LEGITIMACY IN GROUP DECISION MAKING
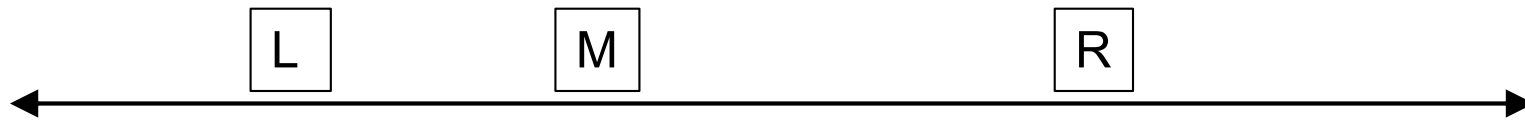
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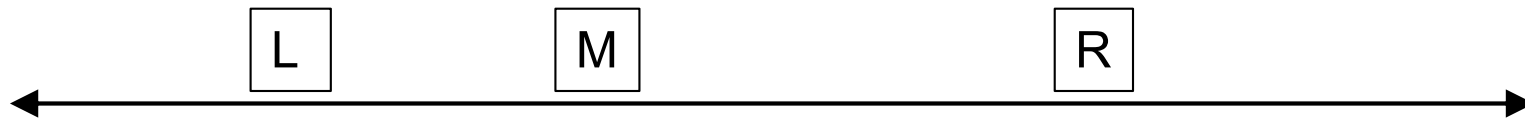
February 2020

Introduction

L   M   R

- Most theories of politics/voting assume: an option "A" needs a certain vote share (50%) to win over "B".

- When many alternatives A, B, C…→The median gets his/her preferred option.

- Median does not need to please anyone else, abstention not a problem.

Introduction

L   M   R

□ But in many real situations, getting endorsement of other voters is important. (Patty & Penn 2013; Epstein et al., 2011; Martin & Stevenson 2001)

□ Increases legitimacy of decision

■ by giving it more weight

■ and since those other voters will not criticize it

□ Especially in **situations with few voters**:

□ Politics (and conflict): many coalitions are larger than strictly needed.

□ Committees.

□ Courts: when several judges, "norm" of unanimity.

Research question

L   M   R

- How does the quest for legitimacy affect decisions (voting outcomes)?

- (When) does the median-voter theorem hold?

- What is the "Bargaining power" of different agents?

- To be answered theoretically…

- …and tested empirically.

Model: players

- Three agents: L, M, R.

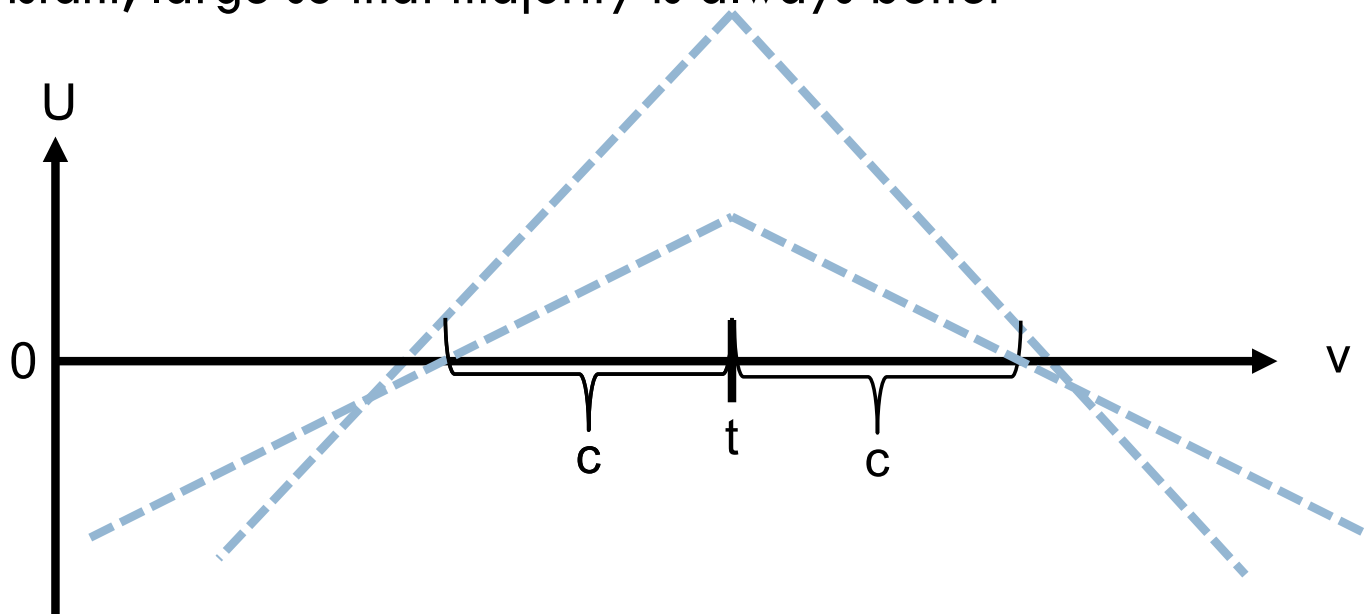- Each has an ideology $\in \mathbb{R}$.

- $L \leq M \leq R$

Model: payoffs

- Agents bargain about a policy $v \in \mathbb{R}$.

- Payoff for agent t:

$$U(v; t; n) = \begin{cases} (c - |v - t|)\lambda^{n-2} & if\ n \geq 2 \\ -K & if\ n < 2 \end{cases}$$

$c > 0$ constant, $\lambda > 1$ constant,

n number of agents signing

K constant, large so that majority is always better

Model: timing

1. Agents vote (Condorcet) about which single agent will get to propose v.

2. The winner proposes v.

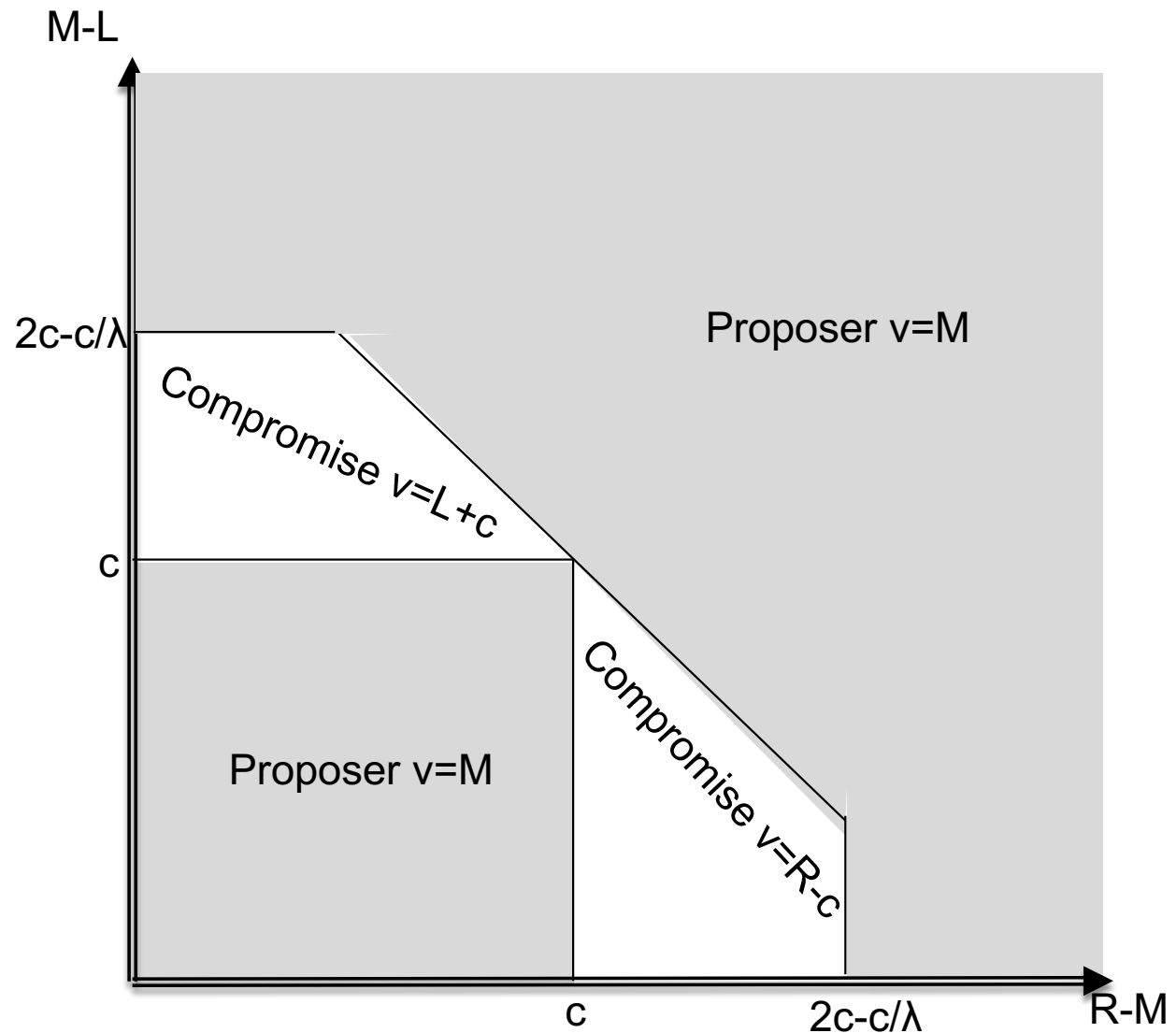3. The remaining two decide whether to sign v.

Main result

Proposition:

(i) $v = L + c$ iff
$c \le M - L < (2 - 1/\lambda)c$ and
$M - L < 2c - (R - M)$.

(ii) $v = R - c$ iff
$c \le R - M < (2 - 1/\lambda)c$ and
$R - M < 2c - (M - L)$.

(iii) $v = M$ if $M - L < c$
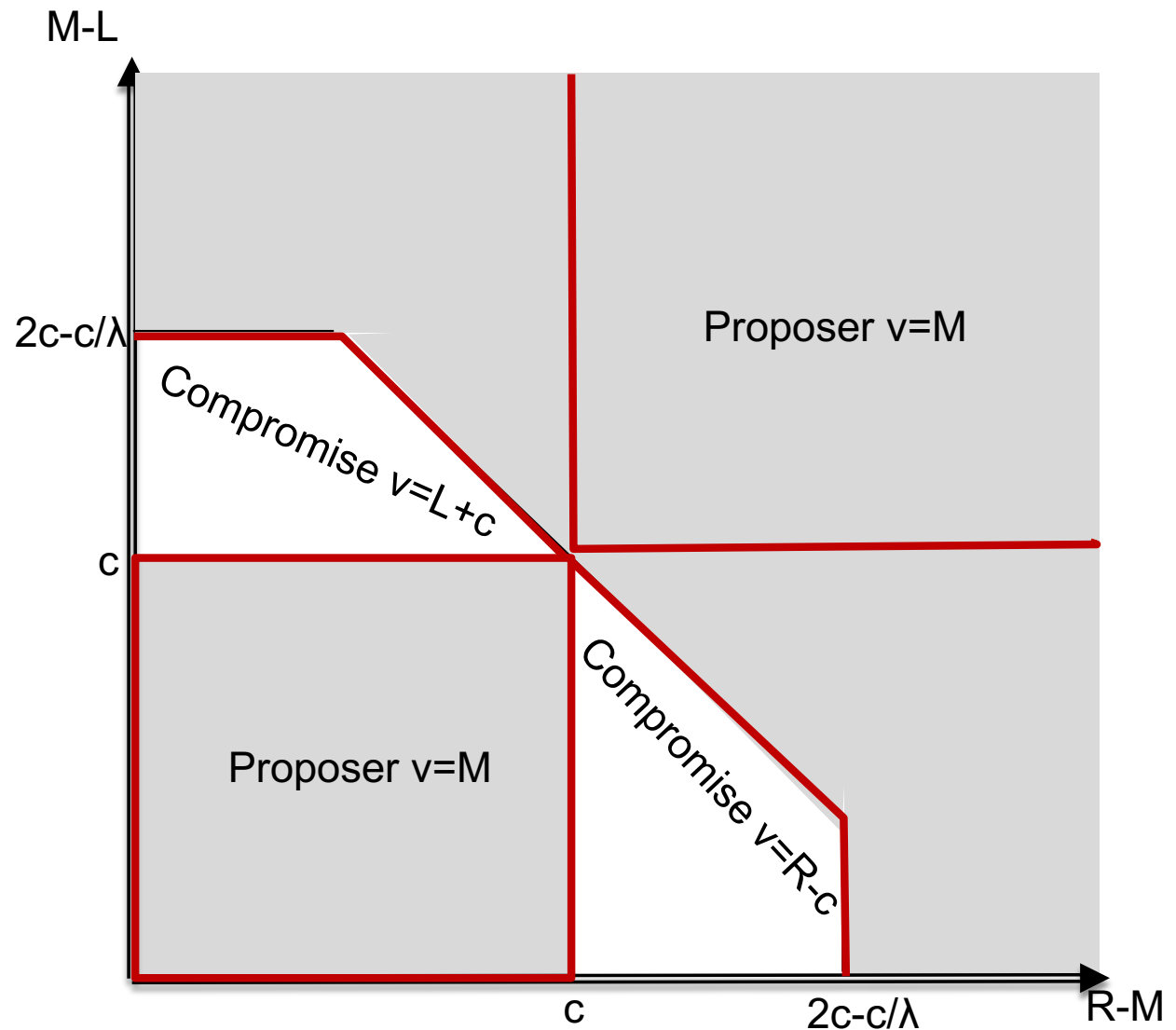and $R - M < c$.

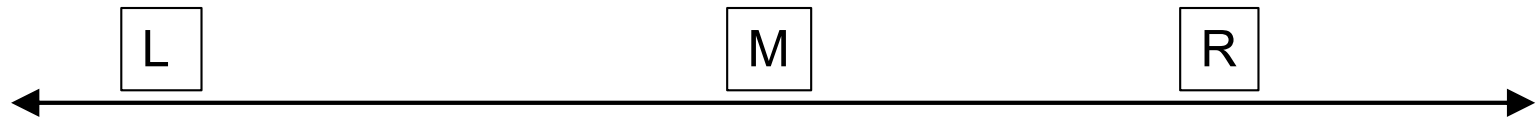**(iv)** $v = M$ otherwise

Main result

Roughly:

The median-voter theorem holds when either:
- *whole group is **cohesive** (both L and R are close to M)*

- *whole group is **distant** (both are far from M)*

- *group is **half cohesive half distant** (one is close, the other far from M)*

*If one agent is at **intermediate distance** and **one agent is close**, median-voter theorem does not hold.*

M-L

$2c-c/\lambda$

Proposer v=M

Compromise v=L+c

c

Compromise v=R-c

Proposer v=M

c

$2c-c/\lambda$

R-M

Result: No sabotage

```
          ┌───┐                    ┌───┐          ┌───┐
◄─────────│ L │────────────────────│ M │──────────│ R │─────────►
          └───┘                    └───┘          └───┘
```

- ☐ Would L vote for R to ensure few signatures on bad v?

- ☐ **No**:

- ☐ Could only happen if R signs M's v.

- ☐ But then M would sign R's v which is even worse for L.
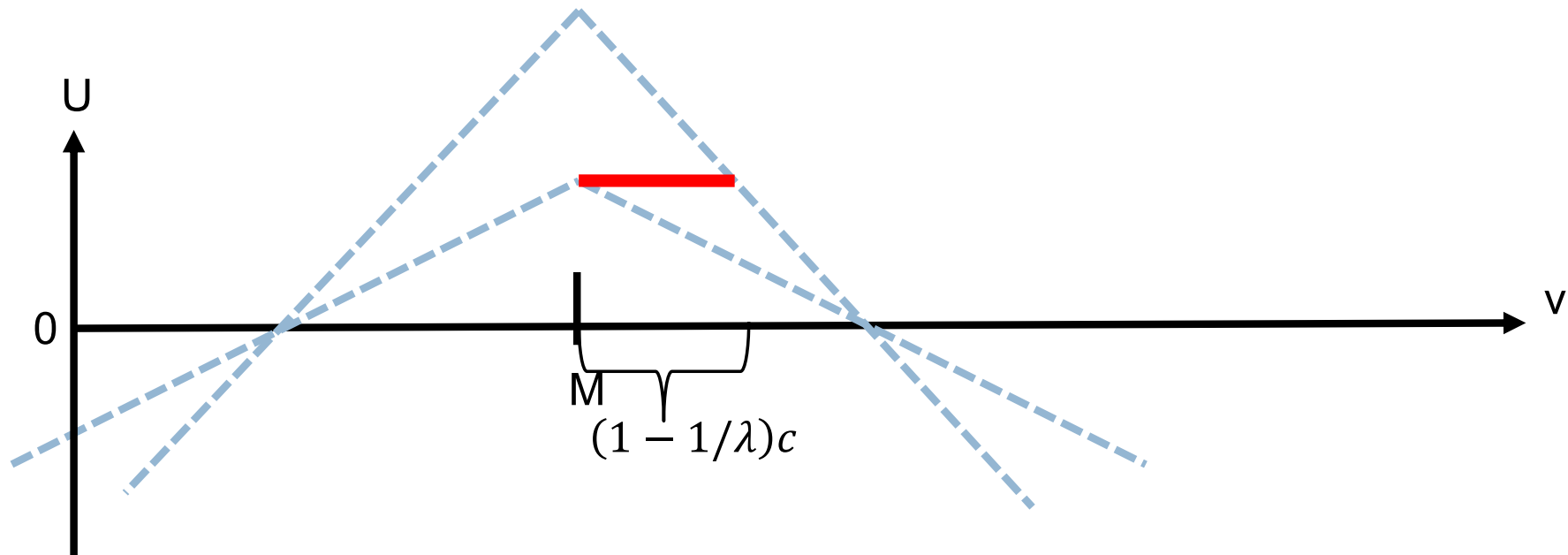
- ☐ Median wins first-stage voting, gets to propose.
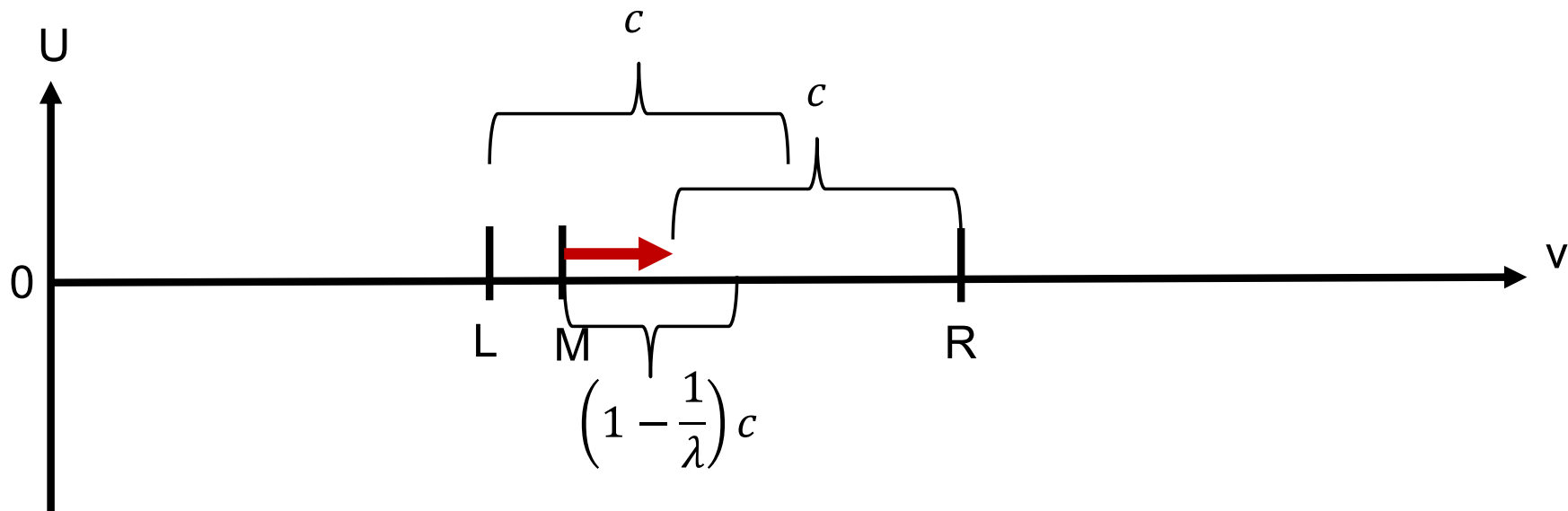
Bargaining power

- R will sign iff v closer than c.
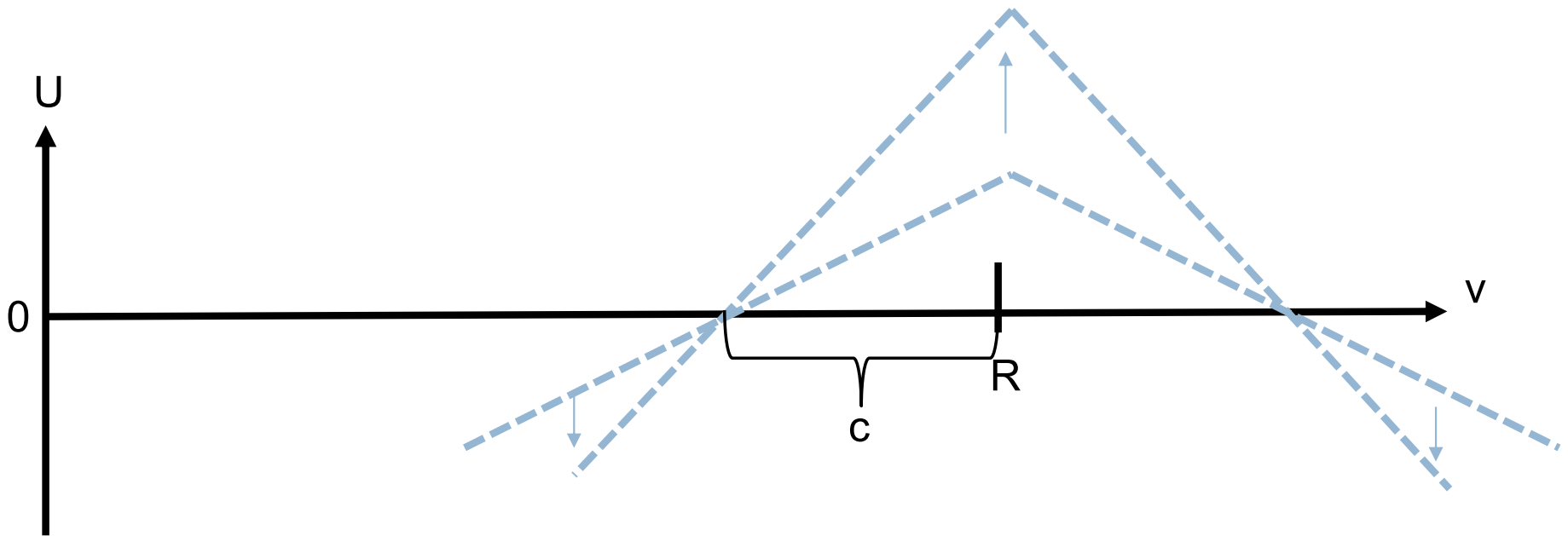
Bargaining power

☐ M willing to propose v at max distance $(1 - 1/\lambda)c < c$.
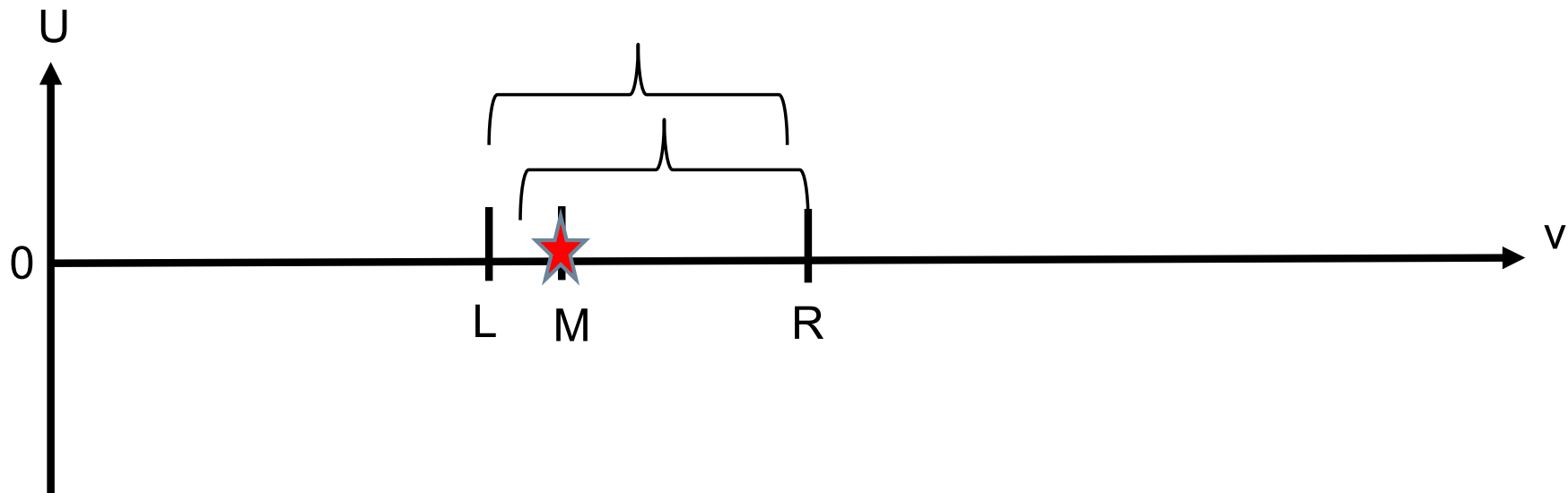
M has more bargaining power

- *Willing* to "move" less than R or L.
- Sometimes *is able* to move even less/not at all.
- L may be willing to sign more right than M willing to propose.
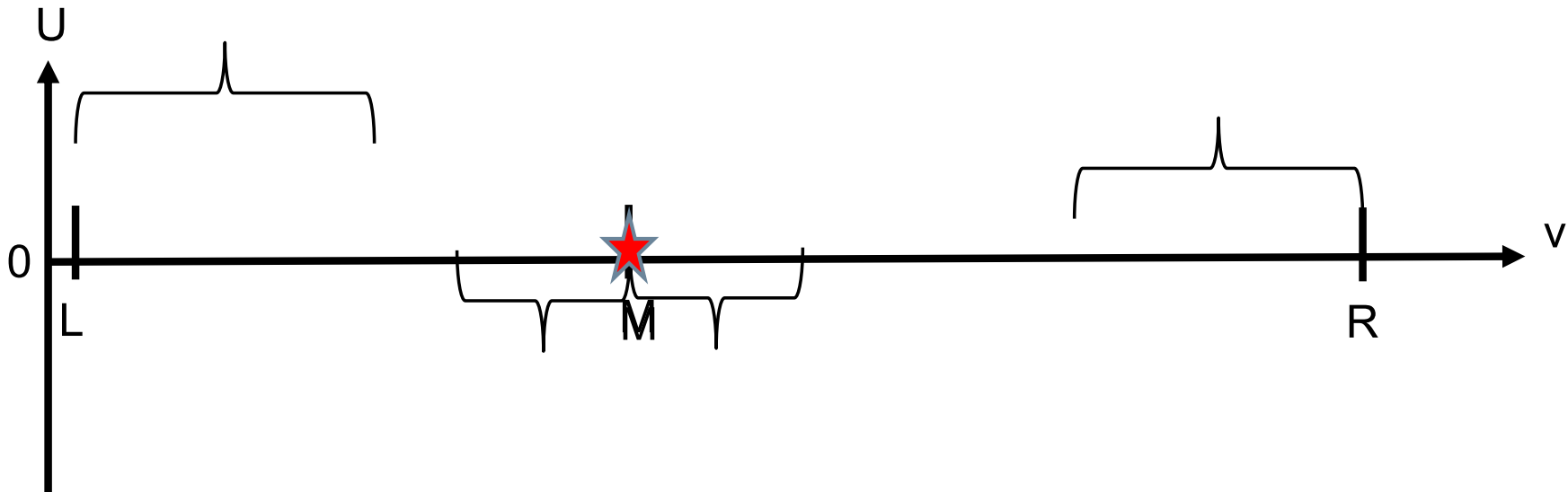- **Prediction 1: M has strongest impact on v.**

Cohesive groups

- When both L and R are close to M, they sign $v=M$.
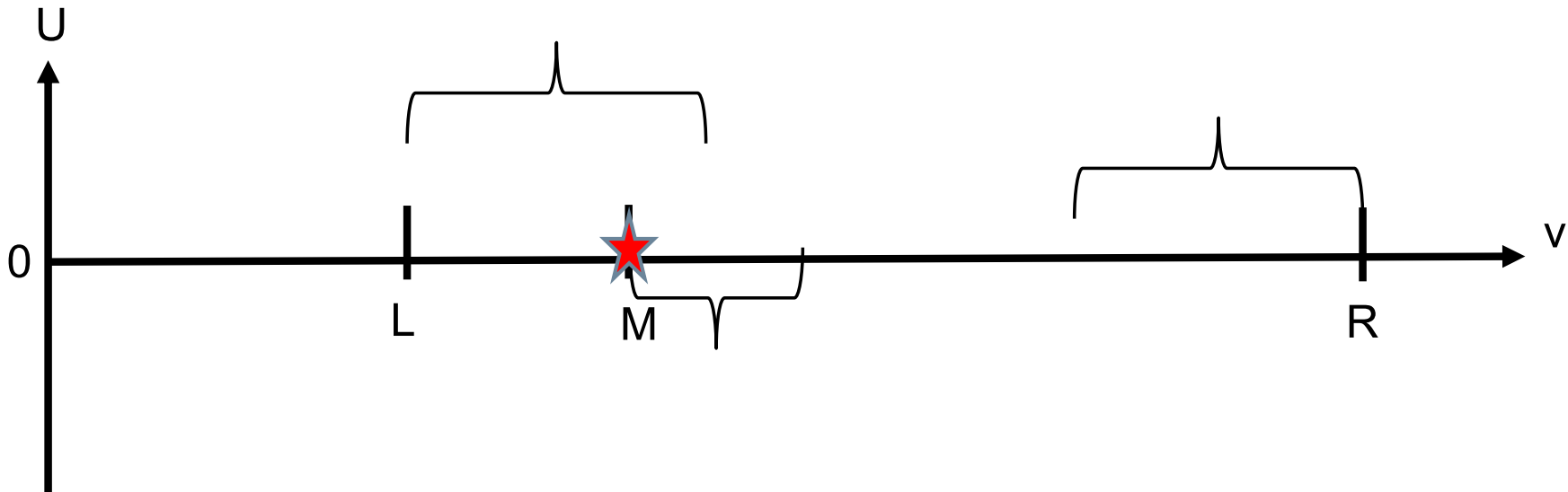- **Median voter theorem holds in cohesive groups.**

Distant groups

- When both L and R are very far from M, no common ground.

- **Median voter theorem holds in distant groups.** (One other agent signs to avoid -K)

Mixed group: cohesive + distant

- When one is very close to and the other very far from M:

- Close signs $v=M$. Far no common ground.

- **Median voter theorem holds in mixed groups.**

Intermediate cohesion

- Suppose L is somewhat far from M.
- R at intermediate distance→common ground if M compromises
- **Median voter theorem does *not* hold if one is at intermediate distance and the other is close.**
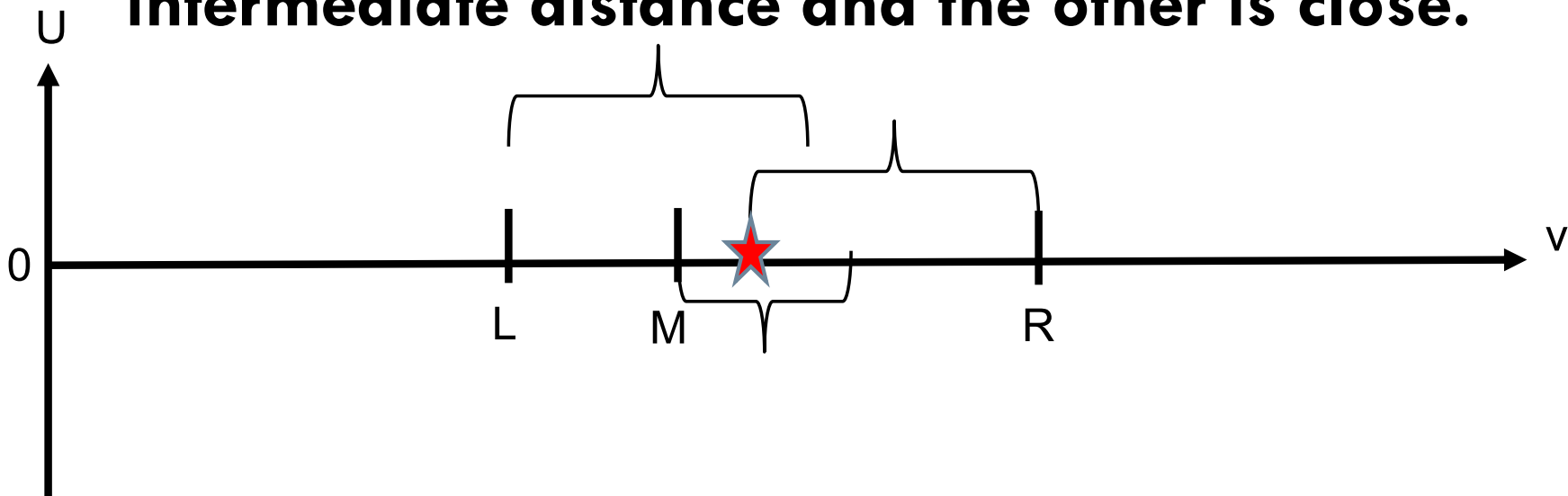
Main result
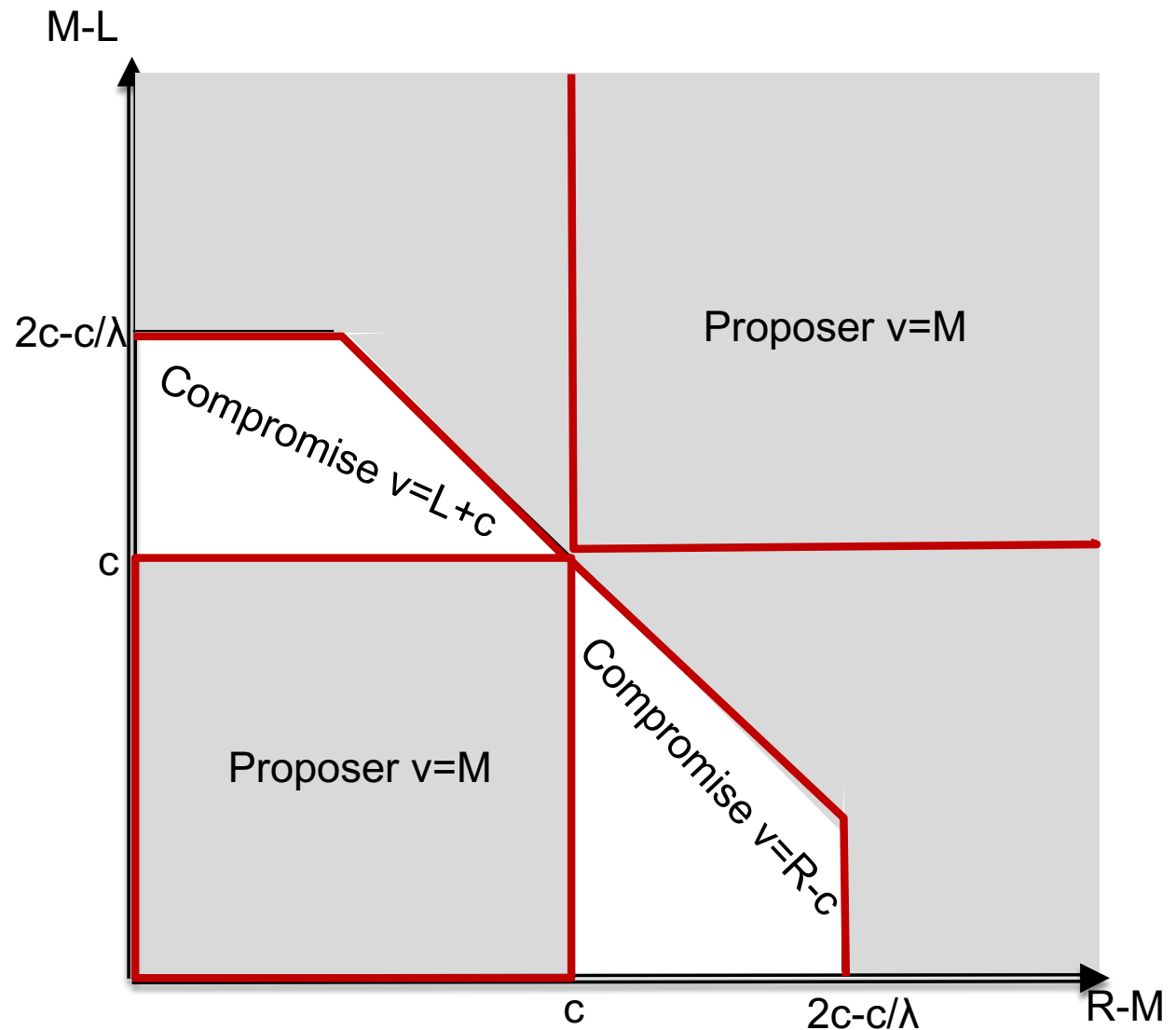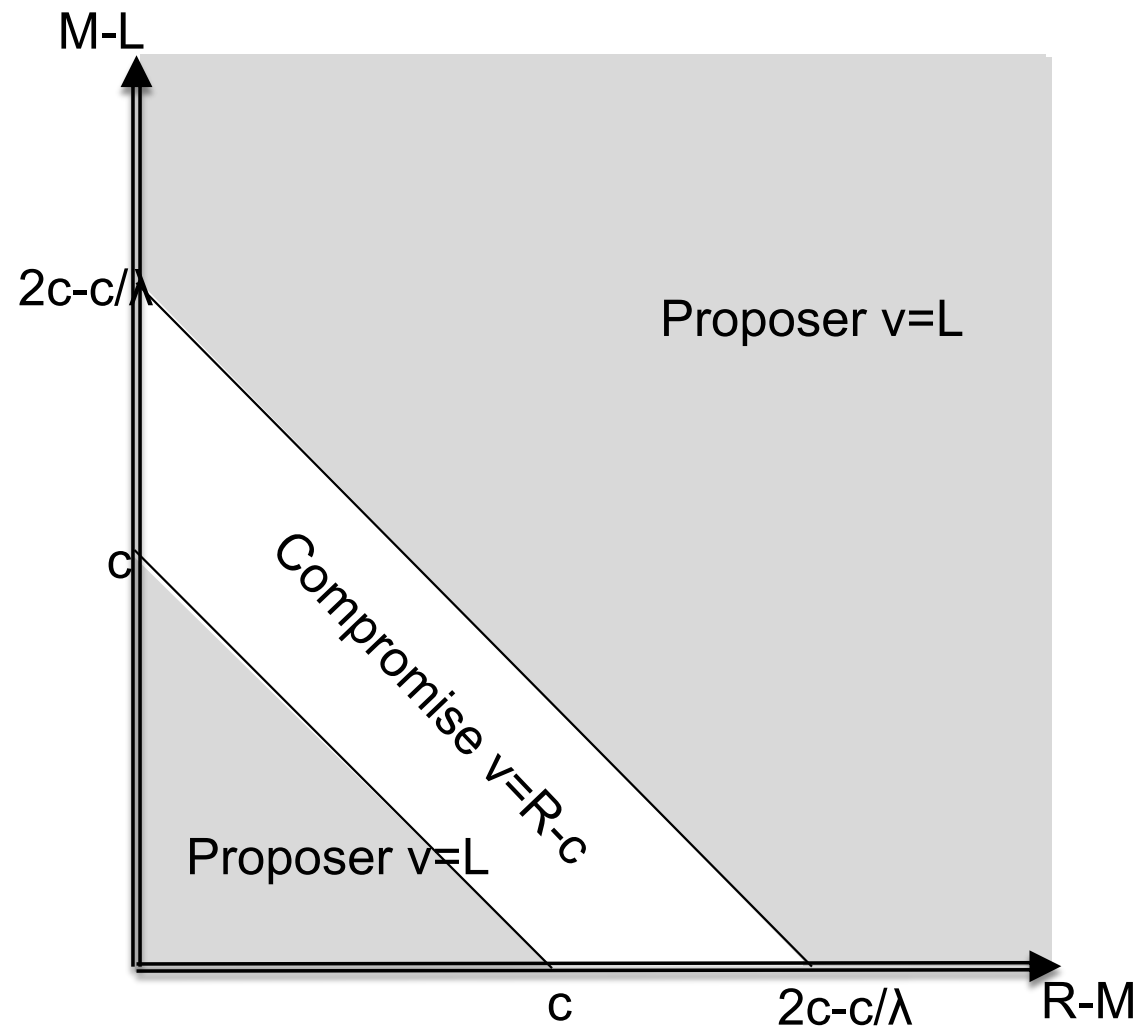
Roughly:

The median-voter theorem holds when either:
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- *whole group is **distant** (both are far from M)*

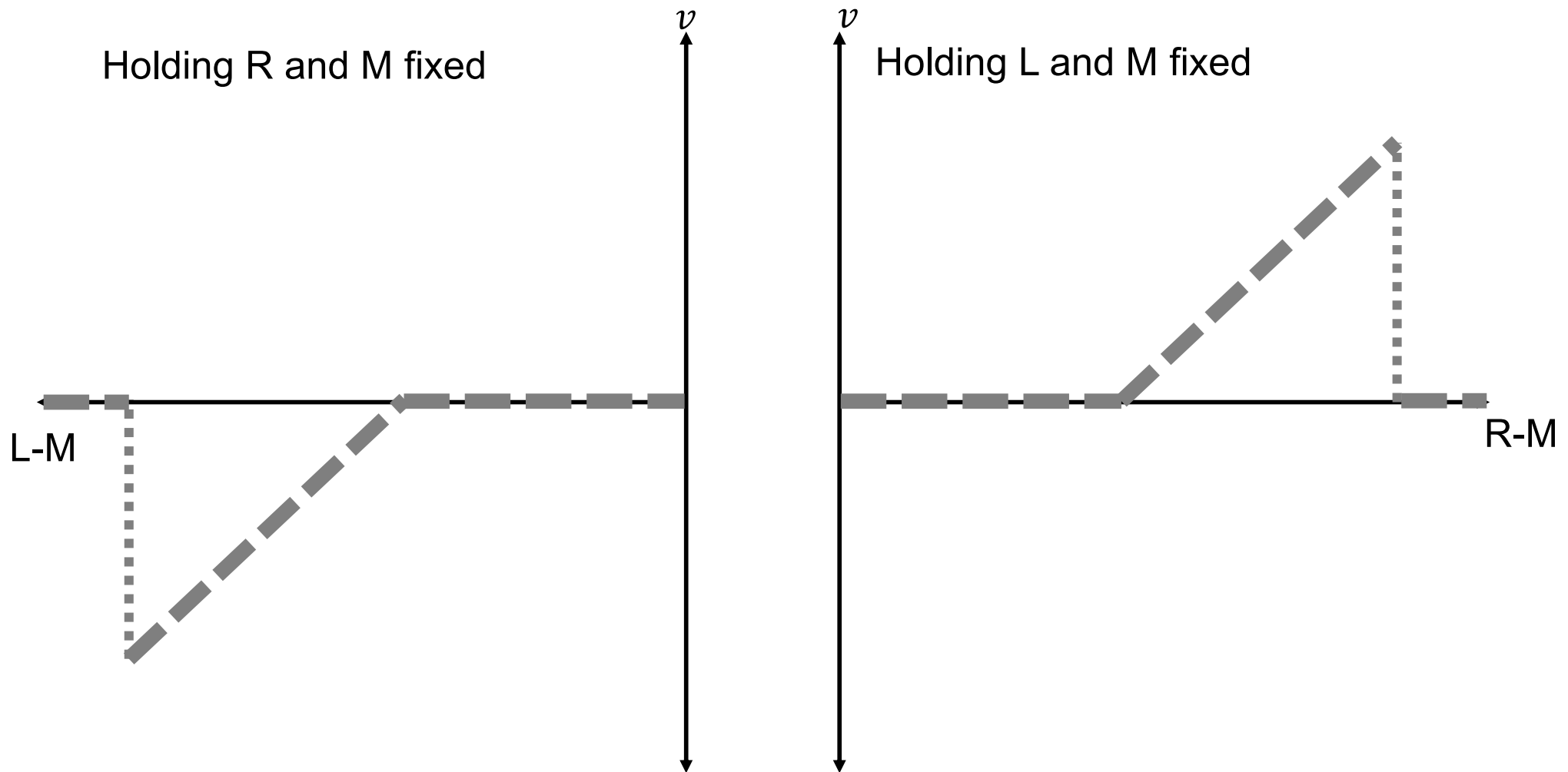- *group is **half cohesive half distant** (one is close, the other far from M)*

*If one agent is at **intermediate distance** and **one agent is close**, median-voter theorem does not hold.*

What if L or R proposes?

Comparative statics/empirical prediction

Empirical setting: US Circuit Courts

- Courts of appeals for cases with important principles, e.g.:
  - Interpretation of law.
  - Constitutional issues regarding federal law.
  - Cases that are likely to set precedent.
  - Ideologically contentious issues.
- 98% of decisions are final.
- One step below Supreme Court.

US Circuit Courts: Ideologically salient

Federal appeals court rules against Trump, refuses to reinstate travel ban

Mark Abadi
Feb. 9, 2017, 6:25 PM   35,432

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- **The Best Tom Hanks Movies Ever**
  (PrettyFamous — By Graphiq)
- **End Your Nightly Snoring Nightmar…**
  (My Snoring Solution)
- **Best Flashlight Ever is Selling Like…**
  (Gladiator Flashlights)
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  (Flare Audio)

Sponsored Links

A federal appeals court unanimously ruled against President Donald Trump on Thursday, refusing to reinstate his travel ban.

The ruling, issued by a three-judge panel on the San Francisco-based 9th Circuit Court of Appeals, means refugees and citizens of the seven majority-Muslim countries affected by the ban can continue entering the US as the ban makes its way through the court system.

President Donald Trump. Drew Angerer/Getty Images

Empirical setting and data

- US president appoints and senate approves judge

→President's and home-state senators' ideology (voting pattern) proxy for judge's ideology.

- A continuous ideology score developed by Giles et al. (2001).

- Judges have life tenure.

- For each case:

- 3 **randomly assigned** judges

- make decision and **write an opinion – a motivation, often ideological.**

- A judge may dissent against (=not sign) the opinion.

- Many cases→many different ideological constellations.

Empirical setting and data

- U.S. Courts of Appeals Database Project and Openjurist

- All judges' ideology scores:
  - min -0.8 (liberal)
  - max 0.8 (conservative)

- Random sample of ~5% of cases 1925-2007.
  - ~20 000 cases

- Judge constellation of all cases.

- Ideology of court opinions:
  - -1 (liberal)
  - 0 (neutral)
  - +1 (conservative)

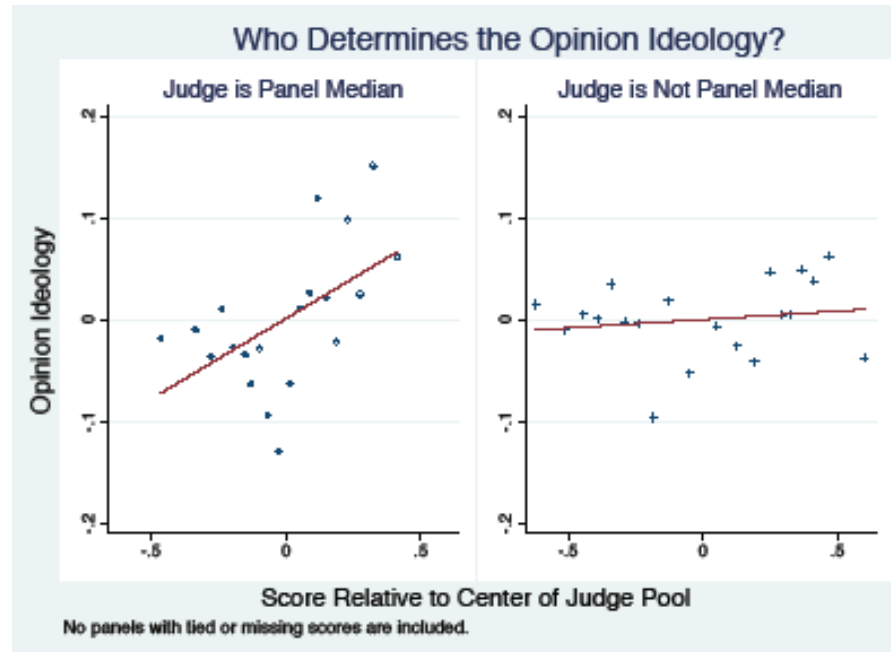# Ideology is salient 1
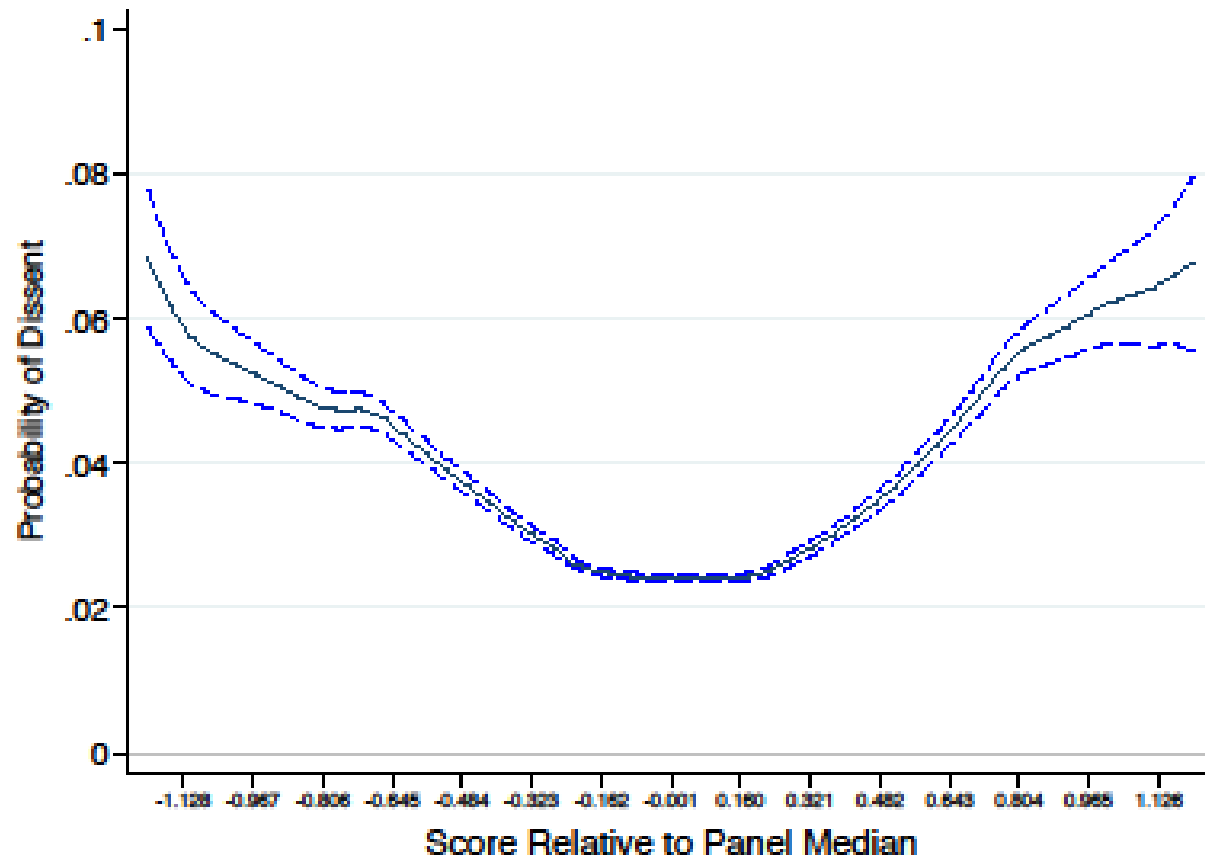
Robustness: Judge FE, circuit FE, year FE.

Ideology is salient 2
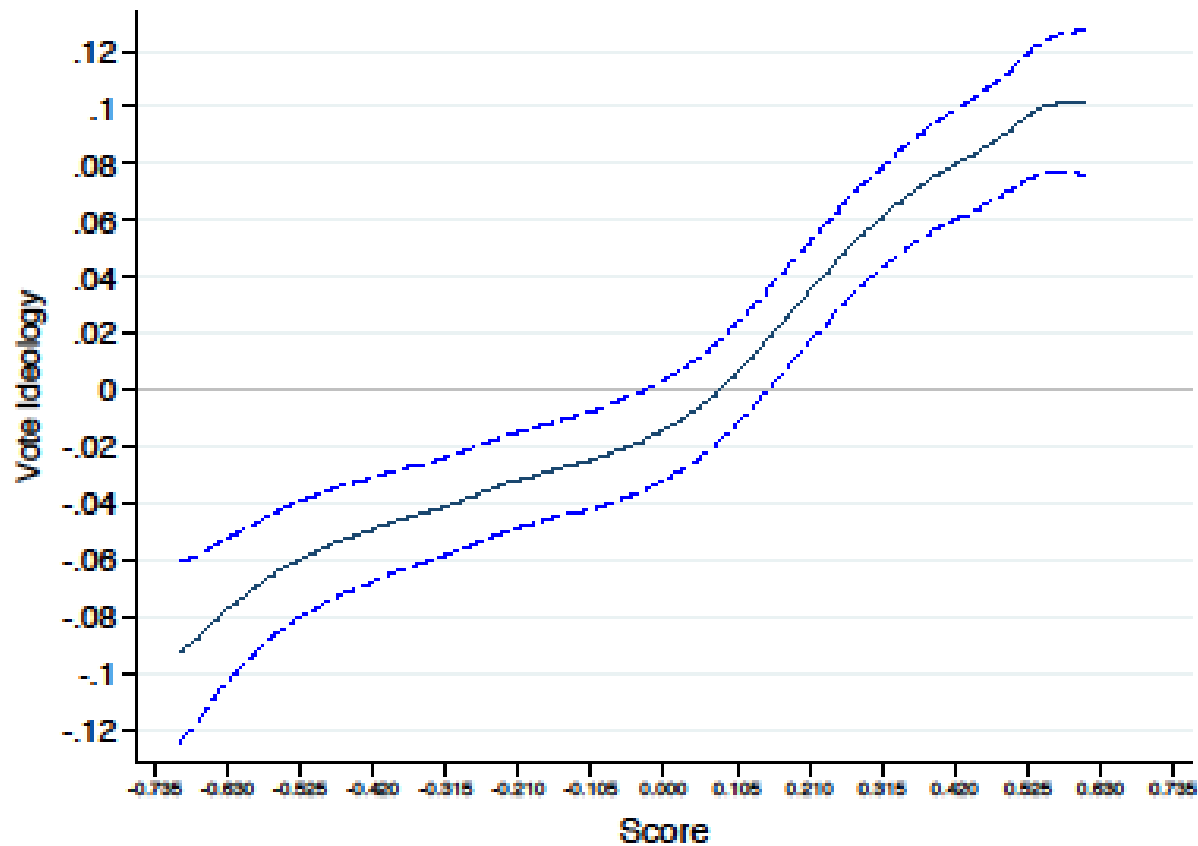
Prediction 1: Median particularly influential

For each panel (=case) and judges in the panel:

Majority opinion's score = b_0 + b_1 Judge's score
$+ b_2$ Judge's score*[judge is median]
$+ b_3$ 1*[judge is median]

Who Determines the Opinion Ideology?

Judge is Panel Median | Judge is Not Panel Median

Opinion Ideology

Score Relative to Center of Judge Pool

No panels with tied or missing scores are included.

Robustness: Raw score, adding left/right judge score, opinion over career control for circuit.
Result: Either Median influences alone or ~3 times more than others.
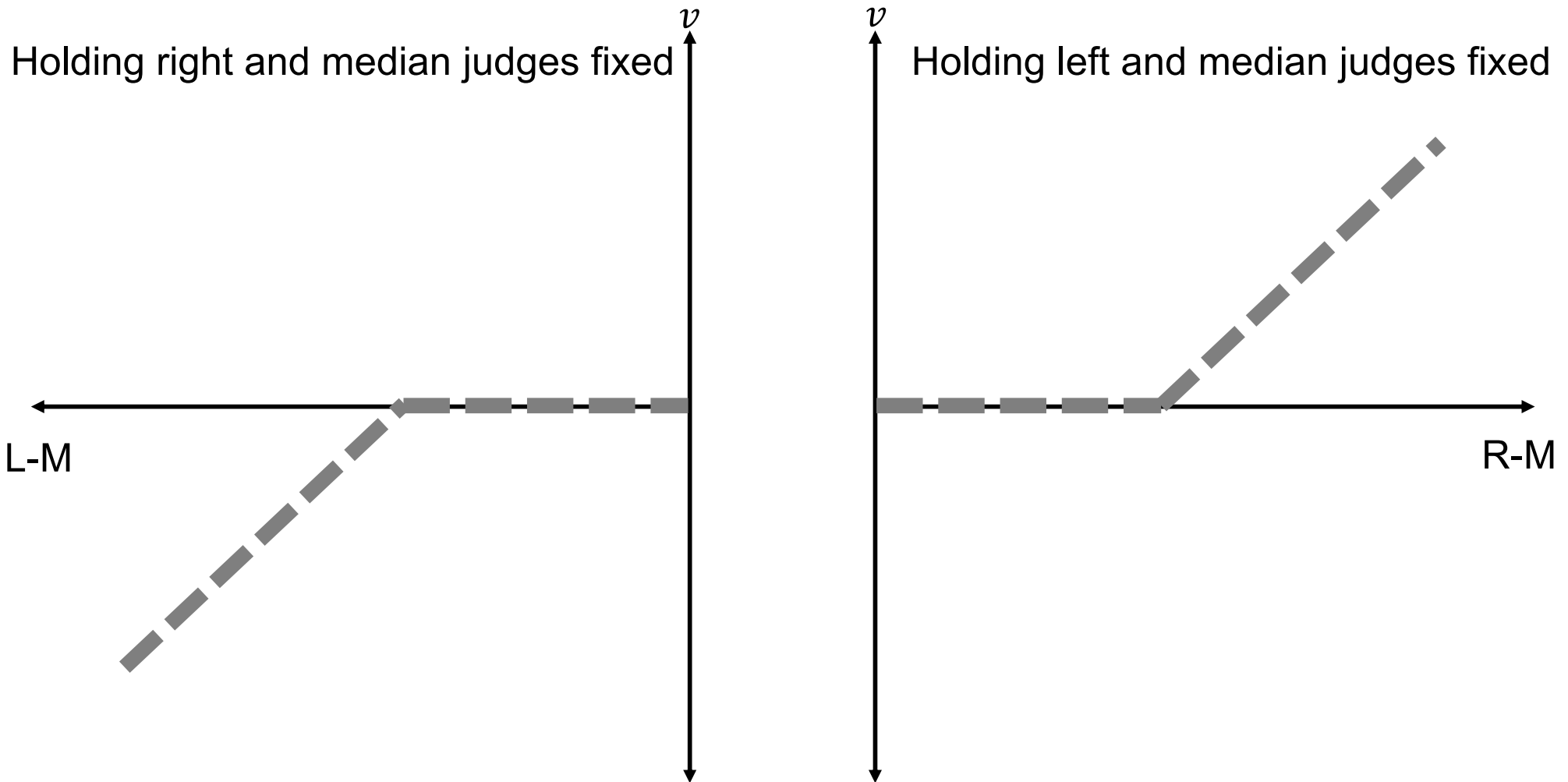
Prediction 2: moving from median

Holding right and median judges fixed

v

Holding left and median judges fixed

v

L-M

R-M
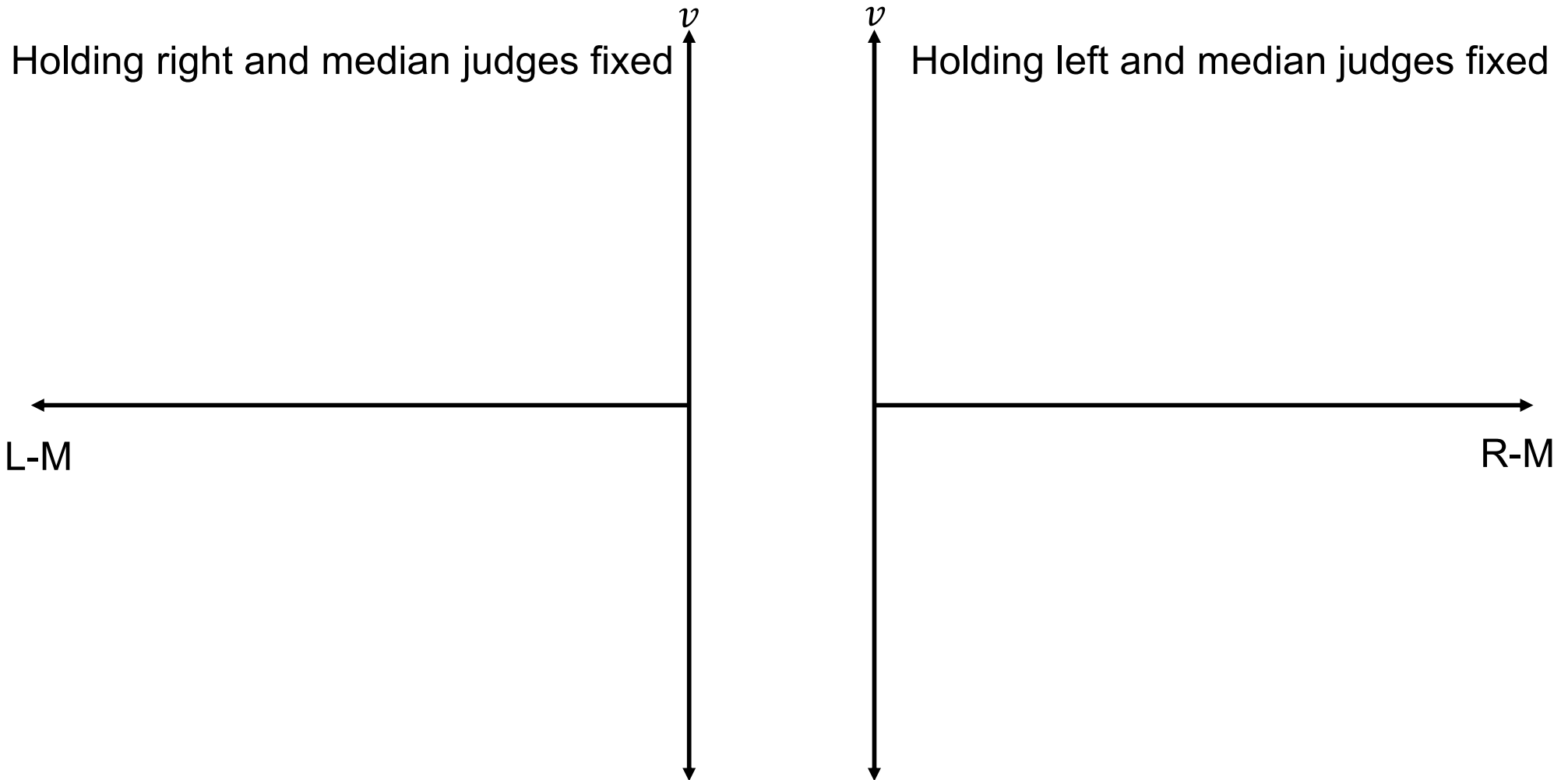
Prediction 2: moving from median

Narrow range of judges

Holding right and median judges fixed

Holding left and median judges fixed

L-M

R-M
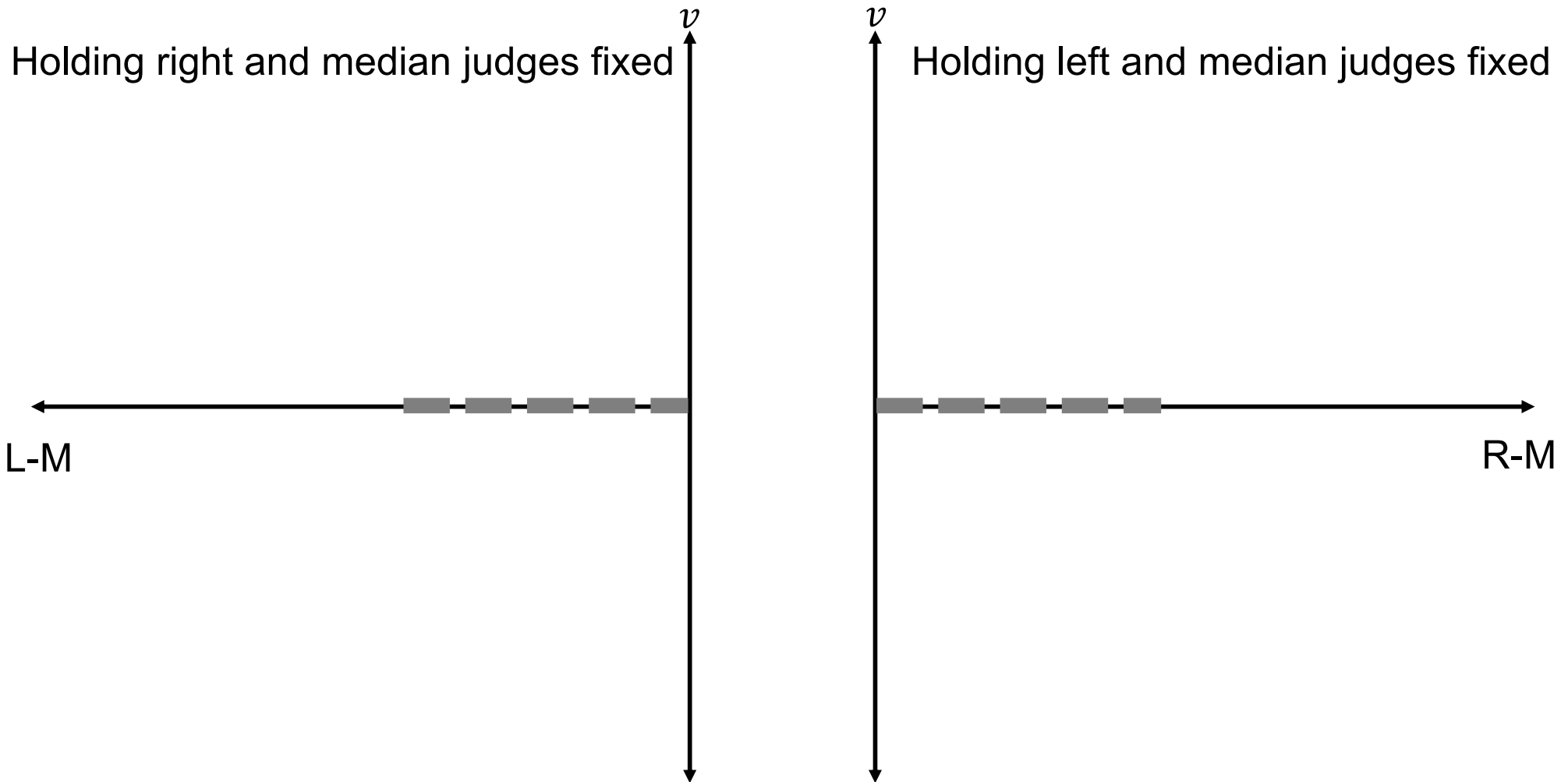
Prediction 2: moving from median

Intermediate range of judges

Holding right and median judges fixed

Holding left and median judges fixed

v

v

L-M

R-M

Prediction 2: moving from median

Broad range of judges

Holding right and median judges fixed

Holding left and median judges fixed
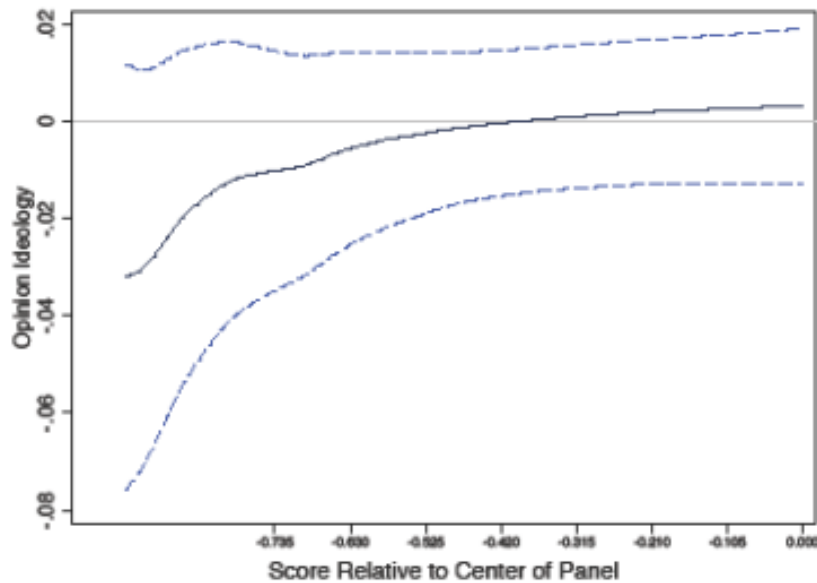
v

v

L-M

R-M
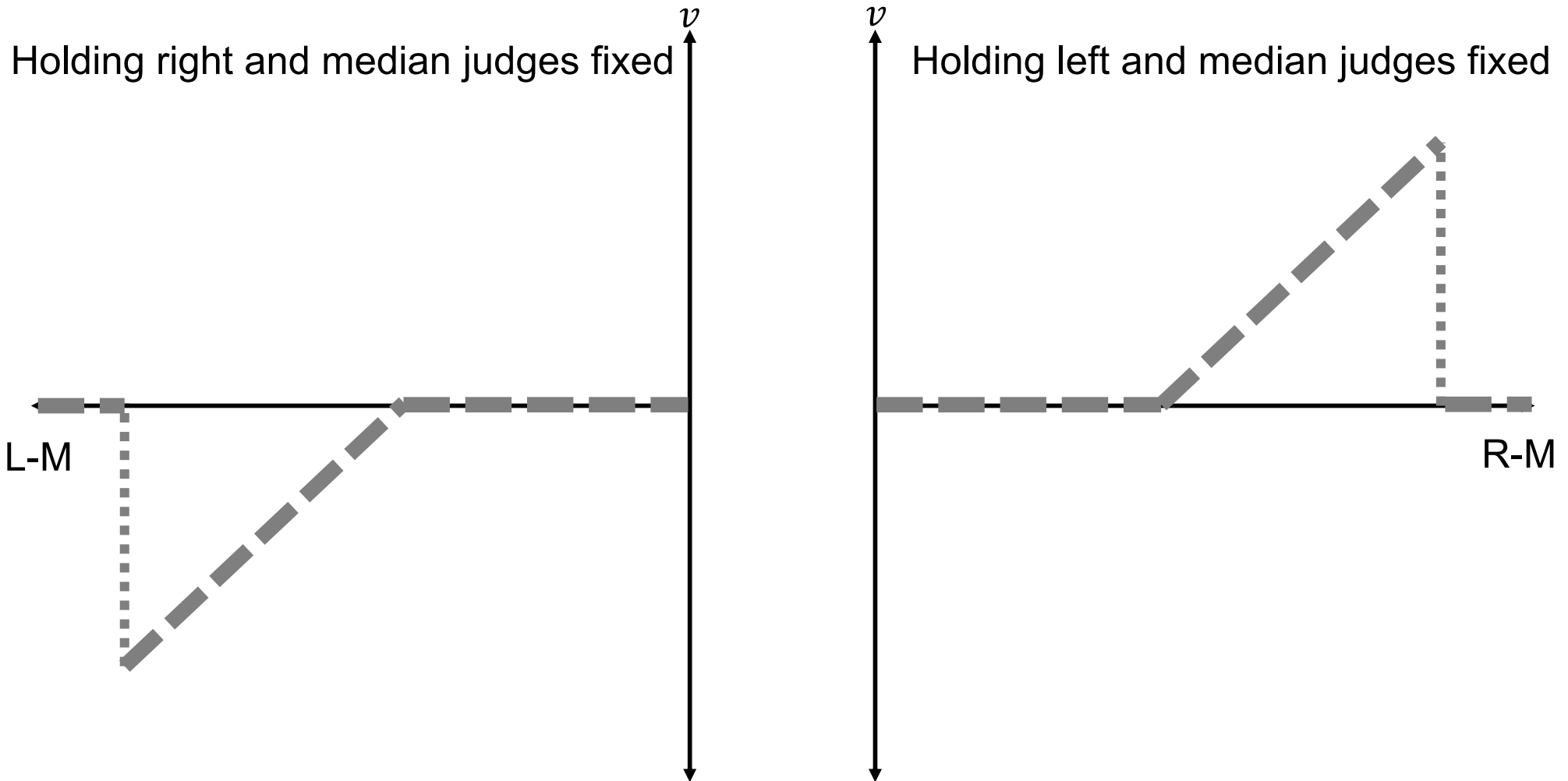
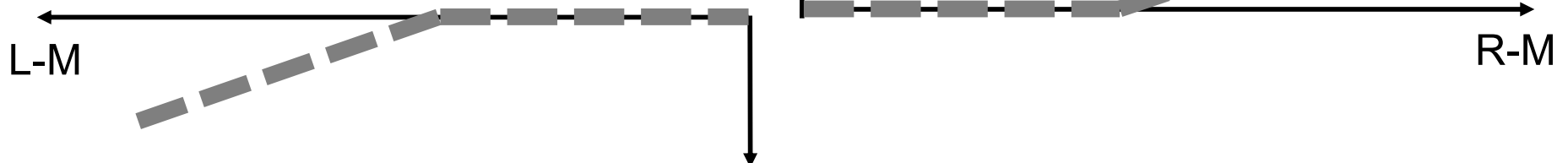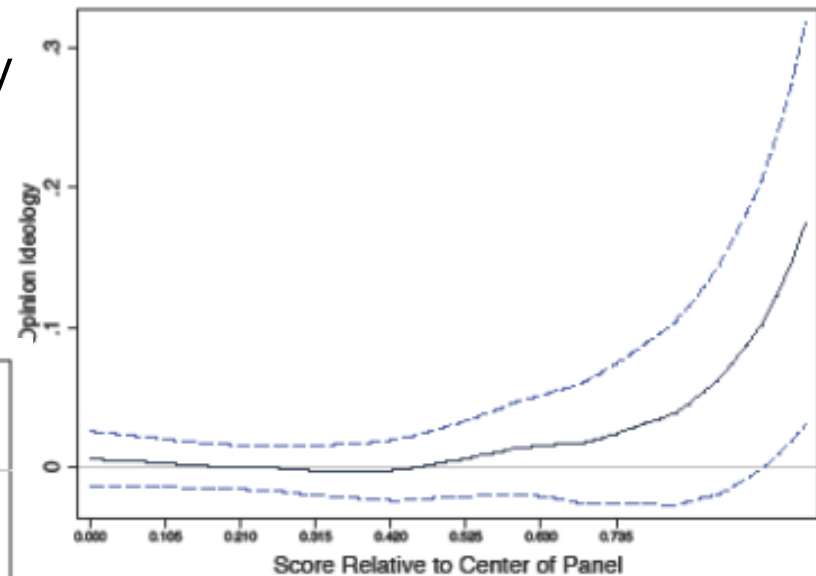# Prediction 2: moving from median

Local polynomial regression controlling:
- Median and Leftist (or Rightist) ideology
- Circuit*Year FE

Rightist
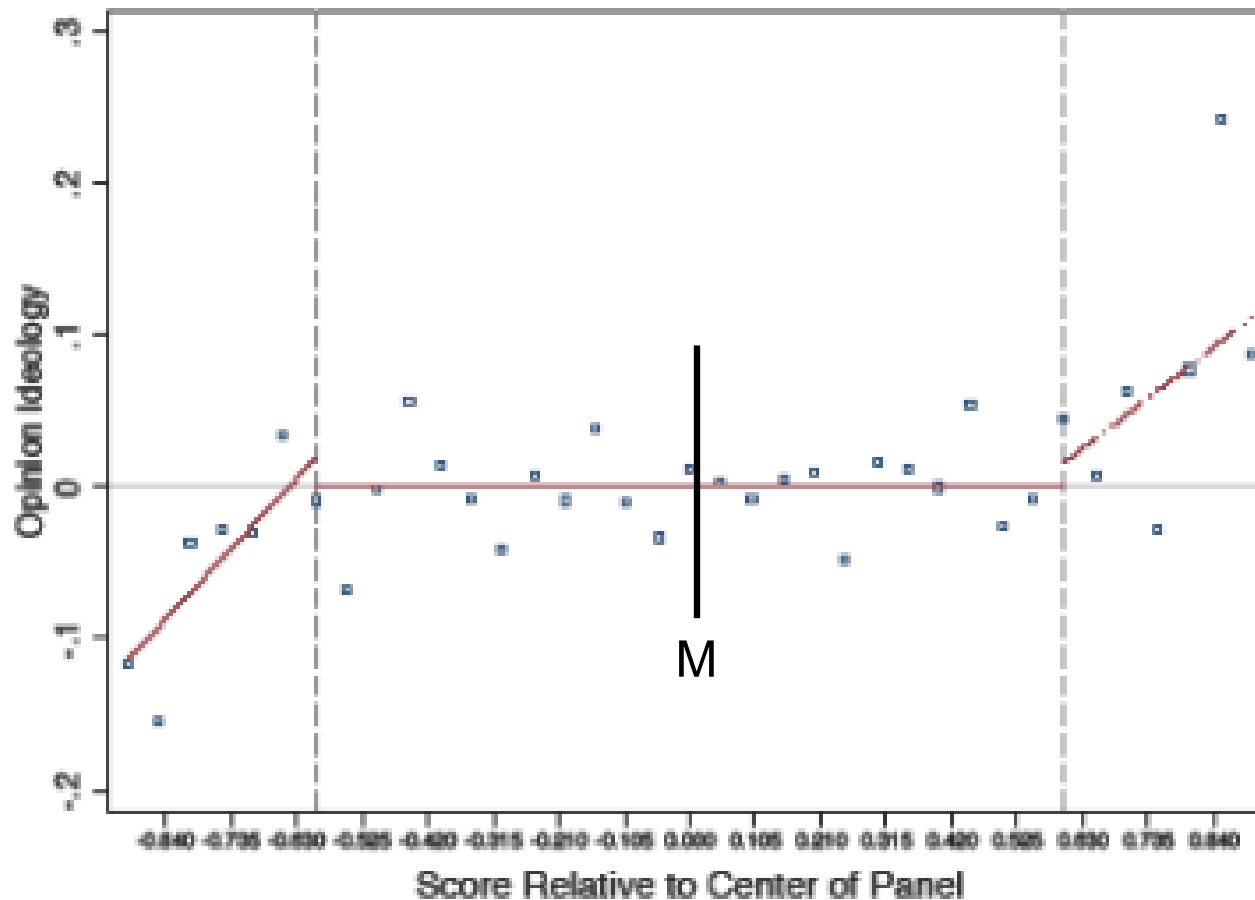
Leftist

Bins moving from median

☐ Structural breaks tests confirm

RESULT: Data consistent with model with intermediate range of ideology.

Conclusions

- Model of group bargaining/voting for policy where agents care about legitimacy of policy.

- Agent will want to endorse good policies but not bad.

- Result: Median wins power to propose.

- Result: Median voter theorem holds in groups where each other agent is either very close or very far from median.

- Result: Median voter theorem does **not** hold if group contains at least one agent at intermediate distance from median.

- Test model in U.S. circuit courts.

- Like model predicts: median has strongest bargaining power.

- Like model predicts: gradually moving another judge from median first has no effect on policy but at intermediate range starts pulling the policy.
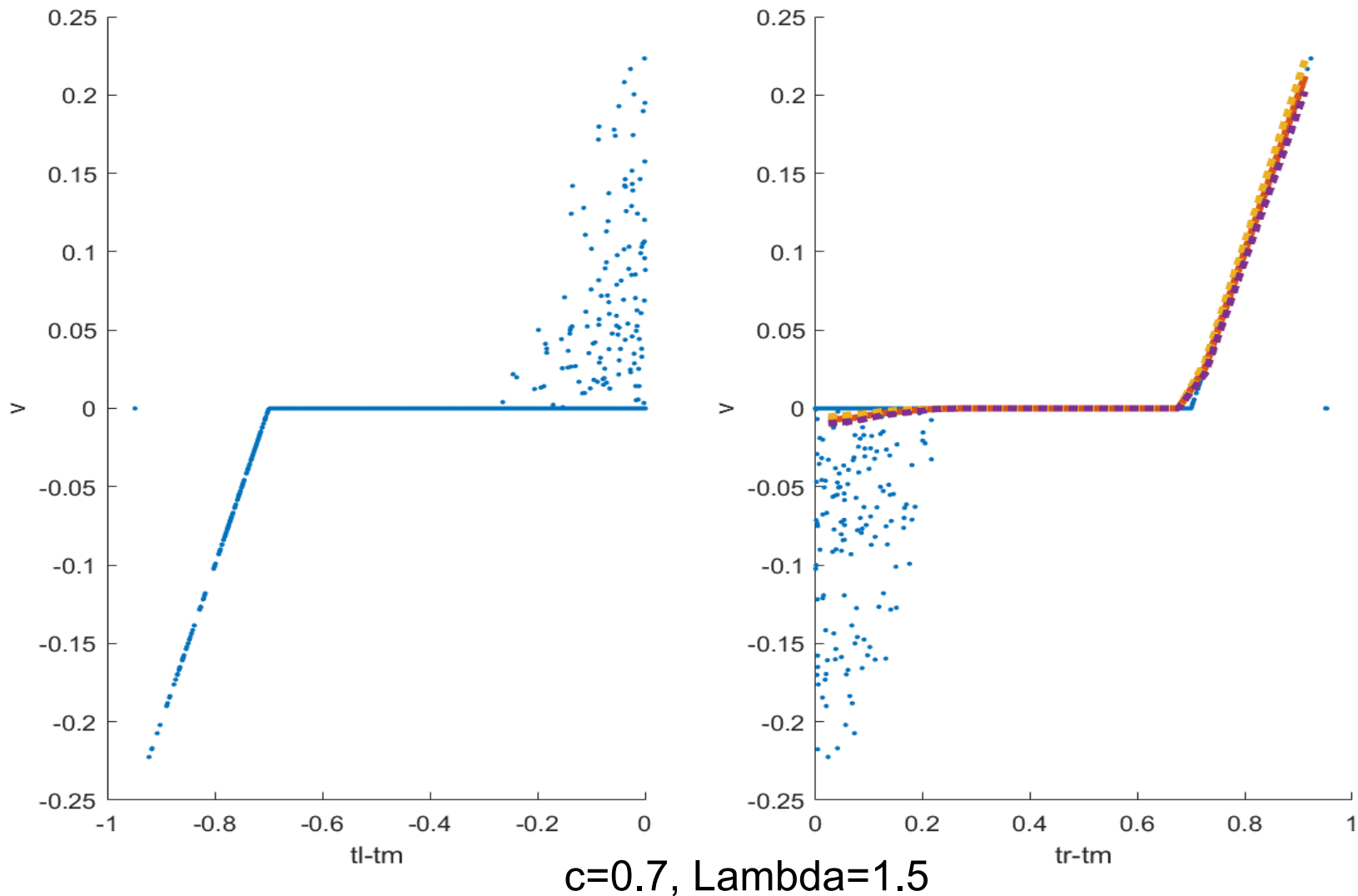
Next steps

- Structural estimation
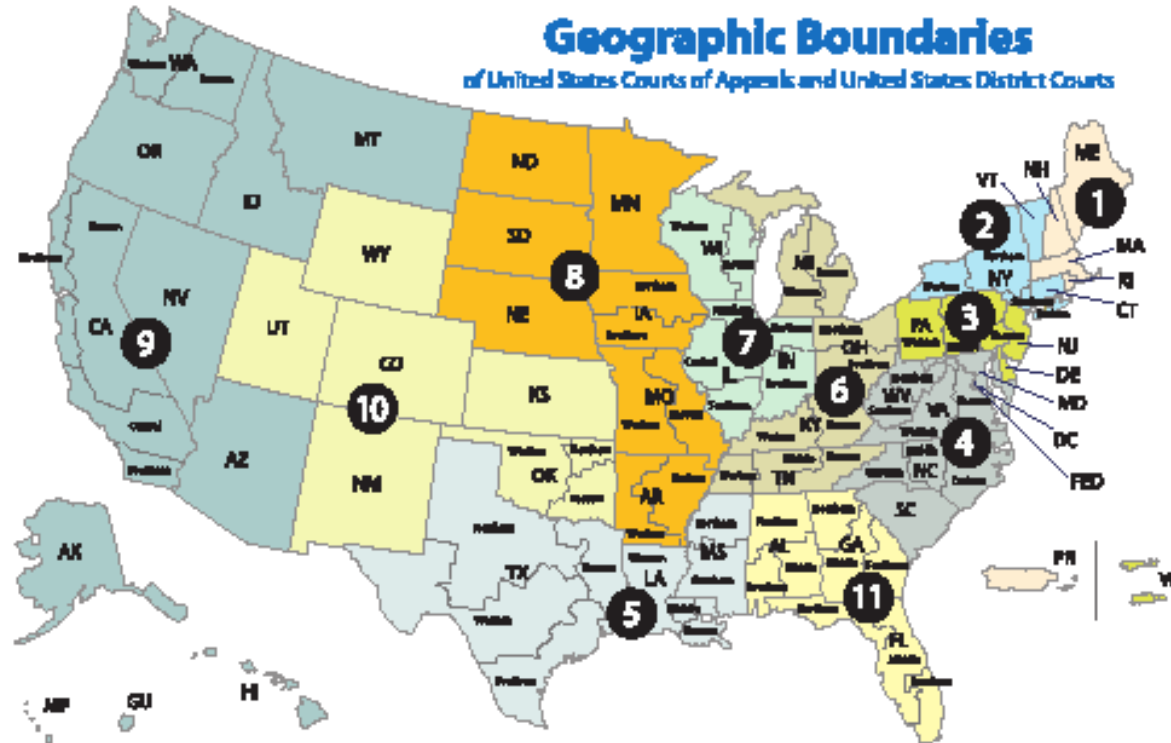
- Another prediction, on dissent

Extra slides

# Model prediction using real panels

c=0.7, Lambda=1.5

US Circuit Courts

- 12 federal appeals courts

- Each court has a *pool of judges* (8-40).
  - Once appointed, a judge serves till retirement (80%), death (16%), own resignation (4%).

- For each judicial case, a panel of three judges is *randomly assigned.*

- The panel writes a *majority opinion*, which is the ruling of the court.

- Each individual judge either signs the majority opinion or writes a *minority opinion = dissent* (or concur), which is a costly action:
  - Psychological cost: being subject to collegial pressure (Epstein et al. 2011)
  - Time cost: writing it requires time and effort

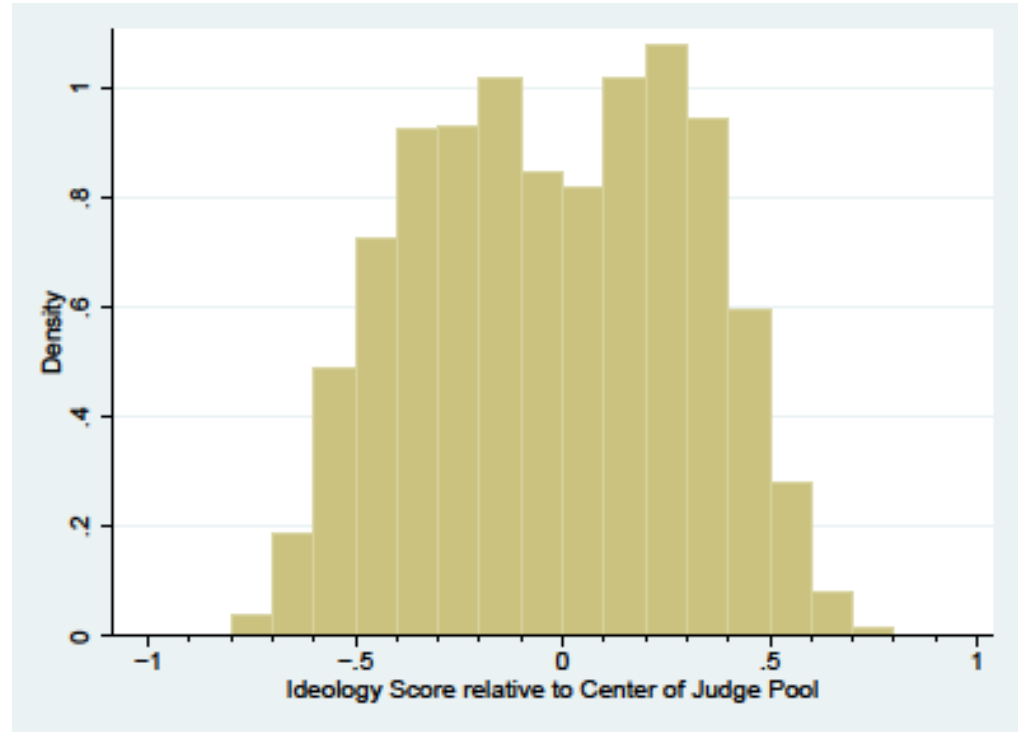- **Dissent (or concur) is a form of confrontation**, expressing a disagreement.

US Circuit Courts

Geographic Boundaries
of United States Courts of Appeals and United States District Courts
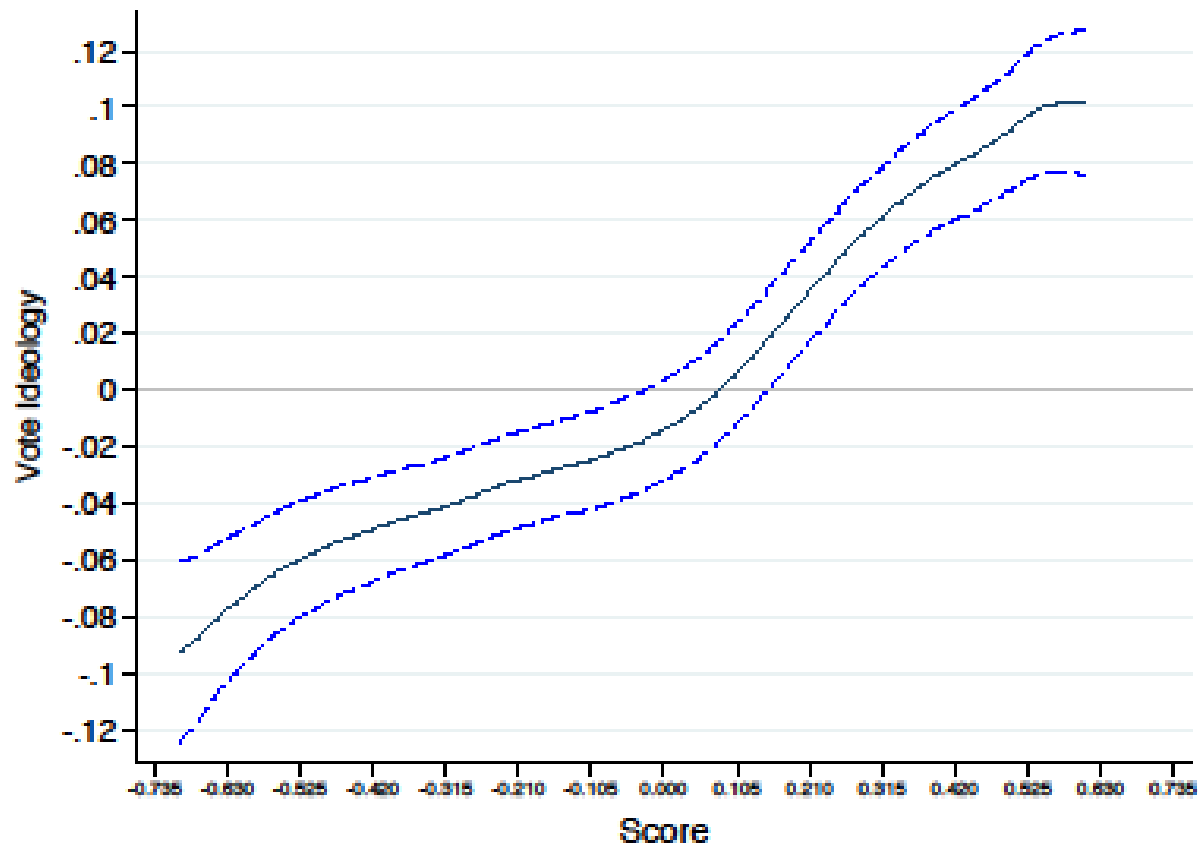
Ideology score, distribution
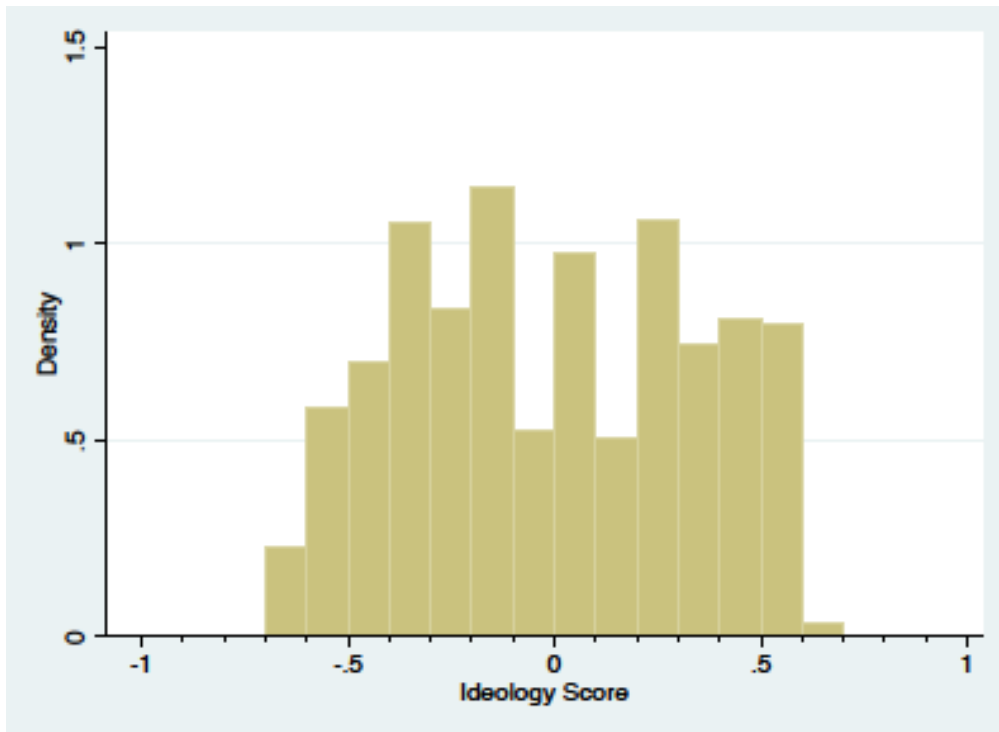
Raw

Relative to pool

Performance of "raw" ideology score

Alternative model

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If one (or two) agent is at **intermediate distance**, median-voter theorem does not hold.