There are three types of voters in a town: parents, elders, and young couples without children.

They have different preferences over the level of school spending (high, medium, or low).

<table>
<thead>
<tr>
<th></th>
<th>Parents (33.3%)</th>
<th>Elders (33.3%)</th>
<th>Young Couples (33.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First choice</td>
<td>$H$</td>
<td>$L$</td>
<td>$M$</td>
</tr>
<tr>
<td>Second choice</td>
<td>$M$</td>
<td>$M$</td>
<td>$L$</td>
</tr>
<tr>
<td>Third choice</td>
<td>$L$</td>
<td>$H$</td>
<td>$H$</td>
</tr>
</tbody>
</table>
Majority Voting: When It Doesn’t Work

- **Cycling:** When majority voting does not deliver a consistent aggregation of individual preferences.

<table>
<thead>
<tr>
<th></th>
<th>Public school parents (33.3%)</th>
<th>Private school parents (33.3%)</th>
<th>Young Couples (33.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First choice</td>
<td>H</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>Second choice</td>
<td>M</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Third choice</td>
<td>L</td>
<td>M</td>
<td>H</td>
</tr>
</tbody>
</table>
9.2 Single-Peaked versus Non-Single-Peaked Preferences

(a) Preferences

(b) Preferences

Both candidates positions converge to median
APPLICATION: Farm Policy in the United States

- The farming sector receives $23 billion in support from the federal government each year in two forms:
  - *Direct subsidy* payments ($11 billion)
  - *Price supports* ($12 billion)
- The average farmer receives more than $10,000/year in support.
- The average American *pays* more than $200/year for this.
Why do American families pay such large costs to support the farm sector?

- One answer: This helps preserve the “family farm.”
  - But most support goes to large farms, and other countries have farming without subsidies.
- More likely answer: free rider problems.
  - Farmers have a strong incentive to support a farm lobby ($10,000/year).
  - Non-farmers have little reason to oppose.
9.4

APPLICATION: Contracting Out with Non-Competitive Bidding

Contracting out often takes place without a competitive bidding process.

- Since early 2000s, Wackenhutt Corporation has been the primary security contractor at U.S. weapons plants.
  - Wackenhutt cheated during safety tests, so the inspector general reported the results were “tainted and unreliable.”
  - Hired by the Nuclear Energy Institute in 2004.
APPLICATION: Contracting Out with Non-Competitive Bidding

• In 2003 and 2004, DHB industries won hundreds of millions of dollars of contracts to supply body armor to troops in Iraq.
  o But in 2002, DHB had to return 6,400 defective vests to the NYPD.
  o In 2003, workers accused DHB of sloppy quality control.
  o 23,000 vests were recalled from Iraq.
APPLICATION: Contracting Out with Non-Competitive Bidding

- Since 2005, the Pentagon awarded more than $50 million of contracts to Applied Energetics.
  - Wanted solutions to combat improvised explosive devices.
  - Applied Energetics continued to receive funding after failed test.
  - Rival company Xtreme Alternative Defense System, with successful anti-IED technology, has received only $1.5 million.
9.4

APPLICATION: Government Corruption

• In 2003, former Illinois governor George Ryan indicted for corruption.
  o Sold state contracts in exchange for cash, gifts, loans and trips for his family.

• Replaced by Rod Blagojevich, who campaigned as a reformer.

• In 2008, Blagojevich was arrested on federal corruption charges.
  o Tried to sell Obama’s Senate seat and pressured Tribute Company to fire critical journalists.
be a continuous and smooth function of vote shares everywhere, except at the threshold that determines party membership. There is a large discontinuous jump in ADA scores at the 50 percent threshold. Compare districts where the Democrat candidate barely lost in period \( t \) (for example, vote share is 49.5 percent), with districts where the Democrat candidate barely won (for example, vote share is 50.5 percent). If the regression discontinuity design is valid, the two groups of districts should appear ex ante similar in every respect—on average. The difference will be that in one group, the Democrats will be the incumbent for the next election \((t + 1)\), and in the other it will be the Republicans. Districts where the Democrats are the incumbent party for election \( t + 1 \) elect representatives who have much higher ADA scores, compared with districts where the Republican candidate

---

**Figure I**

Total Effect of Initial Win on Future ADA Scores: \( \gamma \)

This figure plots ADA scores after the election at time \( t + 1 \) against the Democrat vote share, time \( t \). Each circle is the average ADA score within 0.01 intervals of the Democrat vote share. Solid lines are fitted values from fourth-order polynomial regressions on either side of the discontinuity. Dotted lines are pointwise 95 percent confidence intervals. The discontinuity gap estimates

\[
\gamma = \pi_0(P_{t+1}^{AD} - P_{t+1}^{DR}) + \pi_1(P_{t+1}^{AD} - P_{t+1}^{DR}).
\]

Source: Lee, Moretti, Butler

“Elect”

“Affect”
Single Peaked Preferences

Utility $u_i(a)$

$u_i(a)$ increasing in $a$ for $a < a_i$

$u_i(a)$ decreasing in $a$ for $a > a_i$
Median Voter Theorem

Utility

Median Voter utility

Public good spending

preferred spending of median voter

a_1  a_2  a_{\text{median}}  a_4  a_5

Public good spending a
In the 1960s, higher-educated and high-income voters were less likely to vote for left-wing (social democratic/socialist/communist/green/other left-wing) parties than were lower-educated and low-income voters by more than 10 percentage points. The left vote has gradually become associated with higher education voters, giving rise to a complete divergence of the effects of income and education on the vote. Figures correspond to five-year averages for Australia, Britain, Canada, Denmark, France, Germany, Italy, the Netherlands, Norway, Sweden, Switzerland, and the United States. Estimates control for income/education, age, gender, religion, church attendance, rural/urban, region, race/ethnicity, employment status, and marital status (in country-years for which these variables are available). Data from World Political Cleavages and Inequality Database.

As shown in the upper line, highest-educated voters were less likely to vote for social democratic parties than were lowest-educated voters by 15 percentage points in the 1960s. This gap has shifted very gradually from being negative to becoming positive, from $-10$ in the 1970s to $-5$ in the 1980s, 0 in the 1990s, $+5$ in the 2000s, and finally $+10$ in 2016–2020. Higher-educated voters have thus moved from being significantly more right-wing than lower-educated voters to significantly more left-wing, leading to a complete reversal in the educational divide.

The evolution has been dramatically different in the case of income. The bottom line shows that top-income voters have always been less likely to vote for social democratic and affiliated parties than low-income voters. This gap has decreased from $-15$ in the 1960s to about $-10$ in the past decade, but it remains negative.

14. The corresponding regression coefficients by country and decade are displayed in Online Appendix Tables D1 and D2.