_{ki} - x_{kA})^2\right]^{1/2} + w_A + e_{Ai}$$

$$V_{Zi} = -\left[\sum_{k=1}^{m}(x_{ki} - x_{kZ})^2\right]^{1/2} + w_Z + e_{Zi}$$

- **if there is only one spatial dimension, it is conventional to interpret it as corresponding to a liberal-conservative dimension**
- **if there are several spatial dimensions, it is conventional to interpret them are corresponding to distinct issue positions**
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- **Some people feel that the government in Washington should see to it that every person has a job and a good standard of living. Others think the government should just let each person get ahead on his/their own.**

  Where would you place the Democratic party on this scale? (7-POINT SCALE SHOWN TO R) [used in 1972–1984, 1988, 1992, 1994, 2000]

- **in NES data, the selection of issues varies from year to year (examples)**
- **Some people think the government should provide fewer services, even in areas such as health and education, in order to reduce spending. Other people feel that it is important for the government to provide many more services even if it means an increase in spending.**

  Where would you place the Democratic Party on this scale? (7-POINT SCALE SHOWN TO R) [used in 1982–2000]

- **in NES data, the selection of issues varies from year to year (examples)**
- **Some people believe that we should spend much less money for defense. Others feel that defense spending should be greatly increased.**

  Where would you place the Democratic Party on this scale? (7-POINT SCALE SHOWN TO R) [used in 1980–1988, 1990–1996, 2000]

- **several (m) spatial dimensions:**
- **most of the issues used in NES surveys are strongly correlated with libcon, for people who respond to both issues and libcon**
  - **not everyone cares about (or knows about) all issues: the idea of "issue publics"**

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  - **the idea of the "basic space"**
- **is partisanship in the basic space?**

- suppose we treat everything as spatial, using statistical procedures to map everything onto a conjectured basic space
- especially this has been done by Poole and Rosenthal
- following are results using NES data

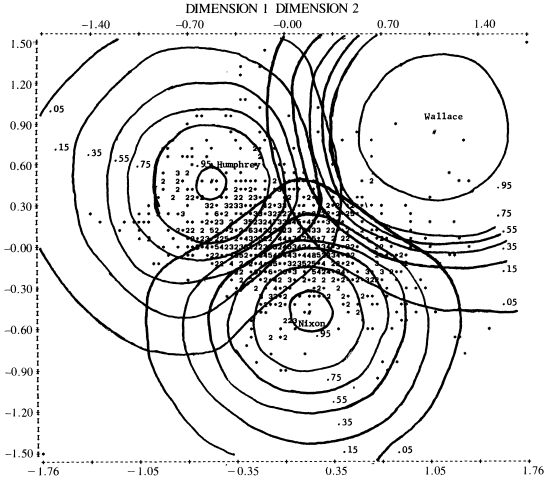
Scaling Model, Poole and Rosenthal AJPS 1984

Our unfolding results are basically similar to those of Rabinowitz (1978). First, most of the variation of the thermometers is accounted for by three dimensions. Second, the candidates appear near the periphery of the space, although voters are unimodally distributed about the center. (See Figures 1–4. Figures 1 and 3 are the plots obtained for voters, Figures 2 and 4 the plots obtained for nonvoters. Similar plots for 1972 and 1980 are available from the authors on request. Major candidate positions are similar across years. In 1980, Anderson is close to Carter. The contour lines are explained below.)

This second result is at variance with some simple spatial theories which would hold that the candidates should converge to a point in the center of the distribution. One might be inclined to ascribe the extreme placement of the candidates to either lack of gradated discrimination by respondents or to methodological artifact.[2] Two corroborative pieces of evidence, however, buttress the

FIGURE 1

1968 Voters

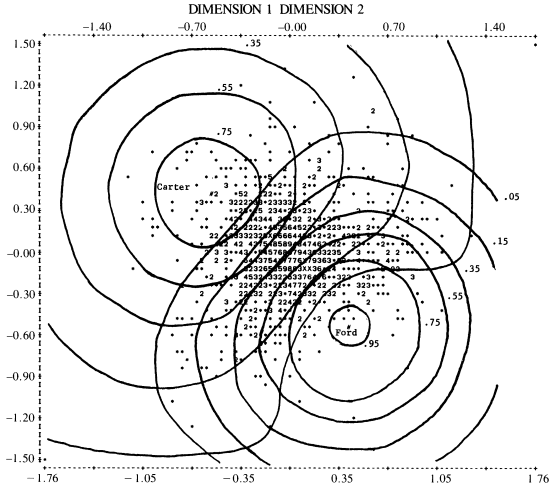


[2] One possibility for methodological artifact can be ruled out. Suppose the thermometers measured not distance but utility and that reported utilities were some nonlinear function of distance, say distance squared. Suppose further that the candidates had converged to a common position. Using

Scaling Model, Poole and Rosenthal AJPS 1984

FIGURE 3

1976 Voters



Our second set of evidence on polarization comes from studies of Congress. Fiorina (1974), replicating an earlier study by Strain, found dramatic changes in the roll call positions of a constituency when its representative was replaced by a representative from the opposite party. Similarly, using the same metric unfolding technique used here, but this time on interest group ratings of Congress, Poole (1981) and Poole and Daniels (1982) found a polarized, bimodal Congress.[3] Using their one-dimensional unfolding values, we have confirmed the Strain-Fiorina results for the Senate (see Poole and Rosenthal, 1983; see also Bullock and Brady, 1983). Senators from the same state but from different parties are far apart on the dimension, but senators from the same party and the same state tend to be spatial clones.

Even though congressional data and survey data on issue placement of presidential candidates both point to spatial polarization, we remain struck by the extent to which the candidates are at the periphery of the space. Indeed Burnham

[3] In distinction to the thermometer data, the interest group ratings contain a full range of numerical values and no piling up of implicit "don't knows" on a score of 50. Hence, the polarized positions of the candidates are surely not simply a consequence of these quirks of survey thermometer data.

Scaling Model, Poole and Rosenthal AJPS 1984

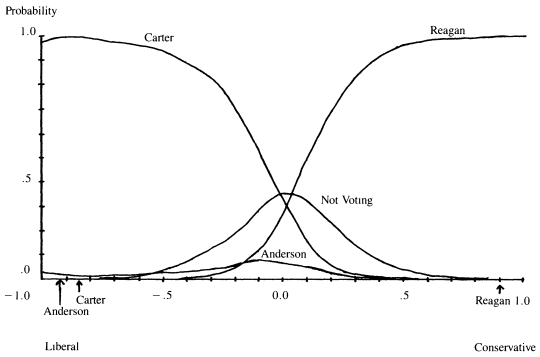
vented convergence in all runs except one. In that case, on the second wave, a one-dimensional model gave the highest geometric mean. The estimated choice probabilities along the dimension are graphed in Figure 5.

We conjecture that spatial models are as successful as raw thermometers in explaining electoral choice because the thermometers are noisy measurements. In positioning a respondent relative to a given candidate on the basis of the respondent's *set* of thermometer rankings and not just the ranking for the candidate, one smooths the error. The basic, commonly shared ideological space is, we further conjecture, of very small dimension. Thus, when one unfolds the thermometer data into higher dimensional spaces, one is basically reintroducing the noise in the original measurements.[8] These conjectures are consistent with the observation that the three-dimensional model typically does not predict as well as a two-dimensional model. The fact that the spatial models do not do even better than thermometers probably reflects the ability of the thermometers to measure, as Pierce (1981) and Fiorina (1981, p. 154) suggest, nonspatial aspects of preference as well as noise.

We emphasize, though, that regardless of nonspatial aspects, thermometer data are consistent with the basic assumptions of spatial theory. For 1980, for example, we do as well by replacing three thermometer ratings for the candidates by a single coordinate, based on the *theoretical restrictions of the Euclidean metric and a common perception of candidate locations for all individuals*. Sim-

FIGURE 5

One Dimension, 1980



[8] See Weisberg (1968) for a discussion of literature demonstrating that when error is present a variety of multivariate techniques will find excessive dimensionality.

- economic performance voting
- pocketbook or sociotropic?
  - cross-sectional NES data says sociotropic
  - but it's fallacious to use variation over people instead of variation over time (tracing to Kramer 1983)
  - unfortunately time-series relationships are ambiguous to interpret

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  - unfortunately time-series relationships are ambiguous to interpret
- economics and presidential voting in 2000: unemployment and employment matter
  - state economic changes and state-level preelection polls (Will Hausberg's thesis)

- **congressional elections**
- **House and Senate**
  - **biggest difference from presidential races...**

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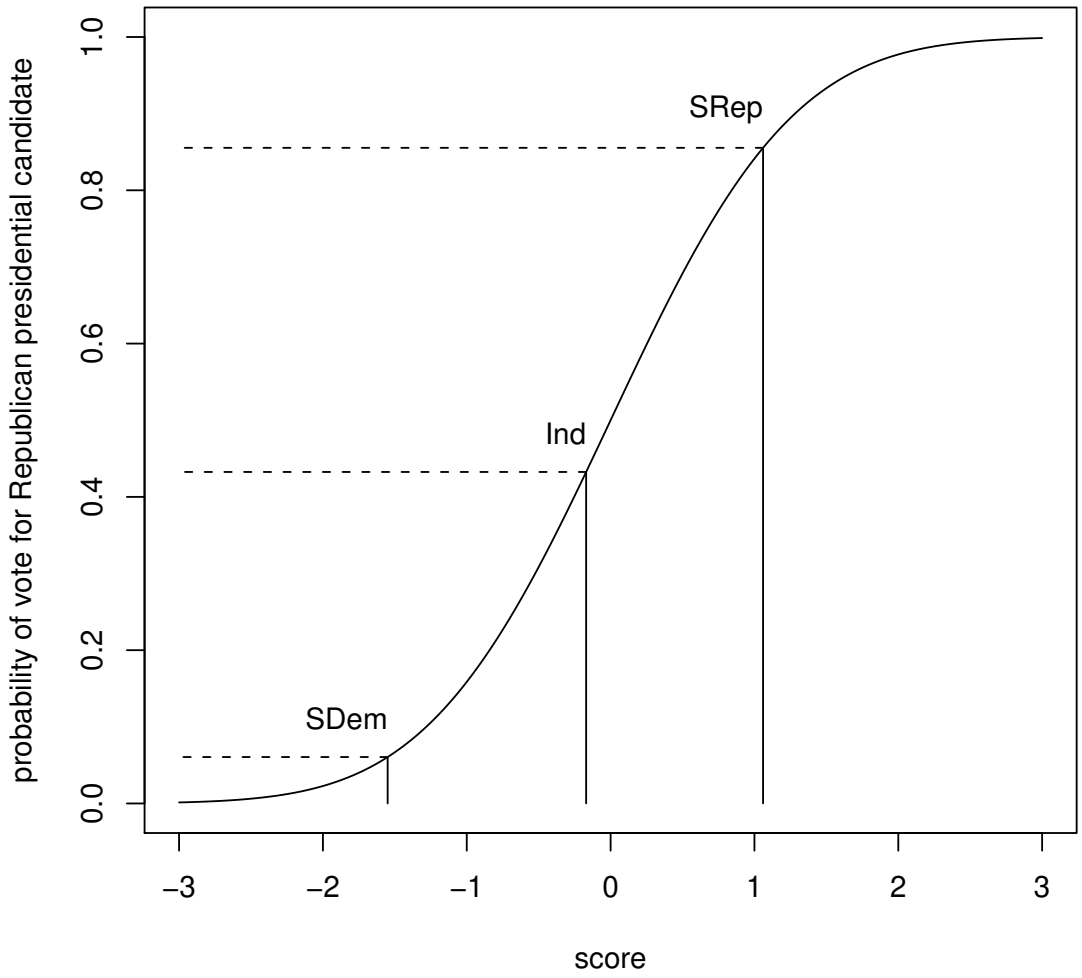
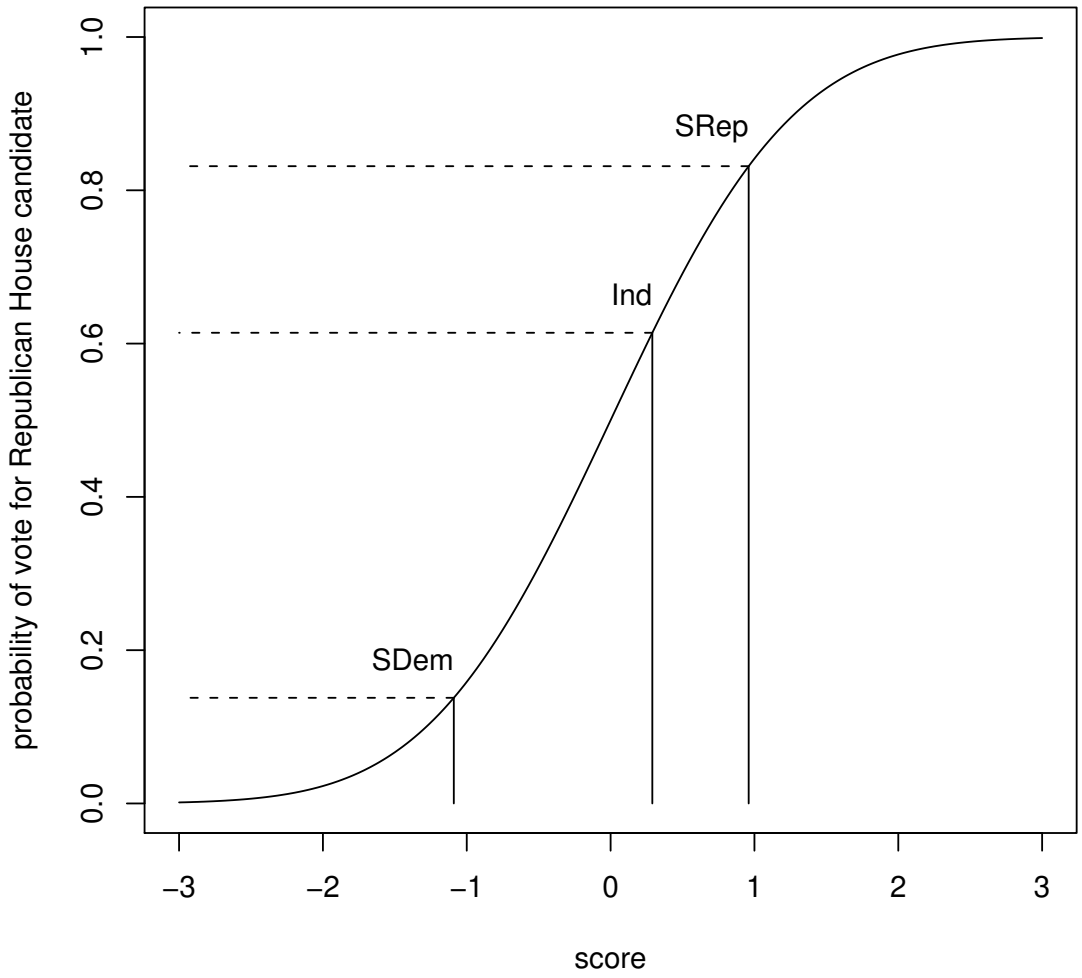
- **congressional elections**
- **House and Senate**
  - **biggest difference from presidential races...**
  - **incumbent advantage**
  - **noncompetitive races**
  - **98 percent reelection rate in the House**
  - **90 percent reelection rate in the Senate in recent years (since the mid 1980s)**
  - **unopposed races**

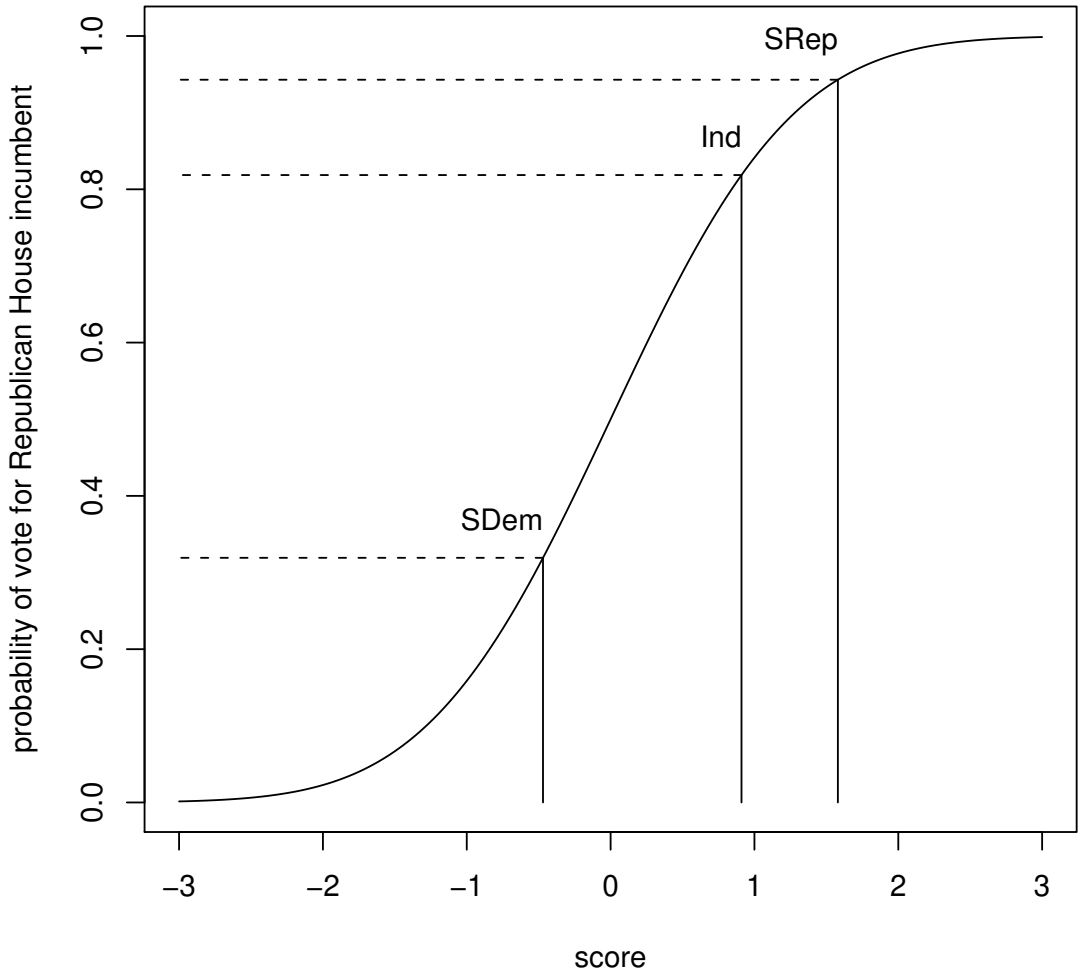
Probit Regression Probabilities, 2004 Presidential Votes



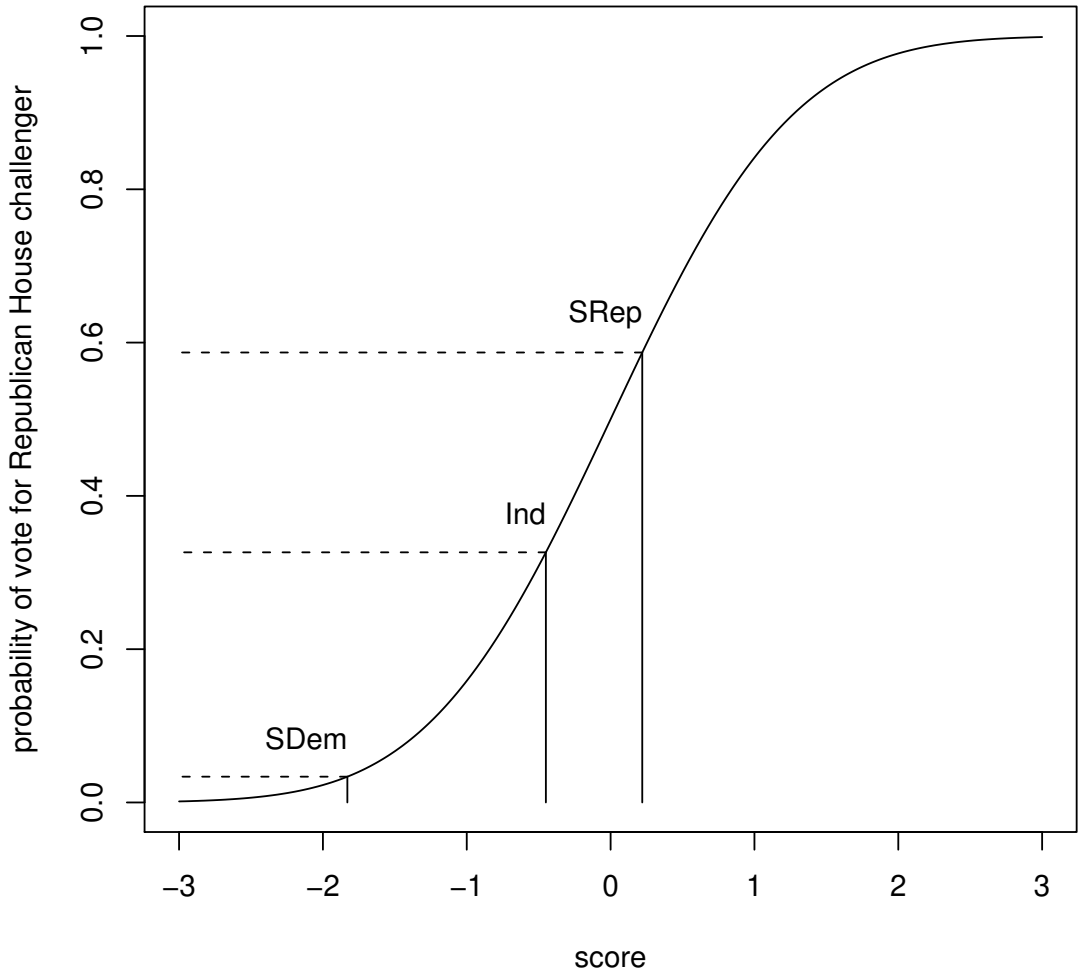
Probit Regression Probabilities, 2004 House Votes, Open Seat



Probit Regression, 2004 House Votes, Republican Incumbent



Probit Regression, 2004 House Votes, Democratic Incumbent



- **House and Senate elections**
  - **importance of constituency service: complicated**
    - **many know about service (nearly 70 percent of constituents in some cases)**
    - **but efforts to find strong connections to votes have not borne out**

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  - **relationship between pork and votes is complicated: more pork does not mean more votes**

- **House and Senate elections**
  - **relationship between pork and votes is complicated: more pork does not mean more votes**
  - **reasons**
    - **general: only discretionary pork that can be attributed to the representative should be considered by voters**
    - **but a lot of pork is directed at local elites and not at voters**
    - **besides, not all voters like pork**

- House and Senate elections
  - relationship between pork and votes is complicated: more pork does not mean more votes
  - four kinds of House campaigns (Mebane 2000):
    * good service, unopposed incumbent, high contributions (.08)
    * good service, incumbent drops out (.07)
    * bad service, unopposed incumbent, high contributions (.38)
    * bad service, competitve race but incumbent advantage (.47)

- **districting in House elections**
  - **incumbent advantage and gerrymandering**
    - **incumbent protection**
    - **partisan districts**

- districting in House elections
  - Voting Rights Act
    - majority minority districts: changes over time
    - contiguity and other aesthetics
    - substantive representation and symbolic representation
    - "bleaching" districts

- **midterm elections and midterm loss**
  - **midterm loss: president's party loses vote share at midterm**
  - **midterm loss was a reliable pattern through most of the 20th century, except for 1998 and 2002**
  - **every indication is it will be back in 2006**
  - **why did it happen, and why did it go away?**

- midterm elections and midterm loss
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  - midterm loss was a reliable pattern through most of the 20th century, except for 1998 and 2002
  - every indication is it will be back in 2006
  - why did it happen, and why did it go away?
- alternative possible theories
  - surge and decline (false)
  - economic performance voting (mostly false)
  - "presidential penalty" (Erikson's term: mostly true)

- **midterm loss: two reliable mechanisms seem to exist, one always, the other mostly**
  - **institutional balancing (based on institutional awareness and strategic voting)**
  - **ideological shifting**

- **models of institutional balancing**
- **a president and a legislature (treated as unicameral)**

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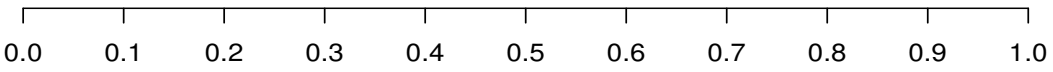
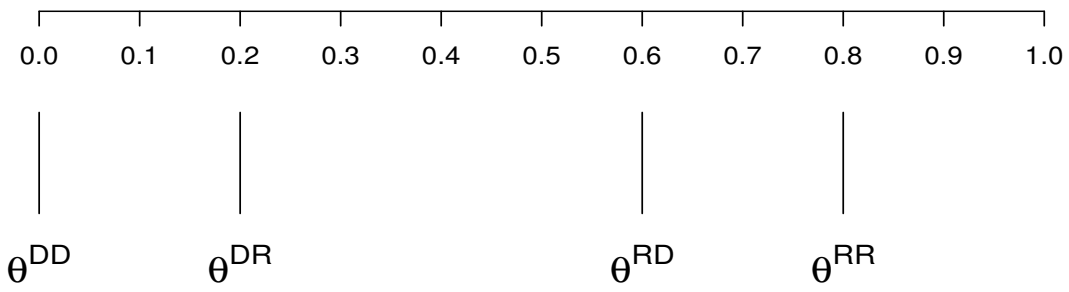
  - **four possible policies: θ_{DD}, θ_{DR}, θ_{RD}, θ_{RR}**
  - **Fiorina's model: voters choose the closest policy (sincere voting)**

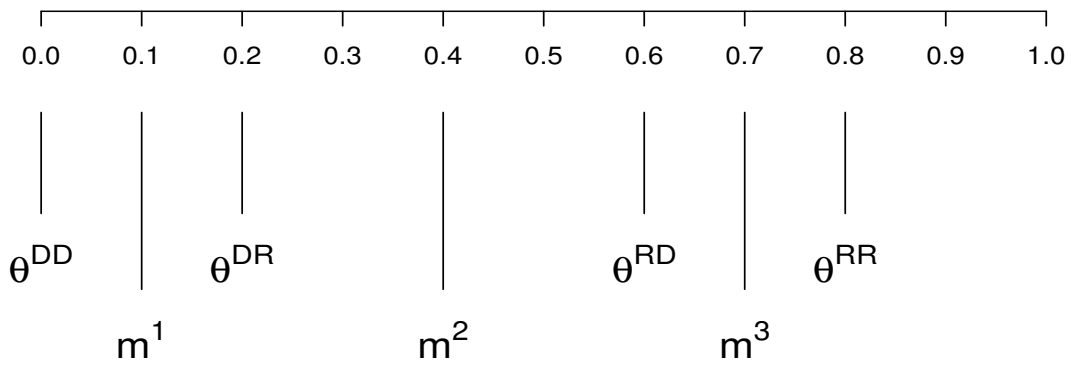
voting model example



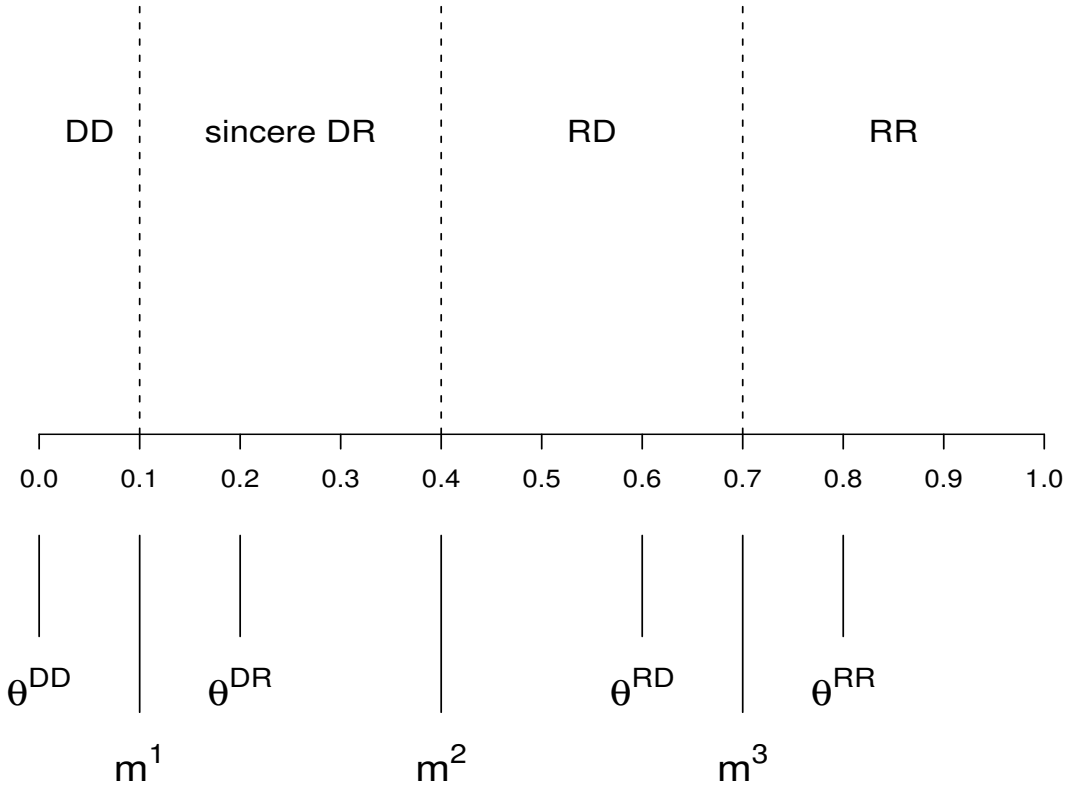
voting model example



voting model example

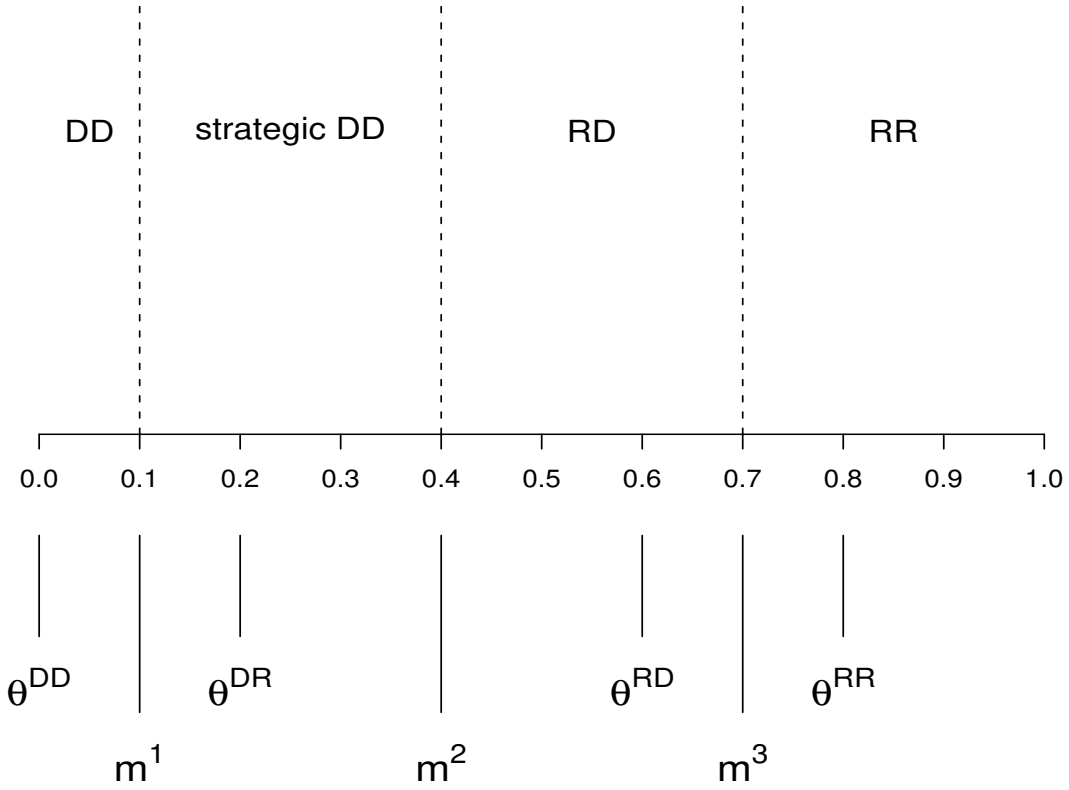


Fiorina model example



- **models of institutional balancing**
- **a president and a legislature (treated as unicameral)**
  - **four possible policies: θ_{DD}, θ_{DR}, θ_{RD}, θ_{RR}**
  - **Fiorina's model with strategic voting: voters choose the closest policy, taking into account how others will vote**

strategic model example



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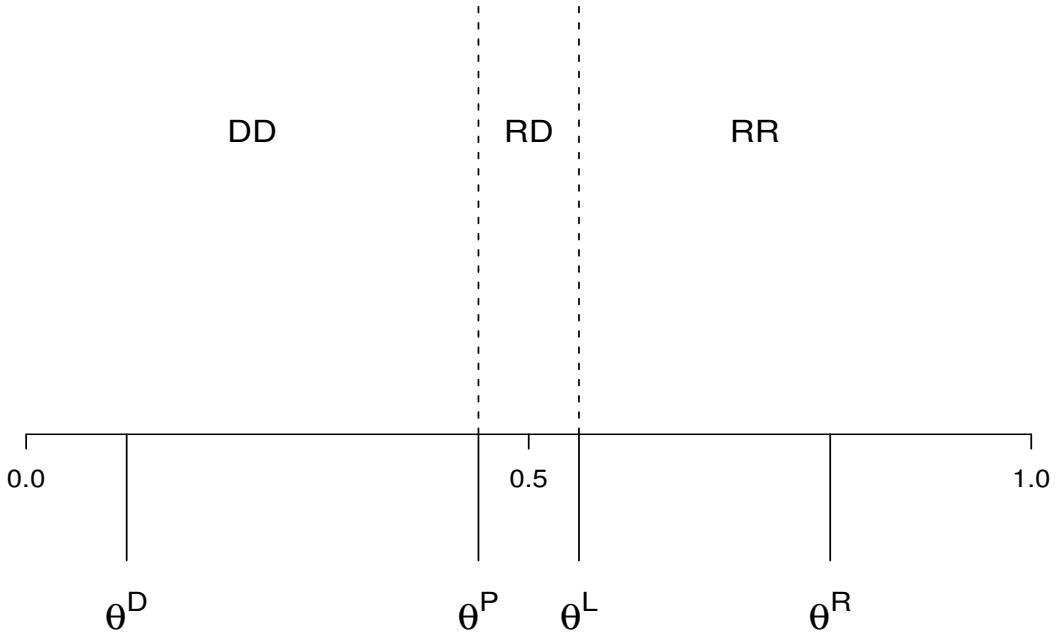
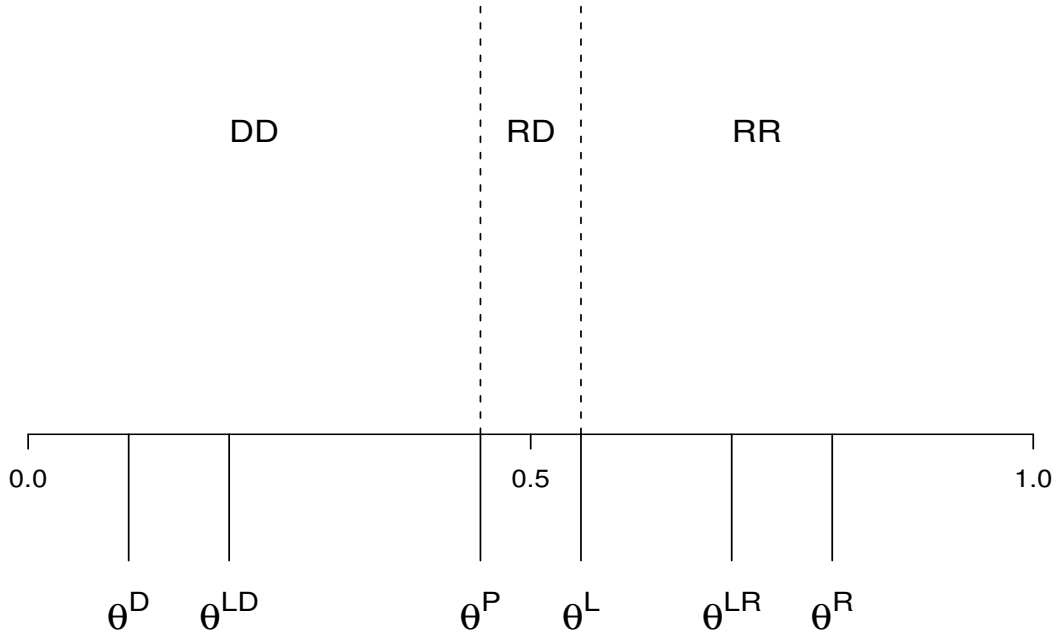
- **ticket splits go only one way**

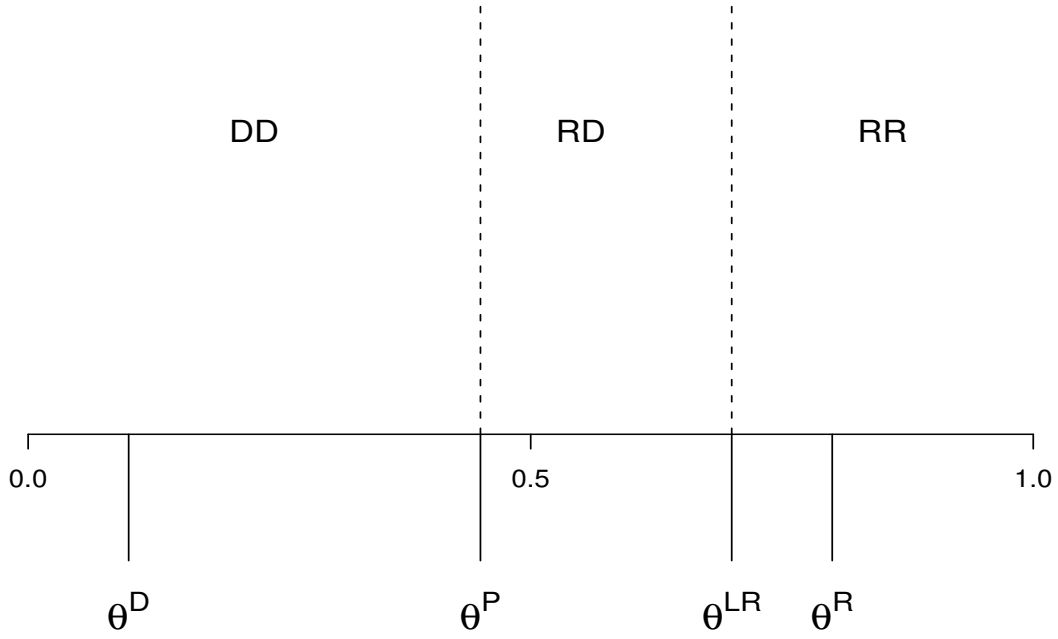
Alesina-Rosenthal model: presidential year, uncertain



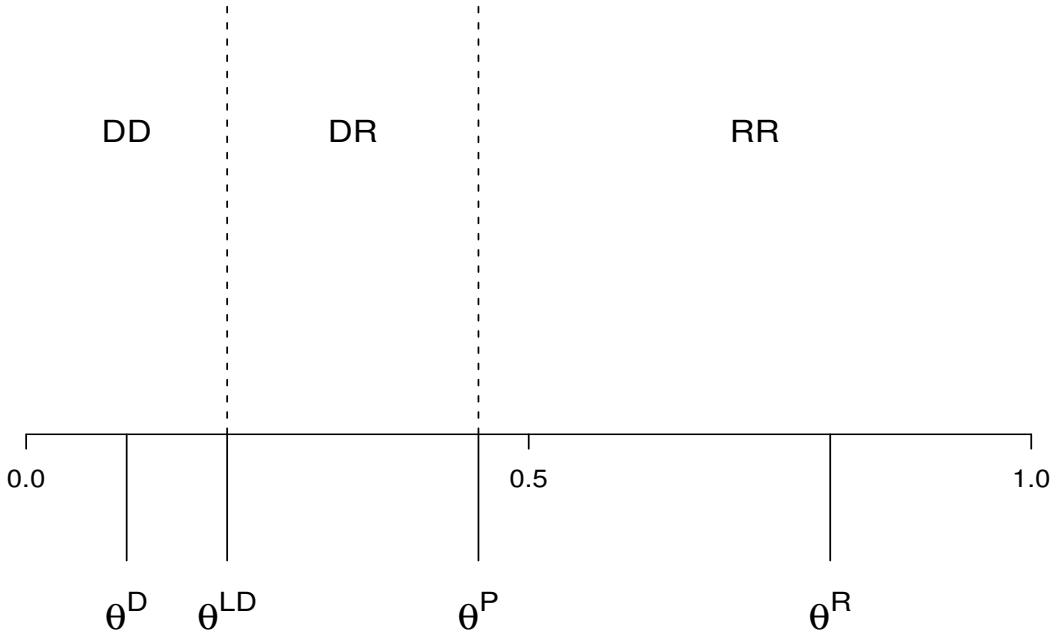
A-R model: pres. year with post-election policies



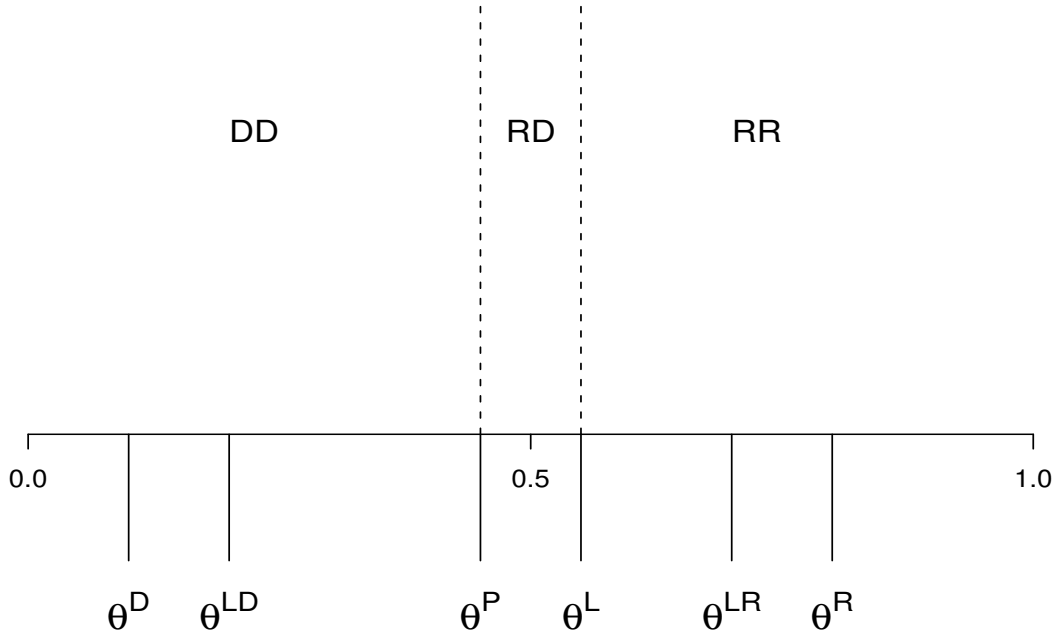
A-R model: pres. year with Republican victory certain



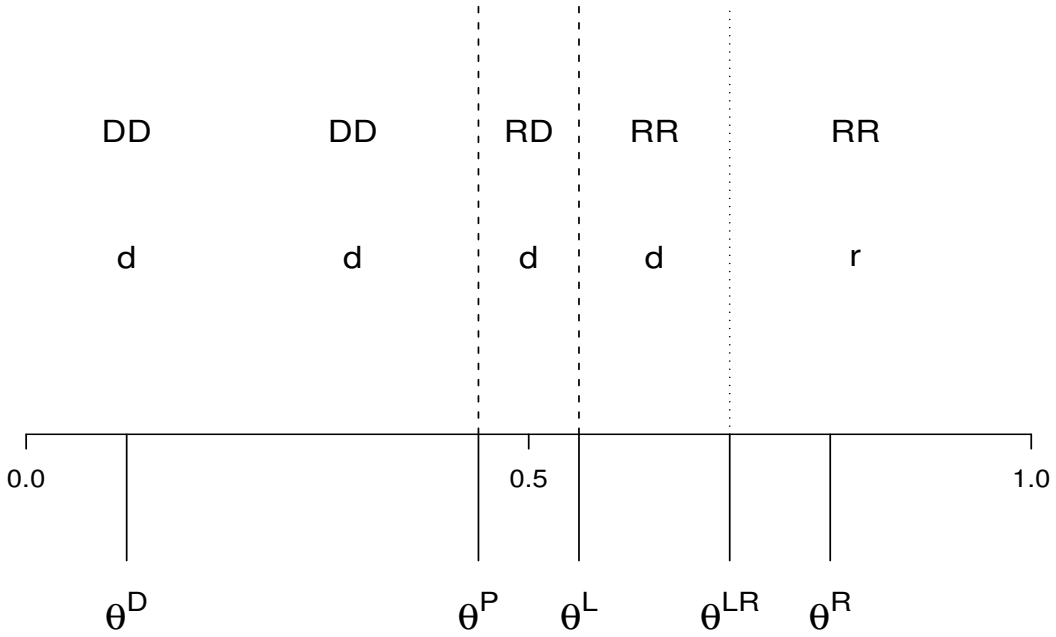
A-R model: pres. year with Democratic victory certain



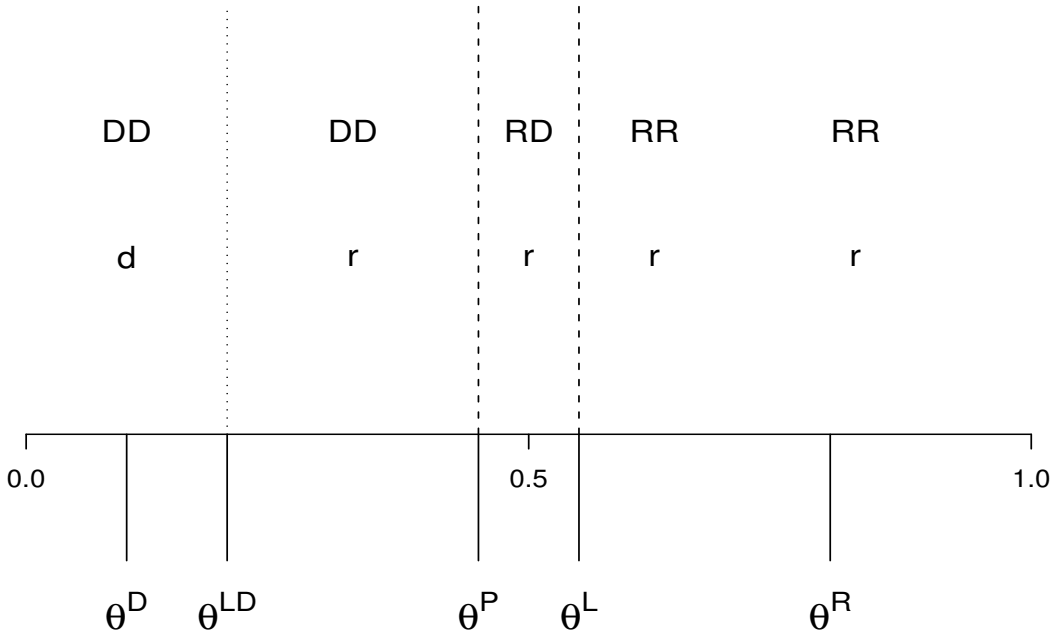
A-R model: pres. year, post-election policies



A-R model: midterm with Republican president



A-R model: midterm with Democratic president



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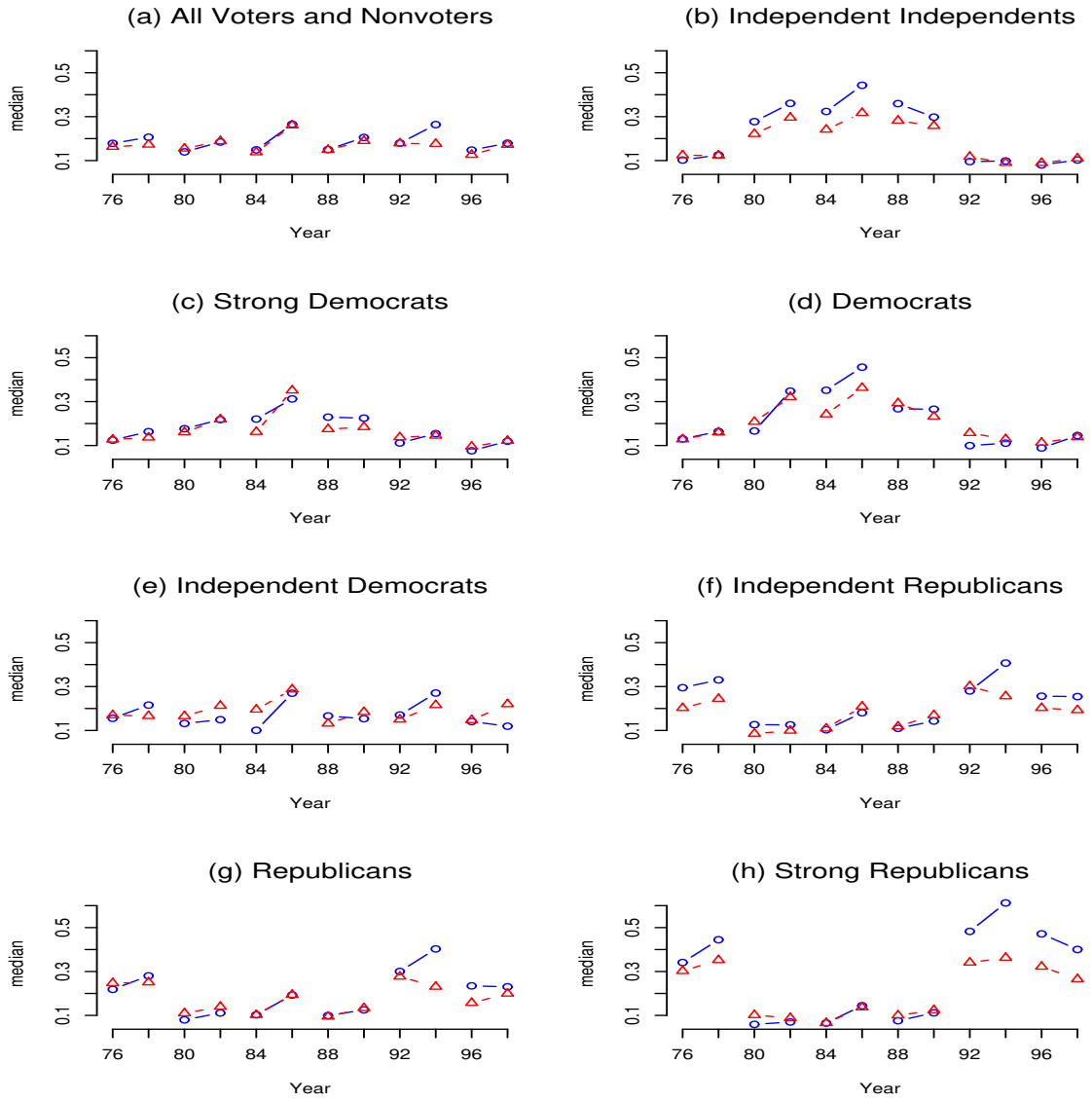
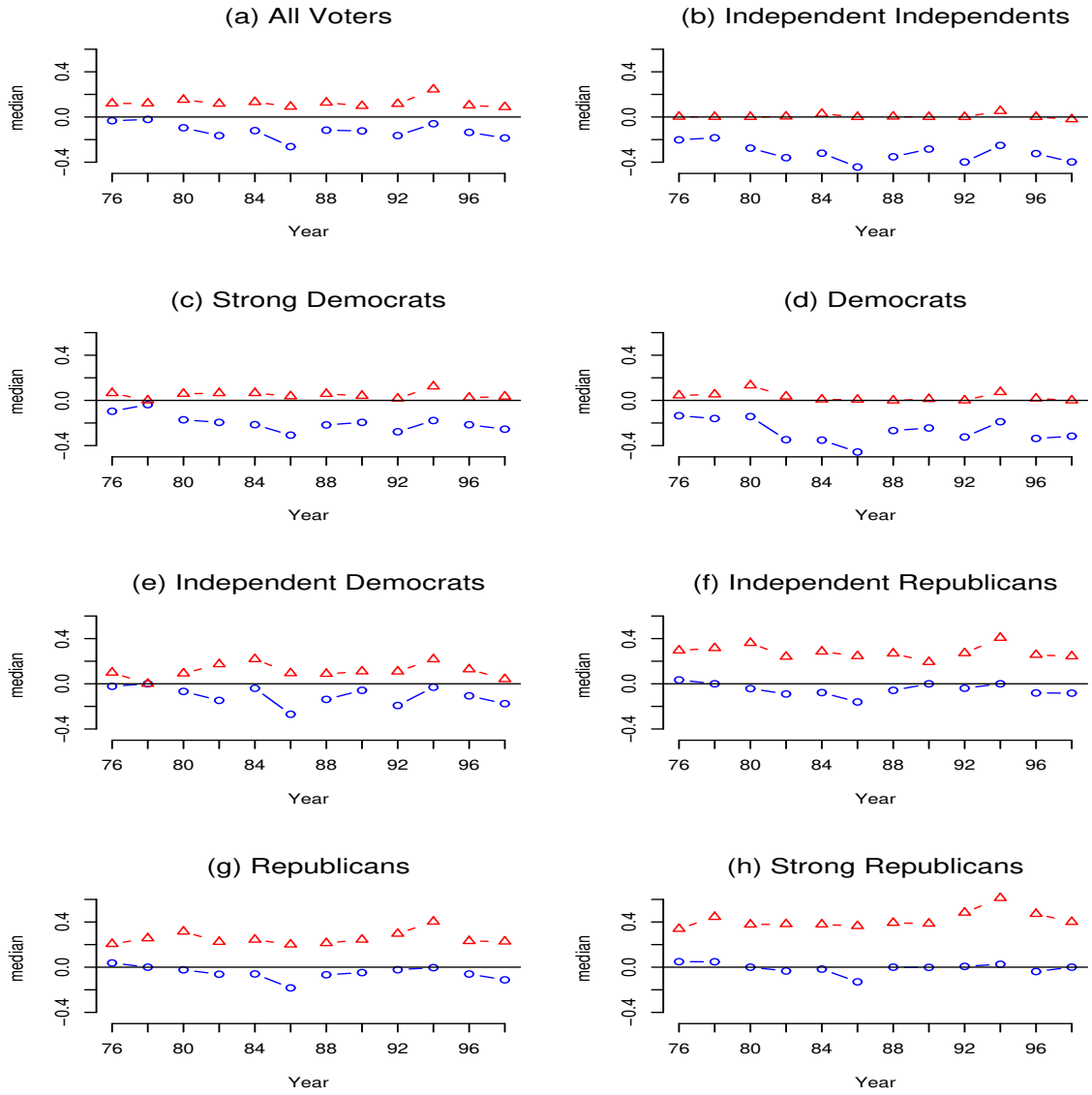
  - **Stimson's data going back to 1960 (and earlier)**
  - **NES data going back to 1976**

Median Absolute Difference, Self versus Winner's Party



Median Signed Difference, Self versus Both Parties