Strategic Voting under Ranked Choice Voting and Plurality: Empirics

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1 Data

To assess the prevalence and distribution of strategic incentives under plurality and RCV empirically, we rely on the Comparative Study of Electoral Systems (CSES) data for a realistic set of preferences and beliefs. The dataset covers 160 surveys from xx different countries, administered shortly before or after an election.[1] We focus on the three largest parties (evaluated how?) and label them A, B, C in descending size, respectively. From each survey, we take the party like/dislike scores to approximate voters' ordinal utilities and construct their preference ranking. Let $\tilde{\mathbf{v}}$ be the vector of ballot proportions if everyone in the survey voted sincerely. Then, we assume that respondents' beliefs about the next election can be captured with a $\text{Dir}(s \times \tilde{\mathbf{v}})$ distribution. Using this set up, we can calculate the strategic incentives under either electoral system as laid out in Section 2.

1.1 Summary statistics

The mean number of respondents in each case is 1384 (with a standard deviation of 539). The 160 different surveys come from xx different countries from the time between xxxx and xxxx. Figure **??** maps the number of surveys in each country.

1.2 Distribution of preferences

How different are the CSES cases from one another? Aside from the intensity of preferences, we can describe each case with the vector $\tilde{\mathbf{v}}$, where the three-item vector $(v_1 + v_2, v_3 + v_4, v_5 + v_6)$ describes the distribution of first preferences, and the three-item vector $(m_{AB} = \frac{v_1}{v_1+v_2}, m_{BA} = \frac{v_3}{v_3+v_4}, m_{CB} = \frac{v_6}{v_5+v_6})$ describes the distribution of second preferences.

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[1] Two additional cases in the survey, Belarus (20xx) and Lithuania (20xx), are dropped because no respondent specified full preferences over more than two parties.

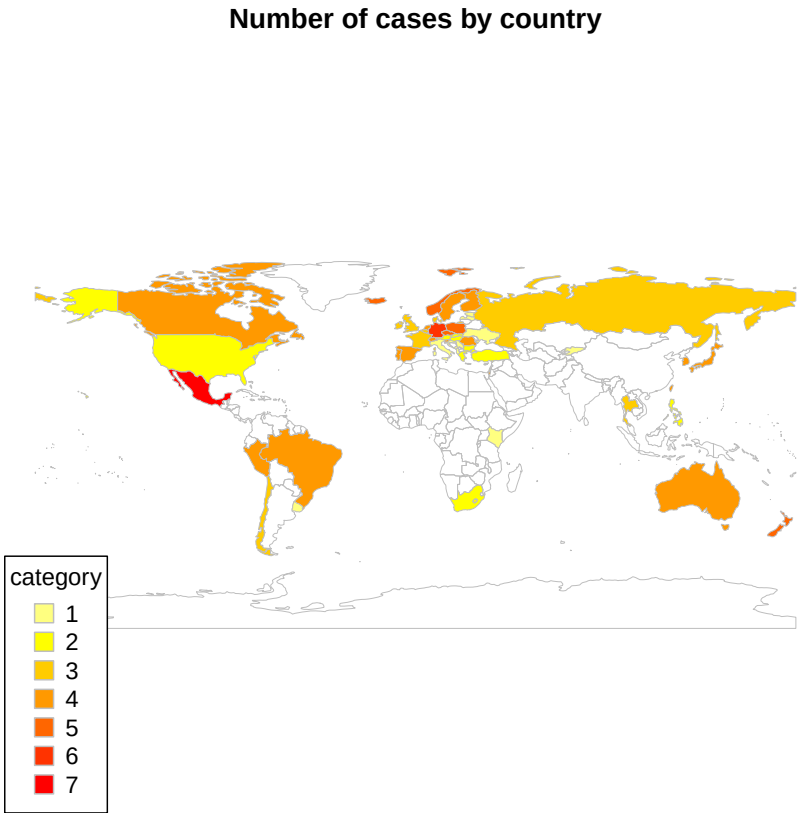

Figure 1: Cases in CSES data, by country

To link these two distributions together and classify cases more completely, we offer the following approach. Without loss of generality, let the candidate (party) X whose first-preference voters have the most equally split second preferences, and the other two parties Y and Z. If both m_{YZ}, $m_{ZY} > 0.6$, then classify this case as *single-peaked* and denote it $X+$.[2] Conversely, if both $m_{YZ}, mZY < 0.4$, then classify this case as *divided majority* and denote it $X-$.[3] If $m_{YZ}, m_{ZY} \in [0.4, 0.6]$, then classify this case as *neutral* and denote it $N(X)$. If neither of these conditions hold (because of unusual second preferences), classify it as *other* and denote it O. This completes a mutually exclusive and exhaustive set of classes determined by $\tilde{\mathbf{v}}$.

Table 1 summarises the distribution of preference classes across the CSES cases. A plurality of cases belong to the divided majority classes; however, there is also a large number of single-peaked cases, whereas neutral and others tend to be rarer. (Figure 2 plots the distribution of first

[2] X is the attractor: both remaining parties have a majority of their second preferences tilted towards X.

[3] Here, X is the repeller: both remaining parties have a majority of their second preferences tilted towards each other and away from X.

Table 1: Distribution of preference profiles in CSES data

	A	B	C
Single-peaked (+)	18	23	9
Divided majority (-)	28	20	20
Neutral ()	5	7	3
Other ()		27	

preferences conditional on the classes.)

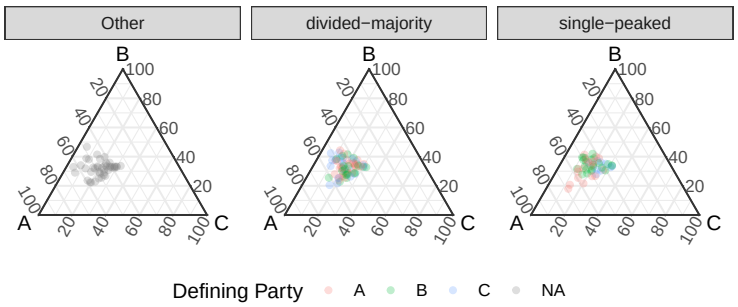

Figure 2: Distribution of first preferences in CSES cases, by class

2 Results: Baseline Case

1. Simple proportion of voters with strategic incentives
2. Scatterplots of voters with strategic incentives
3. Key figure (epsilon)
4. What kind of strategic vote depending on class?

3 Results: Interdependence of Strategic Behaviour