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Abstract

Using data from exit polls and two different methods of ecological inference, I demonstrate how Italian voters shifted between 2006 and 2008. Newly merged parties (PdL, PD) were successful in retaining their former voters; parties which looked as if they would be penalized by the electoral system (*Sinistra Arcobaleno*, UDC) were deserted by voters. The relative success of the *Lega Nord* and *Italia dei Valori* results from strong performance in retaining their own voters and marginal transfers of votes from their coalition partners.

Keywords

Keywords: voting behaviour, ecological inference, Italy, party mergers

Introduction

The Italian general election of 2008 was important for three reasons: first, because it was the second election held under a new electoral system; second, because it was held after two years of significant change in the party system, with multiple cases of party fission and fusion and of shifting electoral alliances; and third, because the election led to the collapse of the vote for the radical left and their consequent failure to gain parliamentary representation, as well as relative success for two parties - the *Lega Nord* and *Italia dei Valori* - which are now amongst the oldest continuously existing political parties in Italy, despite being only eighteen and ten years old respectively.

These reasons lead to two questions: first, did voters remain loyal in cases of party fusion - that is, did they, in 2008, vote for parties composed of parties for which they had voted in 2006? Second, if voters did not remain loyal, did they shift away from parties penalized by the electoral system to parties rewarded by the electoral system, either within or across blocs? Since these are questions about individual behaviour, we would ideally attempt to answer these questions using individual level data. Unfortunately, there is no complete and publicly available data on vote choice in 2008 and 2006. What data is available is partial and subject to considerable mis-reporting of previous vote choice.

I therefore use two different methods of ecological inference to infer vote shifts at the individual level from the available aggregate data. The use of such methods remains problematic, despite the existence of several putative solutions to the problem of ecological inference (King, 1997). The estimates presented here are therefore not only a test of the several political parties' ability to attract nearby voters, but also of the degree of overlap between different methods of ecological inference.

The electoral and party systems

The elections for both the *Camera dei Deputati* (Chamber of Deputies) and the *Senato* (Senate) were held on the 13th and 14th April 2008 under law no. 260 of the 21st December 2005, adopted by the Berlusconi government shortly before the elections of 2006. The law is a bonus-adjusted proportional system which differs importantly between the two chambers of the Parliament. In the Chamber, a bonus of 340 out of a total of 630 seats is awarded to the largest coalition or party. The remaining seats are distributed proportionally between coalitions which have reached the threshold of 10% and non-coalition lists which have reached the threshold of 4%. Within coalitions, seats are distributed proportionally between lists which have reached the threshold of 2%, plus one 'largest loser' list. In the Senate, constitutional objections to a similar nation-wide bonus meant that a series of regional bonuses apply. For each region, the largest coalition or party takes 55% of the seats in that region; the remaining seats are distributed proportionally between coalitions which have reached the regional threshold of 20% and non-coalition lists which have reached the threshold of 8%. Within coalitions, seats are distributed proportionally, with no legal threshold.¹

In 2006, the electoral system caused parties to aggregate, as might have been predicted

¹ I ignore further complications such as the minority-protection clauses, single-member districts in Val D'Aosta and Trentino-Alto-Adige, seats elected by Italians living abroad, and *senatori a vita*.

either by the high thresholds at regional level, or by the race to build a coalition capable of winning a bare plurality of votes. The effect was almost total bipolarism, with two competing electoral cartels of left and right capturing 99.5% of the vote. These cartels were, however, large and unwieldy. The left-wing electoral cartel was composed of thirteen electoral lists in the Chamber, and sixteen in the Senate;² the right-wing electoral cartel was composed of twelve electoral lists in the Chamber, and seventeen in the Senate.³ Although the electoral reform induced aggregation at the level of the electoral coalition, a number of parties had engaged in mergers or closer strategic alliances, the roots of which preceded the electoral reform.

1. The *Democratici di Sinistra* (DS) - the largest of the successor parties of the former *Partito Comunista Italiano* - merged with the *Margherita* to form the *Partito Democratico* (PD) during the period April - October 2007. The roots of this merger date back to repeated attempts in the late nineties by Romano Prodi to turn the left's electoral cartel into a single party. These attempts failed, but the ascent within the DS of those favourable to the plan (such as Walter Veltroni) and the relative decline of those opposed to it (Massimo D'Alema) meant the formation of a common list of the DS and the Margherita for the 2004 European Parliament elections, and ultimately led to the dissolution of the two constituent parties (Baccetti, 2001; Donovan, 2005).
2. Silvio Berlusconi's *Forza Italia* and the post-fascist *Alleanza Nazionale* merged to form the *Popolo della Libertà* (PdL) in November 2007. Berlusconi had called for the formation of a single party of the centre-right during the summer of 2005, but his proposal had been complicated by the reticence of the UDC and *Lega Nord*, at the time both coalition partners.
3. The parties of the radical left - *Rifondazione Comunista*, *Comunisti Italiani*, and the *Verdi* - united to form a single electoral list, the *Sinistra Arcobaleno*. This merger was the most recent and least convincing. Although the *Comunisti Italiani* and the *Verdi* had presented a joint list in the Senate in the 2006 elections, the impetus for this 'rainbow' coalition only came after the creation of the PD and the consequent absorption of a splinter group of the DS which disagreed with the merger.

These three cases of fusion were accompanied by cases of fission. A part of the DS under Fabio Mussi rejected the merger with the *Margherita* and formed the *Sinistra*

² Those in the Chamber were: L'Ulivo, Rifondazione Comunista, La Rosa nel Pugno, Comunisti Italiani, Di Pietro Italia dei Valori, Federazione dei Verdi, UDEUR Popolari, Partito Pensionati, Sudtiroler Volkspartei, I Socialisti, Lista Consumatori, Alleanza Lombarda Autonoma, and the Liga Fronte Veneto. Those in the Senate were: Democratici di Sinistra, La Margherita, Rifondazione Comunista, Insieme con l'Unione, Di Pietro Italia dei Valori, La Rosa nel Pugno, UDEUR Popolari, Partito Pensionati, I Socialisti, Alleanza Lombarda Autonoma, L'Ulivo, PSDI, Repubblicani Europei, Liga Fronte Veneto, and Democratici Cristiani Uniti.

³ Those in the Chamber were: Forza Italia, Alleanza Nazionale, UDC, Lega Nord, Democratici Cristiani-Nuovo PSI, Alternativa Sociale Mussolini, Fiamma Tricolore, No Euro, Pensionati Uniti, Ambienta-Lista, P. Liberale Italiano, SOS Italia. Those in the Senate were: Forza Italia, Alleanza Nazionale, UDC, Lega Nord, Alternativa Sociale Mussolini, Fiamma Tricolore, Democratici Cristiani-Nuovo PSI, Pensionati Uniti, PRI, Ambienta-lista, Nuovo sicilia, No Euro, Patto per la Sicilia, P. Liberale Italiano, Patto Crist. Estesio, Riformatori Liberali, SOS Italia.

Democratica. On the right, a much smaller faction of the *Alleanza Nazionale*, led by Gianfranco Storace, formed *La Destra* in early November 2007. The *Destra*, however, failed to make common ground with another party of the extreme right, the *Alternativa Sociale di Alessandra Mussolini*, which was consequently 'absorbed' by the PdL, with their candidates offered places on PdL electoral lists. Finally, the *Rosa nel Pugno*, an electoral cartel formed prior to the 2006 elections by the *Radicali* and the *Socialisti Democratici Italiani*, dissolved into its component parts. The *Radicali* were eventually absorbed by the PD, which hosted a number of the party's exponents on its lists. The *Socialisti Democratici Italiani* assembled other socialists from friendly and opposing blocs to (re)form the *Partito Socialista*, which ran as an independent list in 2008.

These cases of fission and fusion were motivated in part by changes in the composition of the electoral cartels. On the left, the extremely heterogeneous electoral coalition formed in 2006 split, leaving the newly merged PD to form an electoral coalition with *Italia dei Valori*, a small party led by former prosecutor Antonio di Pietro, leaving the radical left - in the form of the *Sinistra Arcobaleno* - to compete on its own. On the right, the UDC withdrew from the 2006 electoral coalition to compete on its own, leaving the PdL and the *Lega Nord* to form a coalition. Figure 1 summarizes these changes.

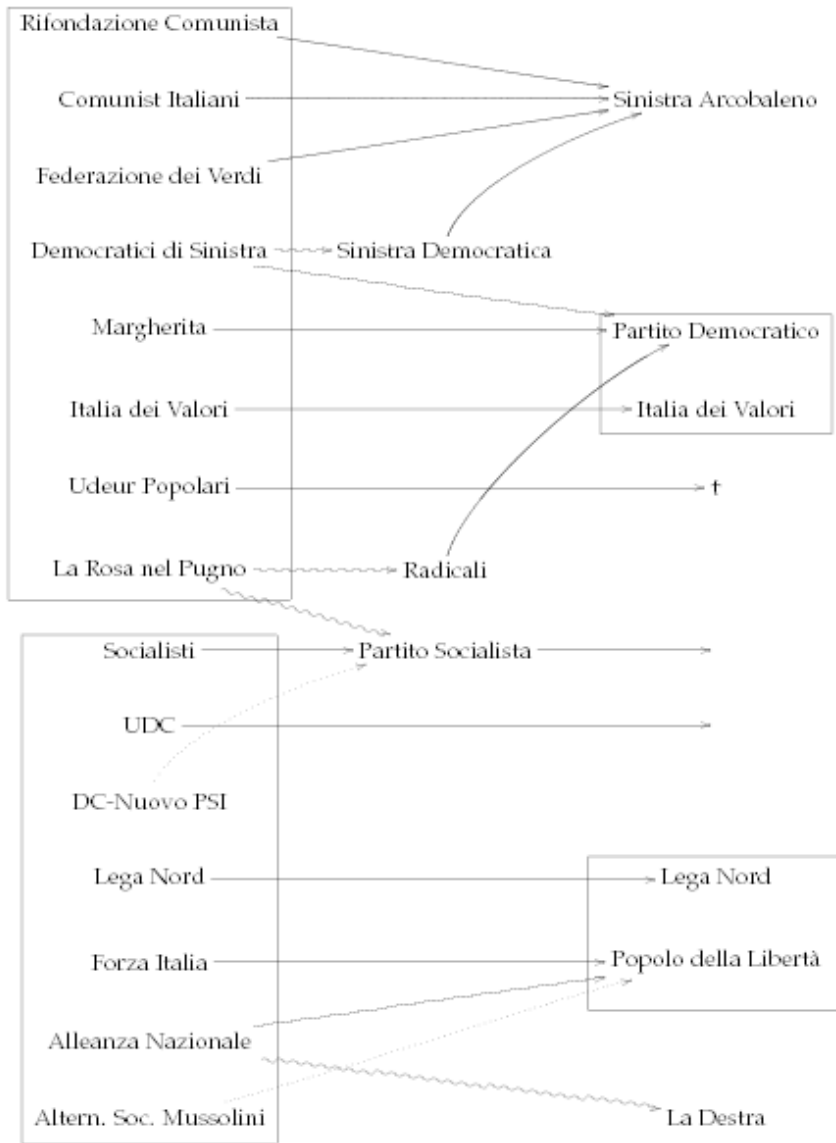


Figure 1: Party system changes, 2006 - 2008

Expectations regarding vote shifts

Given our knowledge of changes in the electoral and party systems, how might we expect voters to shift between parties, irrespective of all other considerations? Table 1 shows the 8 x 8 possible vote shifts between 2006 and 2008. Parties competing in 2008 are listed across the columns, and parties competing in 2006 are listed down the rows. I have added parties together based on subsequent party fusion, so that those who voted for *Alleanza Nazionale* and *Forza Italia* are taken together as notional PdL voters, just as voters for *Rifondazione Comunista*, *Comunisti Italiani*, and the *Verdi* are taken as notional *Sinistra Arcobaleno* (SA) voters.

Table 1: Vote transition matrix

	PdL	Lega Nord	PD	SA	IdV	UDC	Other	Abstention
'PdL'	P ₁₁	P ₁₂	P ₁₃	P ₁₄	P ₁₅	P ₁₆	P ₁₇	P ₁₈
Lega Nord	P ₂₁	P ₂₂	P ₂₃	P ₂₄	P ₂₅	P ₂₆	P ₂₇	P ₂₈
Ulivo	P ₃₁	P ₃₁	P ₃₃	P ₃₄	P ₃₅	P ₃₆	P ₃₇	P ₃₈
'SA'	P ₄₁	P ₄₂	P ₄₃	P ₄₄	P ₄₅	P ₄₆	P ₄₇	P ₄₈
IdV	P ₅₁	P ₅₂	P ₅₃	P ₅₄	P ₅₅	P ₅₆	P ₅₇	P ₅₈
UDC	P ₆₁	P ₆₂	P ₆₃	P ₆₄	P ₆₅	P ₆₆	P ₆₇	P ₆₈
Other	P ₇₁	P ₇₂	P ₇₃	P ₇₄	P ₇₅	P ₇₆	P ₇₇	P ₇₈
Abstention	P ₈₁	P ₈₂	P ₈₃	P ₈₄	P ₈₅	P ₈₆	P ₈₇	P ₈₈

Our first hypothesis is that voting will be (relatively) stable. '[T]raditional sources of electoral stabilisation (ideology, religion, social class) have long inhibited electoral mobility' in Italy (Bellucci, 2007, p. 56), and there are those who argue that electoral mobility remains low despite the breakdown of the established party system in 1992/3. Thus, we should expect that a large share of voters will continue to support the party or group that they voted for at the previous election. Consequently,

H1. Diagonal entries in Table 1 will be greater than any entry on the same row or column.

There are, however, no good reasons to assume that voters will be uniformly loyal to different parties. In particular, given low levels of information about changes in the party system - and in the Italian context, the complexity of such changes can confuse even well-informed voters - voters may not *know* that the party they chose at some previous election on the basis of some heuristic or other grounds (ideological, issue-based, cultural belonging) is now known by a different name. In such a circumstance, they may either re-evaluate the political offer, choosing the party which next best satisfies their current heuristic, or adopt a new heuristic which is less information intensive, such as leader evaluation or broad positive feeling. The former is unlikely given *ex hypothesi* low levels

of information; the latter can only be less likely to result in same party choice. Thus (inverting the hypothesis):

H2. Voters will be more loyal to parties that retain the same identity from one election to the next.

We should therefore expect that voters will be more loyal to the UDC and *Italia dei Valori*. A partial exception may be made for the *Partito Democratico*, given that the two constituent parties had already formed a joint list for the 2006 elections in one of the two chambers.

If voters are, on some level, aware of party mergers, their attitude towards the resulting party may differ from their attitude to its constituent parts. Consider two types of attitude towards a political party: an attitude of *belonging*, and an attitude of *reasoned choice* along some dimension. Attitudes of belonging are common in studies of Italian voting behaviour, and the *voto di appartenenza* (Parisi & Pasquino, 1977) remains a frequently cited link between voters and parties, despite the erosion of traditional vote cues. Here, voters are seen as belonging to particular socio- or religio-cultural groups, and parties are seen as expressions of these particular groupings.

Given recent party mergers, the perception of a link between socio or religio-cultural groupings and a given party may have broken down. Whether this happens or not will depend on the nature of the merger. If, for example, the merger is between two parties which are seen as expressions of the same grouping, the link will be likely to remain. If, by contrast, the merger is between two parties which are seen as expressions of different groupings, the resulting party may not succeed in retaining its links with both of the former reference groups, with either one reference group dominating, or both links being lost. Analogously in the case of the reasoning voter: when parties merge, their position on some dimension may change as a result of compromises necessary for the merger to take place. If voters for some party are all clustered at the party's position at time t_0 , moves away from that position can only reduce loyalty if voters are Downsian.

Thus,

H3. The greater the distance between constituent parts of a new party, the less loyal voters will be to that party.

This consideration is important for all three party mergers, since all three are cross-cut by historical cleavages. The PD is cross-cut by a clerical/secular cleavage (Garelli, 2007); the *Sinistra Arcobaleno* is divided between post-communists and post-materialists; and the PdL is divided, partially, between market liberals and statisticians, and by moderates and nostalgists (Ignazi, 2005). The division between Catholics and secularists in the PD at elite level has already been manifested publicly, with Rosy Bindi representing the 'Catholic wing' of the party in opposition to the inclusion of the ardently secular *Radicali* in an electoral alliance. It is not inconceivable that this split should also manifest itself at the level of the voter. Divisions between *Forza Italia* and *Alleanza Nazionale* were numerous: in particular, the latter retains the support of a number of voters who supported it when it was an unreformed anti-system party. A plurality of AN voters in 2001 (48.6%) thought fascism was a 'good' or the 'best possible' regime. This revanchism is even more pronounced within the party's elite, with '*quadri* that until a very few years ago continued to indulge in the most persistent nostalgia (and perhaps continue to do so)' (Ignazi, 2004,

pp. 72, 75). Additionally, voters of the different parties failed to demonstrate reciprocal sympathy: one of the motives behind the adoption of the electoral system in 2005 was the failure of *Alleanza Nazionale* (respectively, *Forza Italia*) voters to vote for coalition-agreed *Forza Italia* (*Alleanza Nazionale*) candidates in the single-member districts (Renwick, et al. 2008).

Finally, considerations resulting from the combination of the electoral system and the new party system may also have played a role. To the extent that voting is not an expressive act but an instrumental one designed to influence policy in the voter's preferred direction, and to the extent that policy is influenced only by those parties represented in parliament, voters may choose not to vote for parties which will not meet electoral thresholds, but rather vote for the next best viable option. Thus,

H4. Voter loyalty will be lower amongst non-coalition parties which risk failing to meet electoral thresholds

H4a. Past voters for non-coalition parties which risk failing to meet electoral thresholds will move to coalition parties formerly in alliance with the non-coalition party.

During the course of the electoral campaign, leaders of both major coalitions - Walter Veltroni for the PD and *Italia dei Valori*, and Silvio Berlusconi for the PdL and *Lega Nord* - made repeated calls to voters not to waste their vote (the call for a *voto utile*). A vote would have been 'wasted' in one sense if it had been given to a party which failed to reach the threshold for representation in either the Chamber or (more likely) the Senate. Given that for much of the campaign both the *Sinistra Arcobaleno* and the UDC were at risk of failing to meet the Senate thresholds, a vote for either of these two groupings was depicted as a 'wasted vote'.⁴ Thus, we would expect voters of the *Sinistra Arcobaleno* to defect to either the PD or IdV (but more probably to the PD given squabbles between IdV and the radical left), and voters of the UDC to defect to either the PdL or the *Lega Nord* (but more probably to the PdL given the UDC's electoral strength in the South). Unfortunately, disloyalty to the *Sinistra Arcobaleno* is over-predicted by hypotheses H4 and H3. The high rates of voter switching may thus be the result of either dissatisfaction with the single list, a strategic vote, or both.

Findings from exit polling

Following the elections, the consortium which provided exit polling for national broadcaster Rai also provided a breakdown of the composition of party support in terms of previous party choice (Consortium, 2008). Breakdowns were provided for five parties - the *Lega Nord*, the PdL, the PD, *Italia dei Valori*, and the UDC. Since we know the absolute number of votes received for each of these parties, we can multiply the percentage composition by this number to obtain the absolute number of votes which switched from each origin party to each of the five destination parties, and then divide this by the absolute number of votes of the origin party to get transition rates. These data thus allow us a first estimate of certain columns, but not for rates of transition to the *Sinistra Arcobaleno*, other parties, or to abstention.

⁴In the end, the vote share of *Sinistra Arcobaleno* also sank below the 4% threshold for representation in the Chamber, whilst the UDC was able to concentrate its vote in Sicily and Calabria, winning three senators in addition to seats in the Chamber.

Table 2: Vote transition matrix, exit poll data

	PdL	Lega Nord	PD	SA	IdV	UDC	Other	Abstention
'PdL'	<i>0.78</i>	<i>0.07</i>		...			(0.07)	...
Lega Nord	0.05	<i>0.79</i>		...			(0.12)	...
Ulivo			<i>0.65</i>	...	0.05		(0.24)	...
'SA'			0.32	...			(0.58)	...
IdV			0.22	...	<i>0.47</i>		(0.24)	...
UDC	0.12		0.08	...		0.27	(0.49)	...
Other	0.15		0.19	...		0.05	(0.56)	...
Abstention	0.09		0.08	...			(0.77)	...

Table 2 shows vote transitions from all origin parties to the five destination parties for which we have information. Entries on the diagonal are italicised; entries with values less than 0.05 have been omitted for clarity of presentation. The last column, 'Other' is merely 1 minus the sum of the entries for the previous columns.

Better answers to the puzzles raised by Table 2 could be given with additional exit poll data, but given recent problems with the reliability of polling data in Italy, these answers may only heighten the perception that past vote choice is systematically misreported. One alternative to exit poll data which does not have problems with misreporting⁵ is to attempt ecological inference from aggregate data. This method, of course, brings with it problems of its own. It is to these problems that I now turn.

Findings from ecological inference

Ecological inference is an inference from observed data at the aggregate level to unobserved behaviour at the level of the individual. This inference is problematic because, for any observed pattern of aggregate data, there is a finite but extremely large set of individual behaviours consistent with this observation. Attempts to identify single or probable individual behaviours which constitute the aggregate data thus trade on reducing the set of possible configurations by looking at cell frequencies (the method of bounds; Duncan & Davis 1953) and/or by employing multiple aggregate-level observations under certain assumptions about the homogeneity of units. One of the latter methods is Goodman's regression (Goodman, 1953) which, however, relies on the untenable assumption that 'the quantities of interest... are the same over all precincts' (King, 1997, p. 26). This assumption is untenable even in the best of cases: it is no less so in the Italian case, where electoral geographies are local and where the political offer differs across the country. Additionally, Goodman's regression often gives nonsensical results: for example, that 142% of *Lega Nord* voters in 2006 voted for the party in 2008, or that -14% of UDC voters voted for the PdL. Ridge regression (Fülle, 1994; Brown & Payne, 1986) can pull these nonsensical coefficients to within the realm of possible values, but does not address

⁵ On the assumption that voters marked their choices correctly and that those choices were counted correctly

the assumption of unit homogeneity.

In this paper I employ two methods which each claim to address both the problem of out-of-bounds estimates and of unit heterogeneity. King (1997) attempts to unify the method of bounds and ecological regression. After using the method of bounds to estimate logically possible values for the quantities of interest in each district, he then uses maximum likelihood methods to estimate the parameters of the truncated bivariate normal distribution (truncated between 0 and 1) which would result in this configuration of logically possible values. This distribution is then used to predict individual level parameters conditional on the observed district characteristics. There is debate over whether the use of the truncated bivariate normal distribution plus conditioning on observed characteristics in fact imposes any less stringent conditions than the assumption of unit homogeneity, even after using the method of bounds (Rivers, 1998). The same criticisms apply to the extension of King's model that I use here for estimating tables of dimensions $R \times C$, where $R, C > 2$, which uses a truncated multivariate Dirichlet distribution (Rosen et al. 2001).

Second, Thomsen (2000) allows regional-level quantities of interest to vary provided that district-level quantities within a region do not vary, and provided that there be isomorphism between the within-district variation (that is, variation at the individual level) and the between-district variation.

Data and methodology

Comune-level results for the 2006 and 2008 elections to the Chamber were automatically downloaded from the Ministry of the Interior website at www.interno.it,⁶ comunes which were not found in both datasets, and comunes from the Val d'Aosta, were removed, leaving 7711 comunes from nineteen regions. The data were recoded into the categories given in Table 1. Estimates were then obtained using the *ecol* package for Stata and the *ei.RxC* package for *Zelig* (Wittenberg et al. 2007; Imai et al. 2007) respectively. Tables 3 and 4 show estimates from these sources respectively. Only vote transitions of greater than 0.05 are reported in each table for the sake of clarity.

Table 3: Vote transition matrix, *ecol*

	PdL	Lega Nord	PD	SA	IdV	UDC	Other	Abstention
'PdL'	0.69	0.07						0.13
Lega Nord	0.08	0.76						0.06
Ulivo	0.05		0.72					0.11
'SA'	0.08		0.44	0.12	0.07		0.06	0.22
IdV	0.17		0.18		0.18			0.33
UDC	0.25	0.11	0.09			0.32		0.16
Other	0.28	0.09	0.13			0.06	0.17	0.23
Abstention	0.21		0.12				0.06	0.47

⁶ The data are available on request from the author.

Table 4: Vote transition matrix, *Zelig*

	PdL	Lega Nord	PD	SA	IdV	UDC	Other	Abstention
'PdL'	0.79	0.18						
Lega Nord		1.00						
Ulivo			0.93					
'SA'	0.31		0.25	0.28	0.05			0.09
IdV					0.85	0.07		
UDC		0.30				0.60		
Other							0.93	
Abstention								0.88

Three notes on each estimation technique are in order. First, each estimation method produces certain results that seem implausible given the position of the respective Italian parties. *Italia dei Valori's* emphasis on eliminating corruption and conflicts of interest in political life makes it difficult to believe that 17% of its former voters should have voted for a party led by Silvio Berlusconi, as Table 3 suggests. Equally, although both methods show that a non-negligible percentage of radical left voters defected to the PdL, it again seems hard to believe, as Table 4 suggests, that more of these voters would vote for the PdL than for any other party, including the *Sinistra Arcobaleno*.

Second, results from *Zelig* tend to give higher estimates of voter loyalty. This is particularly so for the smaller parties (*Italia dei Valori*, the UDC, and all other parties). These results, though bounded between 0 and 1, are close to the estimates obtained by a straightforward linear regression (results not shown here), a finding that has already been noted by Freedman, et al. (1998).

Third, results from *ecol* are closer to the exit poll results than results from *Zelig*, and results from *ecol* and *Zelig* are further apart than either is from the exit poll data. We can calculate the similarity of the different tables by summing the absolute values of the differences between each entry and dividing by two (in analogous fashion to Pedersen's volatility index: Pedersen (1979)). The difference between the exit poll estimates and the estimates obtained using *Zelig* is 1.65; the difference between the exit poll and *ecol* estimates is 1.01; the difference between the *ecol* and *Zelig* estimates, calculated only on the basis of the first to third and fifth to sixth columns, is 1.88.

Discussion

Perhaps unsurprisingly, our first hypothesis - that voters would be more loyal than not - is proved correct for all but one party: estimates from both *ecol* and *Zelig* suggest that pluralities of *Sinistra Arcobaleno* voters moved elsewhere (though they disagree on

where); and partial estimates from the exit poll data suggest that if a plurality of *Sinistra Arcobaleno* voters did remain loyal, it cannot have been a very large plurality.

Were voters more loyal to parties that remained the same? The mean unweighted retention rate for parties which stayed the same (the *Lega Nord*, *Italia dei Valori* and the UDC) compared to parties which merged (PdL, PD, *Sinistra Arcobaleno*) is actually *lower* on both *ecol* and exit poll data. In particular, the PD was extremely successful in retaining those voters who had voted for it in previous elections (even if it was only marginally successful in attracting voters who had not voted for it previously). The PdL also seems to have had surprisingly few problems in retaining its own voters. The case of the *Sinistra Arcobaleno*, of course, is different.

This may, however, reflect the last of our hypotheses - that voters would defect from parties which would be penalized by the electoral system. Indeed, in every table, the retention rates for the *Sinistra Arcobaleno* and the UDC are the lowest entries in the table, suggesting that much of the difficulties these parties faced was a result of their decision to compete separately. Unfortunately, there is no way to tell from the data from the Chamber alone whether the spectacular collapse of the radical left is entirely due to this factor, or whether the party's rather lacklustre campaign and the original sin of cross-cleavage merger also contributed to its downfall. Extending this analysis to the Senate might allow a partial answer: if retention rates for the *Sinistra Arcobaleno* are (even) lower in the Senate, where the thresholds are more demanding, then the difference between the two loyalty rates might be attributable to the impact of thresholds (admittedly under the demanding assumptions that the vote decision in each chamber is independent and that the different composition of the electorate for the Senate does not systematically affect voter loyalty).

The voters 'lost' by the UDC and the *Sinistra Arcobaleno* do seem to have moved to their nearest former coalition partner. Results from Tables 3 and 4 suggest that UDC voters went to the PdL (though *Zelig* suggests they moved to the *Lega*) and that *Sinistra Arcobaleno* voters went in large numbers to the PD, rather than *Italia dei Valori* (even if *Zelig* suggests they moved to the PdL in greater numbers!).

Finally, the results help in part to explain the success of the two junior partners within the respective coalitions, the *Lega Nord* and *Italia dei Valori*. Based on Table 3, *Italia dei Valori* did well not because it was able to retain many of its former voters, but because it was able to peel off small numbers of voters from almost all parties; Table 4 by contrast, suggests that *Italia dei Valori* only attracted voters from the UDC and *Sinistra Arcobaleno*. Both techniques agree in judging the *Lega Nord* voters to have been amongst the most loyal, and in finding that UDC and notional PdL voters were the next most likely groups to switch to the *Lega*. The relative rates of transition from the UDC to the *Lega* are high; but the substantive significance of the smaller shifts from the PdL is much greater.

The overall picture that we can draw from the 2008 election is not, therefore, one of a dramatic flow of voters from left to right, but rather that of two tribes engaging in self-cannibalisation, with the coalition of the centre-right slightly more successful in stealing voters from the centre-left, and smaller parties – the *Lega Nord* and *Italia dei Valori* – the best equipped to steal from their coalition allies.

What do these results suggest about voting behaviour in Italy? The vote losses for the two parties disadvantaged by the electoral and party systems - the *Sinistra Arcobaleno* and the UDC - tend to suggest that voters are at least minimally aware of the strategic considerations at play in the elections. The dispersion of the votes from these parties tends

to suggest that the voters who did desert these parties did so by shifting to the parties' closest neighbours, as signalled by previous coalition arrangements. Thus, voters seem to be reasoning at a fairly sophisticated level concerning properties not just of the parties themselves, but of the system in which the parties compete.

This finding seems hard to reconcile with continued levels of stability in vote choice at the individual level between competing coalitions. Natale (2002) has written of the "two poles which are clearly and consistently impermeable, with an ever more evident "coalition loyalty"" (p. 313), and in support of this cites the percentage of all electors who have moved from one coalition to another, which ranges from 1.2% to 4.7% over the period 1994 - 2001 after excluding the *Lega Nord*, with an average of 2.9%. The 2008 election, by these standards, seems to manifest the same kind of between-bloc stability seen in previous elections: estimates from *ecol* suggest that 2.94% of the electorate switched from one bloc to another (exclusive of the *Lega Nord*), whilst estimates from *Zelig* suggest a figure of 3.39%, or less than the switch between the regional elections of 2000 and the general election of 2001.

Of course, between bloc stability of vote choice is not incompatible with sophisticated voter reasoning if party positions and valence issues remain the same between elections. Again, however, due to the numerous cases of party fission and fusion, this does not seem to be the case. Insofar as data from a single election can tell us about over-time changes in the behaviour of Italian voters (rather than contributing to an ongoing debate about where the Italian political system is going - see Pappalardo 2006), the analysis presented here suggests that in the presence of a large exogenous change in the strategic environment, Italian voters are cognitively sophisticated enough to vote strategically to benefit their preferred position - or at least act as if they were that sophisticated. However, it is difficult to see clear trends in vote transfers that could not be attributed to such exogenous changes.

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