

Do Vote Transfers Matter for Party Discipline? A “No” from American Single Transferable Vote Elections

Jack M. Santucci*

December 26, 2016

Abstract

New interest in “multi-winner ranked-choice voting” raises old questions about effects on party discipline. This article represents the first examination of party discipline following single transferable vote (STV) elections in the United States, let alone any non-parliamentary regime. Advocates tout the potential to trade transfer votes for policy across party lines. Detractors say this will wreck party discipline. I search for evidence of these deals in voter coordination by parties, pre-election coalitions, and “lone-wolf” candidates from parties and pre-election coalitions. The only election outcome associated with varying party discipline could occur under any electoral system currently used in the United States, including both first-past-the-post and at-large plurality: a leadership challenge that spills into government. My data include previously paper-bound records from Cincinnati and Worcester, Mass., two iconic cases of STV in the United States.

Keywords: ranked-choice voting, single transferable vote, preference swapping, party discipline.

*The author thanks Georgetown University’s Massive Data Institute for funding data collection. Hunter Books, Alexis Campbell, and Suzanne Trivette provided research assistance. Carolyn Ford, Paulette Leeper, and Amy Searcy of the Hamilton County Board of Elections provided aggregate vote-transfer reports for Cincinnati. Niko Vangjeli of the Worcester Election Commission helpfully located these records for Worcester, Mass.

1 Overview

Does the single transferable vote (STV) weaken party discipline? STV allows a candidate from Party A to win on “transfer votes” from one or more Party B candidates. The idea is that cross-party electoral coordination will spill into a legislature. Advocates see this as a benefit. Believers in strong parties think it is a drawback. But does “preference swapping” matter for legislative behavior?

I search for evidence consistent with an STV-based weakening of party loyalty. My data are various indices of party cohesion measured at the ends of legislative terms, then various indices of electoral behavior preceding each of those terms. All the data come from previously paper-bound roll-call and electoral records. They cover 20 elections, 20 council terms, 688 candidacies, 180 victors (including party and party-factional affiliations in non-partisan elections), and 535 rounds of STV vote-counting.

Pronouncing on the use of STV in American local government, Banfield and Wilson (1966: 97) said, “PR breaks down party control over nominations and permits mavericks who owe nothing to party leaders to win office.” This paper returns to two of their three cases – Cincinnati and Worcester, Mass. – to see if quantitative data support plausible restatements of this anecdotal claim.¹

I deduce four basic paths by which STV might reduce party discipline, build appropriate tests, and run them on several appropriate samples. In no case do I find some STV-unique process associated with less-than-average party discipline. Rather, the best predictor of weak party discipline is one that could emerge under any candidate-based voting rule (including single- and multi-member plurality): a leadership fight among winning co-partisans.

2 Electoral systems and party discipline

The connection between electoral systems and party discipline seems intuitive. It is conventional wisdom that candidate-based electoral systems weaken party discipline. In party-based electoral systems, party leaders – whoever they are – ration access to office, and winners are expected to tow

1. Banfield and Wilson (1966) drew exclusively on two qualitative-descriptive accounts by Banfield’s own Joint Center for Urban Studies (Harvard/Massachusetts Institute of Technology): one on Cincinnati (Gray 1959) and one on Worcester (Binstock 1960).

the party line. No such sanction exists when voters choose among candidates. The classic paper in this vein comes from Carey and Shugart (1995).

But Carey and Shugart (1995) never argued that candidate-based voting rules should wreck party discipline. They argued that a candidate under candidate-based rules had “incentives to cultivate a personal vote,” or make “particularistic” promises in order to win office. To say that promises affect legislative behavior is a leap. To say that promises will diverge from party priorities is also a leap. It may be that candidate-based voting rules provide little incentive for loyalty, but the absence of an incentive for loyalty does not guarantee disloyalty. To go from the personal vote to weak legislative discipline is a stretch.

Observers of American politics will note that discipline has varied while voting rules have not. Congressional elections have always been candidate-based. These have overwhelmingly been in single-member plurality districts at least since 1842 (Calabrese 2006). Yet, compared to present levels, party discipline in the 1960s-80s was low. This is true across a range of metrics: average Rice cohesion scores, NOMINATE-based measures of polarization, agenda-corrected measures of the proportion of party-unity votes by Congress, partisan division on votes to empower chamber leaders, floor-speech rhetoric, fundraising coordination, and so on (Mayhew 1974; Cain et al. 1987; Poole and Rosenthal 1997; Crespín et al. 2011; Pearson 2015). Prior to the 1960s, weak party discipline literally fueled a fight among normatively oriented political scientists (APSA Committee on Political Parties 1950; Turner 1951).

Comparative work is largely agnostic about an electoral-system effect on party discipline. Much of it has focused on Brazil, where voters choose Deputies in open-list-PR elections. Limongi and Figueiredo (1995: 500) attribute varying Rice cohesion scores to variation in legislative rules. Ames (2001: 187-223) linked rates of party unity to success in pork-barelling. Desposato (2006) later found party discipline to be similar in the Chamber of Deputies and Senate, the electoral systems of which are different.

Cross-national work produces similar results. Shomer (2016) finds that nomination rules explain Rice-based discipline measures in those of 24 countries with candidate-centered elections. Tavits (2009) compares five European parliamentary democracies because these should have higher party discipline than presidential systems. The rules in her five cases range from not-at-all to highly candidate-centered. She finds that politicians with local political experience are more likely to defect from majorities of their parlia-

mentary parties, regardless of institutions.

Yet the vote-transfer feature of STV may be a unique impediment to party control.² Sinnott (1999: 117) reports high rates of discipline in Ireland, which has used STV since 1921. That would be consistent with cross-party preference flows if the latter reflect coordination to produce certain coalition governments (Gallagher 2011: 63).³ The American, fixed-term-legislative analogue would be an effort to produce certain bill-level outcomes. Party A sends votes to select Party B candidates in return for support on key legislation. Without coalition government, and if transfers anticipate log-rolls, STV may depress party discipline.

3 How STV might depress party discipline

There are two overarching paths by which STV might reduce party discipline. The first is where a candidate depends on vote transfers from other parties for their own election. The second is where a candidate is popular enough to win without transfers at all, but note that such candidates can win without party support in many candidate-based systems. Below I discuss potential conditions under which each path might operate, but first I explain STV.

In its unmodified form, STV asks voters to rank candidates in order of preference. Typically, a candidate must win a Droop quota of votes to win a seat.⁴ A Droop quota (Q) is a function of the sum of valid first-preference votes cast in an election (V) and district magnitude (M):

$$Q = \frac{V}{M + 1} + 1 \tag{1}$$

The vote count proceeds in rounds. The first step is to sum all first-preference votes and calculate the quota, rounding up. If no candidate has a

2. Australia solves this problem by giving voters the option to ratify party-given preference orderings. The vast majority take it, which effectively turns STV elections to the Australian Senate into closed-list PR contests. Malta has no such option, but for whatever reason, ticket-splitting is rare (Farrell and Katz 2014: 15).

3. Other cross-party flows may reflect expressive voting for, say, hopeless Party A in expectation those votes will help elect hopeful Party B anyway (Farrell and McAllister 2006: 13).

4. Less often, the quota is fixed by law, and if no candidate achieves that quota, the N highest vote-getters win seats. N is determined by dividing the total valid first-choice votes cast by the fixed quota, then rounding. This was the rule in New York City.

quota, the last-placed candidate is eliminated, and ballots for that candidate are reallocated to next-ranked candidates on those ballots. If one or more candidates does have a quota, ballots for those candidates in excess of quota become surplus (S). Surplus ballots are reallocated to next-ranked candidates on those ballots. Under a random-transfer STV rule, S ballots are randomly drawn from the winning candidates’ piles.⁵ The counting process iterates between surplus transfer and sequential elimination until M seats are filled.

3.1 Party coordination or its failure

Winners for whom ballot transfers constitute a large proportion of final-round vote totals are heavily transfer-dependent. If many of these ballots come from co-partisans, we might expect the winner to exhibit greater party loyalty, since they depend on co-partisans for election. If many ballots come from non-co-partisans, we might expect less party loyalty, since the winner’s “constituency” includes voters from other parties.

	High proportion of transfers from:	
Transfer dependence	Non-co-partisans	Co-partisans
High	Low loyalty	High loyalty
Low	No prediction	No prediction

Table 1: How transfer-dependence and the source of those transfers may interact to affect party loyalty.

H1.A Among the most transfer-dependent winners, candidates for whom non-co-partisan transfers are arbitrarily large proportions of final vote totals should exhibit lower party loyalty than those for whom non-co-partisan transfers are not.

H1.B Among the most transfer-dependent winners, candidate for whom co-partisan transfers are arbitrarily large proportions of final vote totals should exhibit higher party loyalty than those for whom co-partisan transfers are not.

5. All cities in this analysis used random-transfer rules. The main alternative is a fractional transfer rule, whereby every surplus ballot transfers to the next-ranked candidate at a fraction of its full value.

3.2 Leadership challenges

Table 1 shows it is not clear what to expect from winners who are not transfer-dependent. These are candidates with first-round vote totals arbitrarily far in excess of Q .⁶ They may be especially popular within their parties, making them party leaders and therefore more loyal than average. Or they may be contenders for legislative party leadership, making them less loyal than average. If they are leadership contenders, they may induce legislative-party splits, driving down many co-partisans' party loyalty scores.

There is no conclusive, data-driven way to know the identity of a “contender for party leadership,” but first-round vote totals provide *prima facie* evidence. If two or more candidates from the same party exhibit vote totals far in excess of co-partisans' vote totals, we might assume they contended for leadership. Then, assuming leadership challenges only matter if the contenders secure positions (e.g., the challenger is not defeated), we can measure leadership challenges from the dispersion of the party's winners' first-round vote totals. If this affects overall party discipline, it will manifest not in any one candidate's party loyalty, but in the aggregate cohesion of the party.

H2 Aggregate party cohesion varies with the dispersion of first-preference support for that party's winners.

Tables 2 and 3 show how first-round vote dispersion among winners might capture a leadership challenge. Table 2 gives winners' first-round vote totals for the non-contentious Cincinnati election of 1929. A Droop quota in this election was 13,877. The vote total for one candidate far surpasses the total of any other candidate: eventual Mayor and Charter-Republican Russell Wilson (WilsonR). As long as we focus on the Charter coalition or Charter-Republicans within it, the votes are relatively concentrated on Wilson. He is the clear leader.⁷

Now contrast Table 2 with Table 3, the vote totals for winners in the contentious election of 1955. (A Droop quota was 14,319.) There are two clear Democratic-Party leaders. One is Ted Berry, President of the local National Association for the Advancement of Colored People. The second is long-time Mayor Ed Waldvogel, a New Deal Democrat who selectively

6. I say “arbitrarily” because no candidate knows what Q will be until after votes are counted.

7. Focusing on Democrats, however, it is not clear who leads that faction.

Candidate	Party	Round 1
WilsonR	C-r	22,112
Druffel	C-d	10,622
Rose	C-r	10,394
Matthews	C-d	10,308
Imbus	C-d	9,706
Woeste	R	9,082
Yeatman	R	8,668
Patterson	R	6,715
Pollak	C-r	5,357

Table 2: Cincinnati, 1929. First-round vote totals for winners in a non-contentious STV election. “C” stands for Charter Party, a pre-election coalition of the Democratic Party (“d”) and reformist Republicans (“r”). “R” stands for the regular Republican Party.

worked with Republicans on urban redevelopment in the 1940s. Redevelopment later put Berry and Waldvogel in conflict (Gray 1959: V-5). When the two entered council that December, in fact, the Charter coalition broke tradition by electing Waldvogel mayor, an honor that typically went to the lead vote-getter in Charter. Table 3 consequently gives vote totals more dispersed than those in Table 2.

Note that if H2 is true – that leadership challenges by candidates who do not depend on vote transfers account for diminutions in party loyalty – we have reason to doubt both forms of H1. If popular insurgents are splitting their parties, and if transfer-dependent winners are receiving large proportions of transfers from insurgent co-partisans, winners dependent on co-partisan transfers may manifest low levels of loyalty. The top-right cell in Table 1 takes on a value of “No prediction.”

3.3 Lone-wolf preference swappers

To look for the effect of vote transfers in one final place, I focus on the voting records of those who did receive transfers from candidates we might cast as insurgents. Perhaps winners are trading votes in return for support. If this is the result of STV, it will be due to what the literature calls “preference swapping.” Though this can occur among parties (Reilly 2001), the relevant type of swapping is between candidates of different parties (Reilly 1997;

Candidate	Party	Round 1
Rich	R	25,062
Berry	C-d	14,831
Waldvogel	C-d	13,678
Kelly	R	11,643
Jordan	C-d	10,290
Clancy	R	10,037
Gilligan	C-d	8,085
Bachrach	R	7,683
Dolbey	C-r	6,843

Table 3: Cincinnati, 1955. First-round vote totals for winners in a contentious STV election. “C” stands for Charter Party, a pre-election coalition of the Democratic Party (“d”) and reformist Republicans (“r”). “R” stands for the regular Republican Party.

Horowitz 2003). Preference swaps for policy deals are alleged benefits that STV advocates tout. If this weakens party discipline, it should manifest at the level of legislator dyads. In particular:

H3 Different-party legislator pairs who share arbitrarily large proportions of vote transfers should vote the same way more often than different-party legislator pairs who do not share vote transfers.

We also need to consider coalition-level loyalty for locales where parties formed pre-election coalitions. Coalitions of this type can be thought of in two ways. First, following Laver (2000), they may have been devices for keeping transfer votes away from the system’s largest party in anticipation of cabinet-formation negotiations. Second, they may have been attempts to form legislative-electoral parties in the manner of Schwartz (1989) and Aldrich (1995). The second rationale is more likely. There was no such thing as a cabinet needing to hold confidence under American STV. Concern would have been over bill-level coalitions, and a nomination-rationing electoral party would have been one strategy for enforcing discipline across numerous roll-call votes.

In view of pre-election coalitions in both locales analyzed here, I consider each hypothesis above for both party factions – these stood in for parties under American STV – and the coalitions they formed.

4 Data

I use the Cincinnati and Worcester components of the Municipal STV Data Set, a newly digitized collection covering elections and the subsequent legislative terms in Cincinnati (1929-57); New York City (1937-47); and Worcester, Mass. (1949-61). The Cincinnati and Worcester components comprise 20 elections, 20 council terms, 688 candidacies, 180 victors (including party and party-factional affiliations in non-partisan elections), and 535 rounds of STV vote-counting.

Using the Cincinnati and Worcester components lets us hold two factors constant. One is the institutional setup. Both cities had non-partisan, city-wide elections to nine-seat, unicameral councils. A second is the presence of a pre-election nominating coalition in each city: the Charter Party in Cincinnati, a coalition of reformist Republicans and the Democratic Party; and the Citizens' Plan E Association in Worcester (CEA), a coalition of reformist Democrats and the Republican Party (Santucci 2016b, 2016a).

Figure 1 plots mean party-factional cohesion for each city over the span of its STV use. The measure is a Rice (1924) cohesion score, a standard way to measure party loyalty. Scores are averaged across all roll-call votes in a given term for a given party faction. The Rice score (R) for a single roll call in which party p casts Y yea votes and N nay votes is:

$$R_p = \frac{|Y_p - N_p|}{Y_p + N_p} \quad (2)$$

5 Pre-election party coordination?

I begin with H1.A and H1.B: that among the most transfer-dependent winners, candidates for whom (non-)co-partisan transfers are arbitrarily large proportions of final vote totals should exhibit higher (lower) party loyalty than those for whom (non-)co-partisan transfers are not. All results are null.

Party loyalty here is calculated as the proportion of times that a legislator votes with a majority of their party or pre-election coalition. Given knowledge of each legislator's party affiliation, loyalty can be extracted from the result of a `summary()` call to a `rollcall` object generated by the `pscl` R package from Jackman (2015).

Co-partisan transfers are defined as the proportion of a winner's final

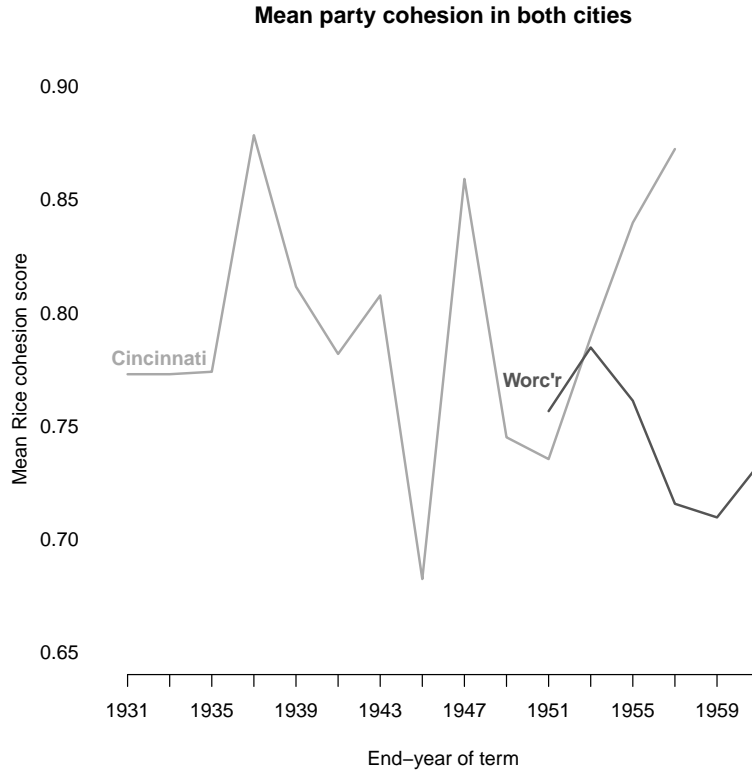


Figure 1: Mean party-factional cohesion under STV for Cincinnati and Worcester, Mass.

vote total that comes from co-partisan candidates. These are calculated with author-written R code to process aggregate STV transfer tables of the type found in official election results. I calculate two proportions: that coming from members of the same faction, then that coming from members of the same pre-election coalition.

I condition co-partisan transfers on transfer dependence, which is the proportion of winner's final-round vote total not obtained via first-preference votes.⁸ If the source of transfers affects party-factional or coalitional loyalty, all three coefficients should be statistically significant and in the expected

8. Winners whose first-round vote totals exceeded a Droop quota receive a zero value because they are not at all transfer-dependent.

direction: proportion of the final vote total from inside (positive) or outside (negative) the faction or coalition, transfer dependence (positive or negative as appropriate), and the interaction term (positive or negative as appropriate).

Table 4 presents the results. I find little support for a relationship between the source of a winner's vote transfers and their factional or coalitional loyalty over the ensuing term.

	Factions	Factions	Coalitions	Coalitions
Intercept	0.78*** (0.04)	0.80*** (0.04)	0.81*** (0.04)	0.81*** (0.04)
Transfer dependence	0.13 (0.10)	-0.01 (0.10)	0.05 (0.10)	-0.03 (0.10)
Prop. of final round from inside	0.02 (0.31)		-0.09 (0.30)	
Dependence*From inside	-0.24 (0.58)		0.01 (0.57)	
Prop. of final round from outside		0.01 (0.22)		0.08 (0.26)
Dependence*from outside		0.15 (0.36)		-0.00 (0.40)
AIC	-124.87	-123.90	-119.37	-118.69
BIC	-107.05	-106.08	-101.55	-100.87
Log Likelihood	68.44	67.95	65.68	65.34
Num. obs.	144	144	144	144
Num. groups: cityTerm	20	20	20	20
Var: cityTerm (Intercept)	0.00	0.00	0.00	0.00
Var: Residual	0.02	0.02	0.02	0.02

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 4: OLS regression results for legislator-level tests. Dependent variable is party loyalty score (factional or coalitional) for legislators. All models include random effects for city-terms. Legislators who did not receive any transfers (i.e., transfer givers) are dropped. Factions = models for factional loyalty. Coalitions = models for coalitional loyalty.

6 Leadership challenges?

This section tests H2: that indications of a leadership challenge at elections are associated with less-than-average party cohesion in the ensuing legislative term. The relevant coefficient is statistically significant and signed as expected in factional models.

The dependent variable is a Rice cohesion score (Eq. 2) calculated at the faction and coalition levels. The predictor of interest is a Herfindahl-Hirschman concentration index (H) of the winners' vote shares, calculated at the faction and coalition levels (Hirschman 1964). The concentration index ranges from zero to one in theory, then from 0.2 to 0.8 in my sample, with higher values indicating greater concentration. Given the vote proportions V among winners $\{1, 2, \dots, N\}$ from party p :

$$H_p = \sum_1^N V^2 \quad (3)$$

I drop any observation for a faction or coalition of one member. These observations would bias the result. This is because party unity and vote concentration for any such faction are both equal to one.

Table 5 presents the results of four regressions: two each for factions and coalitions, one of each pair with random effects for city-terms.⁹ Winner vote-share concentration for factions is significant with the expected direction in both specifications. Figure 2 plots the raw data, regression line from the factional model without fixed effects, and the bounds of a 95-percent confidence interval.

Note that vote-share concentration is not remotely significant in either coalition model. This is evidence that party factions, not pre-election coalitions, were the operative actors under STV in Cincinnati and Worcester at least.

9. Similar results emerge from separate regressions for each city, with and without fixed effects for terms. The sample size for a Worcester faction-model regression with fixed effects is 12, and the coefficient 0.69 (0.18) is significant with greater than 97 percent confidence.

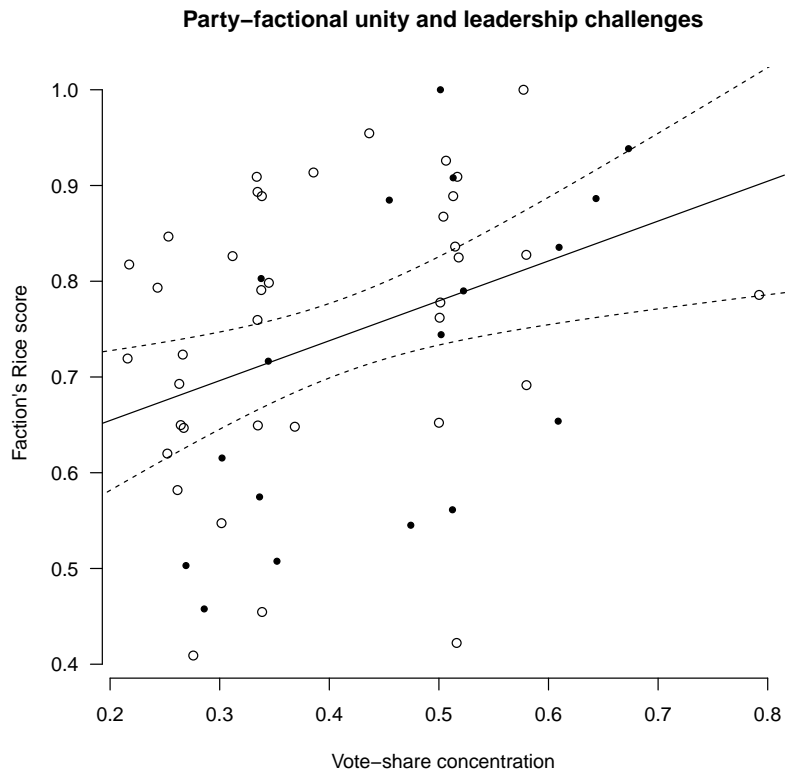


Figure 2: Factional Rice score by the faction's winners' vote concentration. Regression line is from the factional model without random effects. The bounds of a 95-percent confidence interval are dashed. **Filled** points denote party factions in Worcester. Empty points are from Cincinnati. All observations but factions-of-one are included.

	Factions (RE)	Factions (RE)	Factions (RE)	Coalitions (RE)	Coalitions (RE)
Intercept	0.57***	0.57***	0.57***	0.78***	0.78***
	(0.06)	(0.06)	(0.06)	(0.08)	(0.08)
Concentration of winners' vote shares	0.42**	0.42**	0.42**	-0.33	-0.33
	(0.14)	(0.14)	(0.14)	(0.26)	(0.26)
AIC	-43.70			-36.64	
BIC	-35.59			-29.88	
Log Likelihood	25.85			22.32	
Num. obs.	56		56	40	40
Num. groups: cityTerm	20			20	
Var: cityTerm (Intercept)	0.00			0.00	
Var: Residual	0.02			0.02	
R ²					0.04
Adj. R ²			0.13		0.01
RMSE			0.12		0.13
			0.14		

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 5: OLS regression results for faction-level tests. Dependent variable is Rice cohesion score for factions or pre-election coalitions. "RE" means the model includes random effects for city-terms.

7 Preference swapping?

My first set of tests showed that factional and coalitional coordination in elections could not predict party loyalty in the subsequent legislative session. These tests addressed the first big mechanism by which STV might affect party discipline: entire-slate coordination of vote transfers. My second set addressed the second mechanism: that especially strong candidates might in fact be leadership rivals. This next set of tests addresses the last question: do strong candidates like these “swap preferences” for policy support across party lines?

The dependent variable is a measure of co-voting, also called an agreement score. This represents the proportion of times that two legislators vote the same way, given all roll calls for which both were present (Truman 1959; Sinclair et al. 2011).¹⁰ This means my observations are legislator dyads.

The predictor of interest is the proportion of a winner’s final vote total coming from the transfer-giving member of the legislator dyad. The idea is that legislator pairs in which one is dependent for election on the other might vote together more often than if one did not depend on the other.

Following H3, I compare only different-party legislator pairs. We want to know if transfer-sharing pairs vote together more often. An important question is: compared to what? Given the generally high levels of party loyalty in my sample (Figure 1), blindly analyzing all dyads would mask any relationship. As it turns out, relatively few legislators received transfers from others who were elected. This is because the vast proportion of transfers came from eliminated candidates, the effects of which I looked for in my first set of tests. If preference swapping among winners is associated with weakened party discipline, the relationship might be found in pairs of different-party legislators.

Finally, any relationship between co-voting and preference swapping in the preceding election should reflect diminishing returns to swapping. Popular candidates are likely to garner support from voters with potentially many sincere and/or strategic reasons for their rankings. Below some unknown level of preference swapping, the rate of transfer of votes from strong candidates is essentially random. At least that is how the receiver is likely to view the transfer flow. Coordination likely takes over beyond this unknown level. Once the ‘coordination effect’ kicks in, it does not matter how many votes

10. I treat abstentions and absences as missing data.

Candidate A sent to Candidate B, just that B owes their seat to A. I include the square of the predictor to capture diminishing returns.

Table 6 gives the results of four regressions: two for each city, one of each pair with random effects for city-term. Although the results are significant in factional models, they run counter to expectations. Cross-party swapping is associated with less cross-party co-voting. Why?

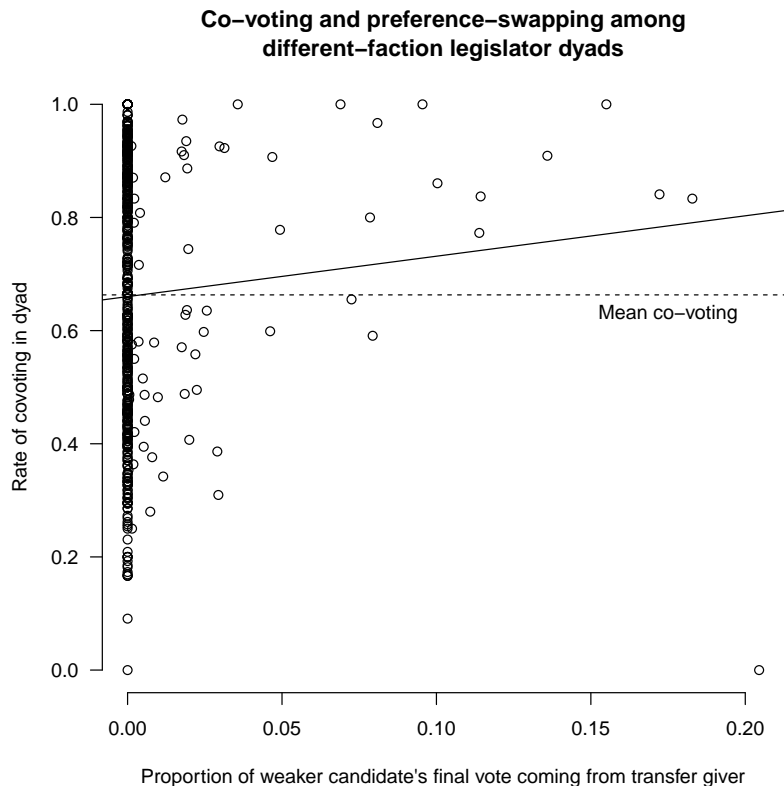


Figure 3: Rates of co-voting among different-faction legislator dyads.

Figure 3 implies that the relationship of preference swapping to co-voting is a model-dependent artifact of sparse data. The diagonal is a simple regression of co-voting on preference swapping ($\beta = 0.71$, $\sigma = 0.48$, $p = 0.14$).¹¹ The result hinges on how we model the most extreme preference swappers.

11. Fitting this model with city-term fixed effects yields $\beta = 0.7$, $\sigma = 0.38$, significant with greater than 90 percent confidence. Fitting it with city-term random effects returns $\beta = 0.7$, $\sigma = 0.38$, $t = 1.86$.

The bottom line is: given these data, preference swapping predicts no more cross-party voting than whatever process causes it among different-party legislators sharing no transfers. Focus in Figure 3 on dyads for which roughly five percent or more of the weaker legislator's winning vote total comes from the other legislator. Why focus on five percent? The data suggest this might be a cut-point at which transfers lose their random character. Almost all dyads above this level co-vote at rates above the sample mean, *but so do many dyads sharing no transfers at all.*

	Faction	Faction (RE)	Coalition	Coalition (RE)
Intercept	0.66*** (0.01)	0.65*** (0.04)	0.61*** (0.01)	0.61*** (0.04)
Preferences swapped as	3.76**	3.09**	2.65	2.34*
prop. of receiver's final vote	(1.37)	(1.06)	(1.67)	(1.17)
The above, squared	-21.48* (9.02)	-16.70* (6.97)	-25.16* (10.81)	-22.90** (7.54)
R ²	0.01		0.02	
Adj. R ²	0.01		0.01	
Num. obs.	550	550	431	431
RMSE	0.23		0.22	
AIC		-297.65		-340.25
BIC		-276.10		-319.91
Log Likelihood		153.82		175.12
Num. groups: cityTerm		19		19
Var: cityTerm (Intercept)		0.02		0.03
Var: Residual		0.03		0.02

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 6: Statistical models

8 Conclusion

I have searched for a relationship between vote transfers and party discipline in several likely places. There exists no other study of this behavior in a non-parliamentary regime. I collected the relevant data for two cities that produced conventional wisdom. Then I asked two questions. Does party coordination (or its failure) in directing vote transfers increase (or decrease) party discipline? Does preference swapping between non-co-partisans predict unique rates of aisle-crossing in government? Based on these data, the answer to both questions was “no.”

Then I found evidence of a different relationship. A fact sheet by the 2005 British Columbia Citizens’ Assembly on Electoral Reform made the following statement on STV:

Candidates may see their major rival as a member of their own party rather than a member of an opposing party. As a consequence, the ability of parties to discipline their candidates is weakened (British Columbia Citizens’ Assembly on Electoral Reform 2005).

Two comments are in order. The first is that STV does not guarantee intra-party rivalry. I give examples of when it did and did not occur. Then I measure it as winners’ vote concentration, showing how it predicts at least some portion of variation in party unity. Different electoral systems – including STV across more than one district – would call for different measures. This leads to my next point.

Leadership challenges find their ways into government under many electoral systems. Consider the case of single-member plurality districts. Imagine one party faction is concentrated in one part of the country, then that its rival is concentrated elsewhere. Both factions will elect delegations, and party unity in government will suffer. This is precisely what happened in the mid-century United States, when Southern Democrats “co-voted” with Republicans (Katznelson and Mulroy 2012). The Tea-Party challenge now exerts similar pressure on Republican leaders (Bailey et al. 2012).

Skeptics will say that closed-list PR (CLPR) resolves the party leadership issue. Internal decision-making ends the fight, and the faction that loses does not get nominated (or receives perfunctorily low positions on party lists). But skeptics overlook the potential for party splits. Walking out is easy. Just start a new party.

If party discipline is important, the best way to guard it is to raise the costs of aisle-crossing. Parliamentary government is one way to do this. Current theory suggests it is the best way but still imperfect. If aisle-crossing happens on key votes, and if governments fall when they lose on key votes, make it so that governments can fall if you like party discipline.

References

- Aldrich, John. 1995. *Why Parties? The Origin and Transformation of Party Politics in America*. Chicago, IL: University of Chicago Press.
- Ames, Barry. 2001. "Party Discipline in the Chamber of Deputies." Chap. 7 in *The Deadlock of Democracy in Brazil, 187–223*. Ann Arbor: University of Michigan Press.
- APSA Committee on Political Parties. 1950. *Toward A More Responsible Two-Party System*.
- Bailey, Michael A., Jonathan Mummolo, and Hans Noel. 2012. "Tea Party Influence: A Story of Activists and Elites." *American Politics Research* 40 (5): 769–804. doi:10.1177/1532673X11435150.
- Banfield, Edward C., and James Q. Wilson. 1966. *City Politics*. Cambridge, MA: Harvard University Press.
- Binstock, Robert H. 1960. *A Report on Politics in Worcester, Massachusetts*. Technical report. Cambridge, MA: Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University.
- British Columbia Citizens' Assembly on Electoral Reform. 2005. *Fact Sheet No. 11: Proportional Representation by Single Transferable Vote System*. <http://esm.ubc.ca/BC05/PRSTV.pdf>.
- Cain, Bruce, John Ferejohn, and Morris Fiorina. 1987. *The Personal Vote: Constituency Service and Electoral Independence*. Cambridge, MA: Harvard University Press.
- Calabrese, Stephen. 2006. "An Explanation of the Continuing Federal Government Mandate of Single-member Congressional Districts." *Public Choice* 130 (January): 23–40.

- Carey, John M., and Matthew S. Shugart. 1995. "Incentives to Cultivate a Personal Vote: A Rank Ordering of Electoral Formulas." *Electoral Studies* 14 (4): 417–439.
- Crespin, Michael H., David W. Rohde, and Ryan J. Vander Wielen. 2011. "Measuring Variations in Party Unity Voting: An Assessment of Agenda Effects." *Party Politics* 19 (3): 432–57. doi:10.1177/1354068811407578.
- Desposato, Scott W. 2006. "The Impact of Electoral Rules on Legislative Parties: Lessons from the Brazilian Senate and Chamber of Deputies." *Journal of Politics* 68 (4): 1015–27.
- Farrell, David M., and Richard S. Katz. 2014. "Assessing the Proportionality of the Single Transferable Vote." *Representation* 50 (1): 13–26.
- Farrell, David M., and Ian McAllister. 2006. *The Australian Electoral System*. Sydney: University of New South Wales Press.
- Gallagher, Michael. 2011. "Ireland's Earthquake Election: Analysis of the Results." In *How Ireland Voted 2011: The Full Story of Ireland's Earthquake Election*, edited by Michael Gallagher and Michael Marsh, 139–71. London: Palgrave Macmillan. doi:10.1057/9780230354005_7.
- Gray, Kenneth E. 1959. *A Report on Politics in Cincinnati*. Technical report. Cambridge, MA: Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University.
- Hirschman, Albert O. 1964. "The Paternity of an Index." *American Economic Review* 54 (5): 761.
- Horowitz, Donald L. 2003. "Electoral Systems: A Primer for Decision Makers." *Journal of Democracy* 14, no. 4 (October): 115–127.
- Jackman, Simon. 2015. *pscl: Classes and Methods for R Developed in the Political Science Computational Laboratory, Stanford University*. Stanford, CA: Department of Political Science, Stanford University.
- Katznelson, Ira, and Quinn Mulroy. 2012. "Was the South Pivotal? Situated Partisanship and Policy Coalitions during the New Deal and Fair Deal." *Journal of Politics* 74 (2): 604–20. doi:10.1017/S0022381611001940.

- Laver, Michael. 2000. "STV and the Politics of Coalition." Chap. 7 in *Elections in Australia, Ireland, and Malta under the Single Transferable Vote: Reflections on an Embedded Institution*, edited by Shaun Bowler and Bernard Grofman, 135–152. Ann Arbor, MI: University of Michigan Press.
- Limongi, Fernando, and Argelina Maria Cheibub Figueiredo. 1995. "Partidos Políticos na Câmara dos Deputados: 1989–1994." *Dados* 38 (3): 497–527.
- Mayhew, David R. 1974. *Congress: The Electoral Connection*. New Haven, CT: Yale University Press.
- Pearson, Kathryn. 2015. "Party Loyalty and the Potential Mechanisms of Party Discipline." Chap. 3 in *Party Discipline in the U.S. House of Representatives*, 53–74. Ann Arbor: University of Michigan Press.
- Poole, Keith T., and Howard Rosenthal. 1997. *Congress: A Political-Economic History of Roll Call Voting*. New York, NY: Oxford University Press.
- Reilly, Benjamin. 1997. "Preferential Voting and Political Engineering: A Comparative Study." *Journal of Commonwealth & Comparative Politics* 35 (1): 1–19. doi:10.1080/14662049708447736.
- . 2001. *Democracy in Divided Societies: Electoral Engineering for Conflict Management*. Cambridge: Cambridge University Press.
- Rice, Stewart A. 1924. "Farmers and Workers in American Politics." Doctoral dissertation, Columbia University.
- Santucci, Jack. 2016a. "Exit from Proportional Representation and Implications for Ranked-choice Voting in American Government." Typescript, November. http://www.jacksantucci.com/docs/papers/repeal_nov2016.pdf.
- . 2016b. "Party Splits, not Progressives: The Origins of Proportional Representation in American Local Government." Online preprint. *American Politics Research*. doi:10.1177/1532673X16674774.
- Schwartz, Thomas. 1989. "Why Parties?" Unpublished manuscript. July.
- Shomer, Yael. 2016. "The Conditional Effect of Electoral Systems and Intraparty Candidate Selection Processes on Parties' Behavior." Online preprint. *Legislative Studies Quarterly*. doi:10.1111/lsq.12141.

- Sinclair, Betsy, Jennifer Nicoll Victor, Seth Masket, and Gregory Koger. 2011. "Agreement Scores, Ideal Points, and Legislative Polarization." Paper presented at the 2011 Annual Meeting of the American Political Science Association, Seattle, WA.
- Sinnott, Richard. 1999. "The Electoral System." Chap. 4 in *Politics in the Republic of Ireland*, edited by John Coakley and Michael Gallagher, 99–126. New York & London: Routledge.
- Tavits, Margit. 2009. "The Making of Mavericks: Local Loyalties and Party Defection." *Comparative Political Studies* 42 (6): 793–815. doi:10.1177/0010414008329900.
- Truman, David B. 1959. *The Congressional Party: A Case Study*. New York: Wiley.
- Turner, Julius. 1951. "Responsible Parties: A Dissent from the Floor." *American Political Science Review* 45 (1): 143–52.