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Mapping the Irish policy space: Voter and party spaces in preferential elections

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Mapping the Irish Policy Space: Voter and Party Spaces in Preferential Elections*

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Abstract: In this note we map the Irish policy space, locating both voters and parties on the most salient policy dimensions in Ireland. Estimates of the voter locations are based on the Irish National Election Survey (INES), conducted in 2002. Estimates of the party positions are based on an expert survey of party positions conducted by the authors in late 2002. We show that respondent self-placements on a priori policy scales are highly biased and difficult to interpret, and we rely instead on building scale positions for respondents from their answers to relevant attitude questions in the INES. The results provide a methodological template for locating voters and parties in a common space – a significant problem for any analyst who wants to create an empirical elaboration of a spatial model of party competition.

I INTRODUCTION

Spatial models of political competition have been one of the mainstays of political science over the past few decades (e.g. Downs 1957; Enelow and Hinich 1984, 1990; Hinich and Munger 1994, 1997). As Dow (1998) notes, however, despite the increasing theoretical sophistication of spatial theories of voting, these are increasingly criticised for not having made equivalent contributions to the empirical study of electoral competition. In multiparty

electoral contexts, furthermore, spatial theory has provided even more limited insight (Laver and Schofield, 1990; Macdonald *et al.*, 1991, 1995; Iversen, 1994; Merrill, 1995; Merrill and Grofman, 1999). Our aim is to develop new empirical sources for testing spatial models, by generating reliable maps of both voters and parties in a common policy space.

Previous efforts to map policy spaces have been limited by a lack of concrete and reliable data on comparable locations of parties and voters. The essential problem is that estimates of voter and party positions tend to come from different sources, making it difficult to map a single common space containing both types of actor. Typical sources of voter preferences come from election studies and opinion surveys, while estimates for parties may come from elite surveys, content analyses of texts produced by parties, surveys of political experts, or estimation of voting returns or patterns. For example, work by Budge and coauthors (1987, 2001) uses the content analysis of party manifestos to estimate party policy positions. Dow (2001) generated two-dimensional density estimations of voter positions based on surveys where respondents indicated their proximity to parties; Dow (1998) used similar methods to generate one-dimensional voter density estimates. Other possibilities include computerised word scoring of political documents (Laver, Benoit, and Garry, 2003) or factor analyses of voting returns (Myagkov and Ordeshook, 1999).

The only way for both sets of estimates to come from the same source is to estimate party positions using survey respondent placements of parties on a priori policy dimensions and to estimate voter positions from responses to attitude questions in the same survey. The problems with doing this are that:

- Data on survey respondent placements of party positions are far less extensive and comprehensive than, e.g., expert survey data on these positions – we are at the mercy of those survey questions on party positions that happen to have been asked.
- As we show below, such placements are so intensely subjective to individual respondents that they may or may not form the basis of reliable and valid indicators of overall party positions in the space.

Some have attempted to draw on separate sources to map voters and experts, but these also suffer from related problems. For instance, Schofield *et al.* (1998) draw on Eurobarometer data for voter positions, and the European Political Parties Middle Level Elites survey to estimate party positions. In order to mate the two sources, however, they construct policy scales indirectly using factor analytic techniques from batteries of related questions.

In the following we set out to address this problem in two ways. First we

explore ways of using the survey placements of party positions. Second we explore ways of mapping expert survey estimates of party policy positions into policy spaces defined by voters' estimated ideal points on the same policy dimensions. We do all of this using previously unanalysed data from the Irish National Election Study (INES) and from a new expert survey of Irish party positions. Having mapped voter positions using public opinion data and party positions using expert survey data, our primary objective in the latter part of the paper is to show how these independent sources of voter and party policy positions can be mapped into a single common space.

II MAPPING THE IRISH POLICY SPACE: PUBLIC OPINION DATA

Identifying the policy terrain to be mapped for Ireland involves first identifying the most salient political dimensions defining the Irish policy space. The data we use are drawn from two principal sources, expert surveys taken by the authors in late 2002 and early 2003, and the Irish National Election Survey (INES) taken in mid-2002.

For three key policy dimensions, the INES asked voters to locate both themselves and each of the main parties on scales with explicitly defined endpoints. These dimensions concerned:

- economic policy, specifically the trade-off between cutting taxes and increasing public spending in areas such as health and education;
- "social" policy, specifically the issue of whether abortion should be totally banned or made widely available;
- Northern Ireland, specifically the issue of whether to insist on a united Ireland immediately or abandon this aim altogether.

As we shall see, the economic and Northern Ireland policy dimensions were judged in our expert survey to be the two most important dimensions in Irish politics in 2002, while the issue of abortion has been the subject of a series of bitter and divisive referendum campaigns. The INES not only contained self-placement questions on these scales, but also asked respondents to locate the political parties on the same scales. We present the estimates of these positions in raw form, together with their estimated overall importance for voters, in Table 1.

Of the three, INES respondents on average thought that the economic policy dimension was most important to them personally ("very important" is coded 1, "not important at all" is coded 4). The most extreme "cut taxes" end of this 11-point (0 – 10) scale is zero and the centre is 5 – thus this scale in effect

Table 1: *Mean Self-placements, and Placements of Main Irish Parties, on Three*
a priori Policy Dimensions, INES 2002

	N	Min	Max	Mean	Std. Dev.
N. Ireland (United Ireland 0)					
Sinn Féin	2,226	0	10	1.43	2.489
Fianna Fáil	2,186	0	10	3.90	2.305
Self	2,476	0	10	3.98	2.728
Progressive Democrats	1,921	0	10	4.43	2.211
Labour	1,816	0	10	4.69	2.004
Fine Gael	2,024	0	10	4.76	2.188
Greens	1,590	0	10	4.87	2.098
Importance (1 = very)	2,643	1	4	2.21	.871
Abortion (Total ban 0)					
Fianna Fáil	1,915	0	10	4.50	2.444
Fine Gael	1,774	0	10	4.64	2.173
Greens	1,406	0	10	4.69	2.345
Self	2,498	0	10	4.72	3.548
Progressive Democrats	1,647	0	10	4.88	2.240
Sinn Féin	1,273	0	10	4.91	2.653
Labour	1,623	0	10	5.41	2.328
Importance (1 = very)	2,589	1	4	2.04	.888
Tax v spend (Cut taxes 0)					
Progressive Democrats	1,847	0	10	5.52	2.114
Fianna Fáil	2,012	0	10	5.86	2.079
Fine Gael	1,889	0	10	5.94	1.919
Sinn Féin	1,439	0	10	6.04	2.222
Greens	1,614	0	10	6.05	1.942
Labour	1,814	0	10	6.38	2.042
Self	2,496	0	10	6.47	2.467
Importance (1 = very)	2,637	1	4	1.72	.713

runs from right to left. Mean placements of party positions are all bunched together in the centre-left of the scale, ranging from the PDs at 5.52 to the Labour Party at 6.38. Note that the mean respondent self-placement on this scale is to the left of the mean placement of the most left wing party, a matter to which we return. The ranking of the mean party placements from right to left on the scale (PD, FF, FG, SF, G, Lab) tallies with that of our expert survey (see below) except that Labour is on average ranked as most left-wing by survey respondents, but a little to the right of the Greens and Sinn Féin by the experts.

The social policy dimension was on average ranked as being more

important than Northern Ireland policy by survey respondents, a reversal of expert judgements of the relative salience of these dimensions. Here the range of mean party placements was slightly larger, though these were still very bunched, ranging from a most conservative mean placement of 4.50 for FF, to a most liberal 5.41 for Labour. Mean respondent self-placement was at the conservative end of the range of party positions, at 4.72. The ranking of the mean party placements from conservative to liberal on the scale (FF, FG, G, PD, SF, Lab) tallies with that of our expert survey only to the extent of placing FF and FG as the most conservative parties. After this, the expert survey ranks the parties (SF, PD, Lab, G).

On Northern Ireland, given the relatively extreme party placement for Sinn Féin, the range of mean party placements is larger than for the other two dimensions. This runs from a mean of 1.43 for Sinn Féin at the republican end of the scale, to one of 4.87 for the Greens. Mean respondent self-placement was close to the mean position of FF, at 3.98. The ranking of parties on this dimension, from the republican end, was (SF, FF, PD, Lab, FG, G). This tallies with the expert survey only in placing SF at the republican end of the scale. After this, the expert survey ranks the parties (G, FF, Lab, PD, FG). There is thus a contradiction between experts and survey respondents on the position of the Greens on this dimension.

The problem with the respondent party placements is that different respondents "centre" the parties at very different points on the same scale, and that this respondent-specific centring of the party system is highly biased by the respondents' self-placements on the same scale. Furthermore, different respondents use very different ranges on the scale to locate the set of parties. Some use the entire eleven-point scale width; a substantial number of others *locate all parties at the same position*. Consider each of these problems in turn.

Figure 1 summarises the first problem, showing the distributions of the mean party locations given by each respondent, by policy dimension. Thus the top panel shows that the mean party location of the six Irish parties varied by respondent from 0 to 10 on the 0-10 scale, that the mean of these mean placements was 5.99, but that standard deviation of these means was 1.59. In other words typical survey respondents were generating a "centre" of the six party locations on this 0-10 scale of anywhere between 3 and 9. As Figure 1 shows, the variability of party system centres for the other two scales was actually greater than this. Different survey respondents clearly had very different subjective interpretations of how the predefined endpoints of the scales related to the positions of the Irish party system as a whole.

Table 2 summarises the range between the leftmost and the rightmost party placement by each respondent on each of the three scales. For both the economic and social policy scales, *just over a quarter of all respondents placed*

Figure 1: *Mean Respondent Placements of Six Irish Parties on Three Policy Dimensions*
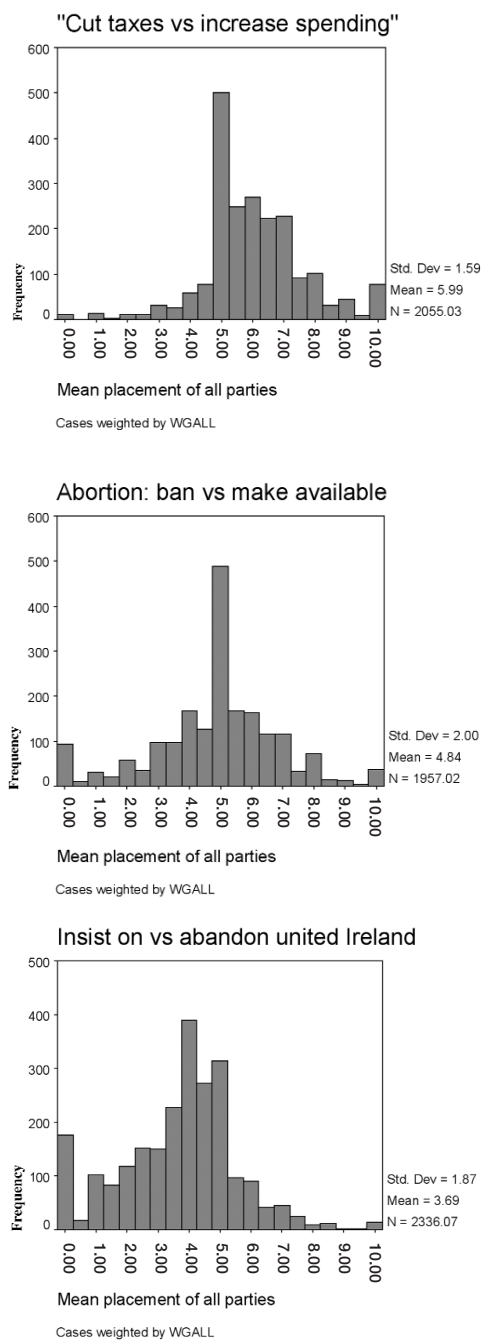
Table 2: *Ranges of Party Placements on Three 0-10 Scales*

Range of party placements on "cut taxes (lo) vs increase spending (hi)"

		Frequency	Per Cent	Valid Per Cent	Cumulative Per Cent
Valid	.00	689	25.9	33.5	33.5
	1.00	164	6.2	8.0	41.5
	2.00	250	9.4	12.2	53.7
	3.00	279	10.5	13.6	67.2
	4.00	239	9.0	11.6	78.9
	5.00	198	7.4	9.6	88.5
	6.00	106	4.0	5.2	93.7
	7.00	57	2.1	2.8	96.5
	8.00	36	1.3	1.7	98.2
	9.00	12	.4	.6	98.8
	10.00	25	1.0	1.2	100.0
	Total	2,055	77.2	100.0	
Missing	System	608	22.8		
Total		2,663	100.0		

Range of party placements on "ban abortion (lo) vs make available (hi)"

		Frequency	Per Cent	Valid Per Cent	Cumulative Per Cent
Valid	.00	730	27.4	37.3	37.3
	1.00	187	7.0	9.6	46.9
	2.00	204	7.7	10.4	57.3
	3.00	226	8.5	11.6	68.9
	4.00	186	7.0	9.5	78.4
	5.00	197	7.4	10.1	88.5
	6.00	84	3.2	4.3	92.8
	7.00	62	2.3	3.2	95.9
	8.00	30	1.1	1.5	97.4
	9.00	19	.7	1.0	98.4
	10.00	31	1.2	1.6	100.0
	Total	1,957	73.5	100.0	
Missing	System	706	26.5		
Total		2,663	100.0		

Party placements on "insist on united Ireland (lo) vs abandon (hi)"

		Frequency	Per Cent	Valid Per Cent	Cumulative Per Cent
Valid	.00	455	17.1	19.5	19.5
	1.00	78	2.9	3.3	22.8
	2.00	112	4.2	4.8	27.6
	3.00	221	8.3	9.5	37.1
	4.00	269	10.1	11.5	48.6
	5.00	474	17.8	20.3	68.9
	6.00	251	9.4	10.7	79.6
	7.00	194	7.3	8.3	88.0
	8.00	133	5.0	5.7	93.7
	9.00	66	2.5	2.8	96.5
	10.00	83	3.1	3.5	100.0
	Total	2,336	87.7	100.0	
Missing	System	327	12.3		
Total		2,663	100.0		

all parties in the same position, giving a zero range for their party placements. This figure was somewhat lower at 17 per cent for the Northern Ireland scale. Over two-thirds of all respondents generated a maximum range of party placements of 3 or less on the 11-point economic and social policy scales.

Table 3: *Aggregates of the Relative Party Positions, "Standardised" for Each Respondent*

"Cut taxes (lo) vs increase spending (hi)",

	N	Minimum	Maximum	**Mean**		Std. Deviation
	Statistic	*Statistic*	*Statistic*	*Statistic*	*Std. Error*	*Statistic*
PD	1,282	−2.04	2.04	**−.3091**	.0247	.88420
FF	1,421	−2.04	2.04	**−.0942**	.0233	.87657
FG	1,316	−2.04	2.04	**−.0261**	.0207	.75270
SF	951	−2.04	2.04	**.0588**	.0335	1.03326
G	1,088	−2.04	2.04	**.1014**	.0257	.84701
LAB	1,278	−1.95	2.04	**.3114**	.0244	.87403

"Ban abortion (lo) vs make available (hi)", standardised for each respondent

	N	Minimum	Maximum	**Mean**		Std. Deviation
	Statistic	*Statistic*	*Statistic*	*Statistic*	*Std. Error*	*Statistic*
FF	1,303	−2.04	2.04	**−.2483**	.0258	.93271
FG	1,172	−2.04	2.04	**−.2048**	.0226	.77279
G	926	−2.04	2.04	**−.0576**	.0292	.89003
PD	1,096	−1.92	2.04	**.0662**	.0227	.75246
SF	831	−2.04	2.04	**.1083**	.0361	1.04105
Lab	1,093	−2.04	2.04	**.4158**	.0237	.78338
Valid N (listwise)	691					

"Insist on united Ireland now (lo) vs abandon (hi)", standardised for each respondent

	N	Minimum	Maximum	**Mean**		Std. Deviation
	Statistic	*Statistic*	*Statistic*	*Statistic*	*Std. Error*	*Statistic*
SF	1,976	−2.04	2.04	**−1.1647**	.0220	.97692
FF	1,911	−2.04	2.04	**.0204**	.0143	.62709
PD	1,676	−2.04	1.92	**.2605**	.0135	.55370
LAB	1,590	−1.79	1.95	**.3533**	.0137	.54452
FG	1,771	−2.04	2.04	**.3912**	.0130	.54856
G	1,372	−2.04	2.04	**.4166**	.0175	.64968
Valid N (listwise)	1,278					

In a nutshell, raw mean party placements on the three policy scales investigated by the INES are aggregates of a series of individual judgements by respondents that are both highly bunched and with highly variable centres. One way to try and fix this problem is to "standardise" party placements for each respondent, rescaling these to have a mean of zero and a standard deviation of unity. This sacrifices all information on different subjective views by different respondents about how the same set of parties stood on some policy dimension. What is preserved are the relative positions of the six parties and the respondent on each dimension.[1]

Aggregating these standard scores gives a summary of individual respondent judgements of the relative placements of the six parties on each dimension. These are reported in Table 3, and result in considerably "crisper" and more differentiated summary of the *relative* positions of each party on each dimension.

Figure 2 reports the self-placements of survey respondents, rescaled in exactly the same way as the party positions in Table 3. These rescaled respondent self-placements are thus on the same scale as the "standardised" party placements. As Figure 2 below shows, these now look quite well-behaved and it at least seems possible we have a common policy space for both voters and parties.

III MAPPING THE IRISH POLICY SPACE: EXPERT SURVEY DATA

Essentially, the problem with using survey respondent judgements about party policy positions, as we have seen, is that they are intensely subjective – with scores highly biased by the respondents' self-location on the scale in question. This was addressed above by standardising each respondent's scores for each scale, in effect removing all substantive content from scale positions and preserving only the relative positions of parties on each scale. An alternative response is to take each survey respondent's self-location on each policy scale at face value, and attempt to place party policy positions on these scales using some external data source. There are a number of possible external data sources, but here we use a new expert survey we recently conducted as part of a 47-country comparative study. This involved sending out an e-mail invitation to participate in a web-based survey that asked country specialists to locate political parties on 10 issue dimensions. This methodology followed that of Laver and Hunt (1992) who conducted similar
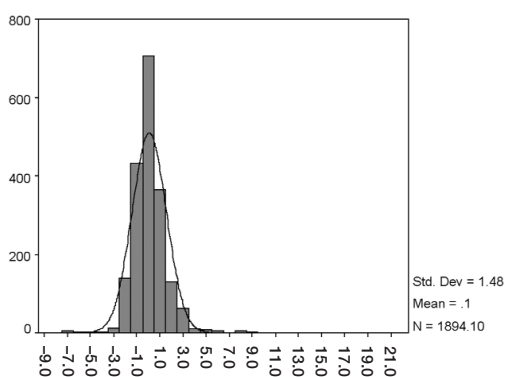
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[1] Obviously, this transformation cannot be performed for respondents who located all parties at the same policy position, since the standard deviation of their party locations is zero.

Figure 2: *Standardised Respondent Self-placements on Three Policy Dimensions*
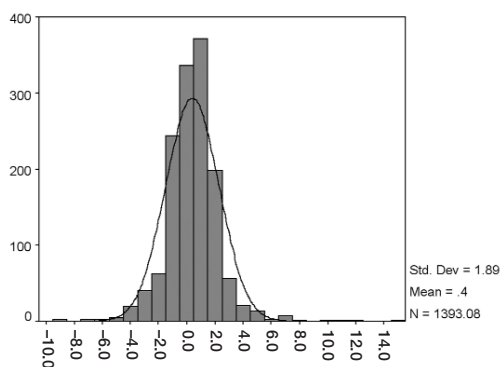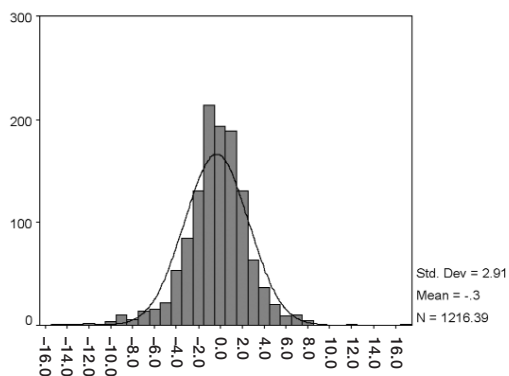

"Standardised" respondent self-placement: economic policy

Cases weighted by WGALL

"Standardised" respondent self-placement: Northern Ireland

Cases weighted by WGALL

"Standardised" respondent self-placement: abortion

Cases weighted by WGALL

(postal) expert surveys in 22 countries. The Irish survey invitation was sent from October 2002 to February 2003 to 70 Irish expert respondents drawn from the membership list of the Political Studies Association of Ireland. A total of 54 respondents completed the questionnaire. The mean expert scores, along with other summary information are given in Table 4.

Table 4: *Positions of Irish Parties on Policy Dimensions from 2002 Expert Survey*

| *Policy Dimension*	*Party (Mean, SE, N)*					
	SF	*GR*	*LB*	*FG*	*FF*	*PD*
Left-Right	6.3	5.8	7.4	12.7	13.2	16.3
	0.58	0.33	0.29	0.27	0.30	0.28
	53	52	54	54	54	54
Economic	4.8	5.7	6.5	12.4	13.7	17.4
	0.31	0.28	0.35	0.38	0.38	0.24
	51	52	53	54	54	53
Northern Ireland	1.5	8.7	9.1	10.9	6.3	11.0
	0.19	0.40	0.35	0.47	0.37	0.44
	53	42	52	53	53	52
EU Neutrality	17.6	17.4	9.7	5.0	7.2	6.8
	0.51	0.53	0.53	0.38	0.48	0.45
	50	53	54	54	54	53
EU Enlargement	12.0	9.8	5.7	5.3	7.1	6.7
	0.74	0.76	0.42	0.50	0.54	0.53
	46	50	53	53	53	53
EU Strengthening	16.9	16.9	10.2	8.3	12.6	13.2
	0.47	0.51	0.45	0.47	0.48	0.56
	53	52	54	53	53	52
Immigration	8.9	6.1	6.9	13.0	14.8	14.2
	0.68	0.44	0.49	0.44	0.41	0.54
	41	50	52	52	53	53
Social	9.6	5.7	6.1	11.3	14.7	7.0
	0.61	0.47	0.37	0.51	0.34	0.46
	50	51	54	54	54	53
Environment	10.1	2.4	9.5	13.7	15.9	15.4
	0.63	0.24	0.44	0.37	0.38	0.44
	38	54	54	53	54	53
Decentralisation	7.0	4.8	8.8	11.8	13.0	11.9
	0.58	0.47	0.51	0.50	0.49	0.53
	40	52	50	49	54	50
Sympathetic	15.7	8.7	6.9	11.1	13.1	13.4
	0.70	0.61	0.59	0.65	0.59	0.81
	52	52	52	52	52	51

Table 5: *Importance to Irish Parties of Policy Dimensions from 2002 Expert Survey*

Policy Dimension	Party (Mean , SE)						
	SF	GR	LB	FG	FF	PD	OVERALL
Economic	11.3	12.3	15.5	13.6	13.6	17.9	13.9
	0.69	0.66	0.41	0.37	0.49	0.26	1.4
Northern Ireland	19.6	7.1	11.0	12.3	15.6	10.1	13.9
	0.12	0.67	0.45	0.45	0.35	0.47	3.0
EU Neutrality	15.3	17.2	12.8	12.9	11.3	10.3	12.4
	0.66	0.45	0.43	0.38	0.46	0.53	1.8
EU Strengthening	12.8	16.8	11.8	12.4	11.7	13.2	12.3
	0.66	0.33	0.35	0.45	0.46	0.43	1.2
EU Enlargement	9.4	12.9	12.3	13.4	11.5	11.9	12.0
	0.67	0.60	0.47	0.48	0.55	0.51	1.2
Immigration	9.0	11.6	12.9	11.1	12.2	12.8	11.6
	0.63	0.57	0.42	0.52	0.55	0.54	1.1
Social	7.7	11.3	13.9	11.1	10.7	12.4	11.1
	0.58	0.67	0.53	0.53	0.61	0.57	1.6
Environment	8.4	18.7	11.3	10.6	10.5	10.5	10.8
	0.75	0.43	0.51	0.48	0.63	0.66	2.0
Decentralisation	8.6	13.4	10.2	10.4	10.2	9.1	10.3
	0.74	0.65	0.53	0.49	0.52	0.57	0.9
Party Voting Weight	7.3%	4.3%	12.1%	25.3%	46.6%	4.5%	

Note: Overall salience is the mean of the party values weighted by party vote share.

In addition to specific questions on policy (discussed below), the questionnaire asked each country specialist to locate parties on a general "left-right" dimension. The results are shown in Figure 3 and show that, from left to right, Irish parties range from the Greens on the left, followed by Sinn Féin and Labour, through Fine Fáil and Fine Gael in practically the same position, to the Progressive Democrats on the right.

In addition to locating each party on each policy dimension, respondents were asked to indicate the relative importance of the dimension to each party. Table 5 reports these ratings, in a manner similar to that of Table 4. The last column of Table 5 also shows the overall salience of each policy dimension in

Figure 3: *Party Positions on the General Left-Right Dimension*
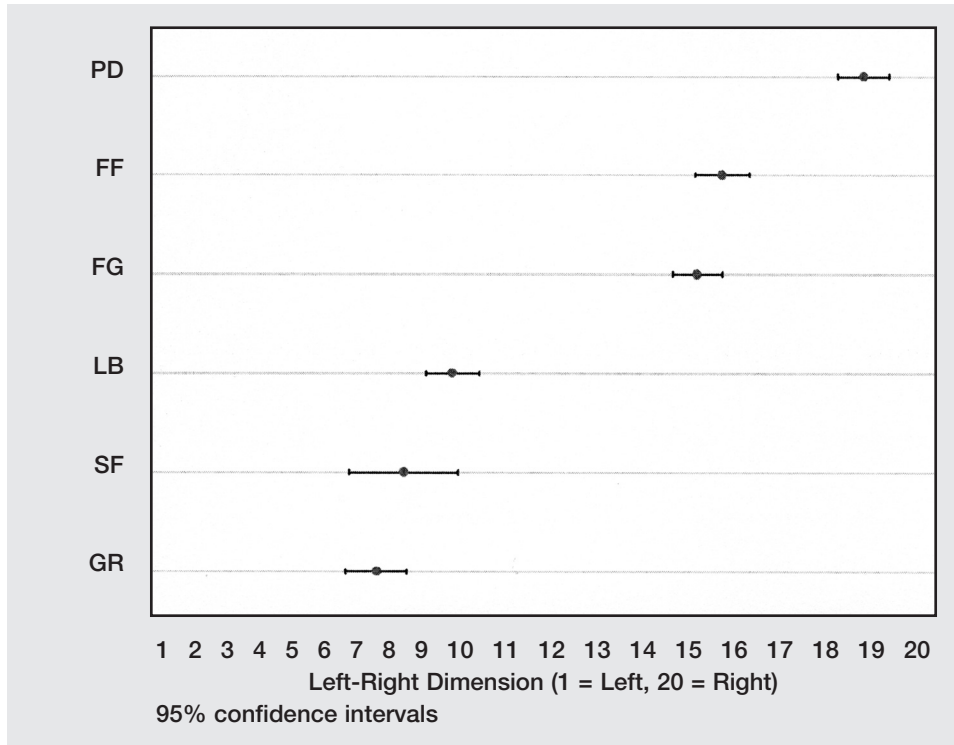
Note: Estimates of party positions come from an expert survey of political party positions taken from November-February 2003-2003.

the Irish context, weighting each party's mean salience score for each dimension by its vote share in the 2002 Irish general election (last row). The two most salient policy dimensions in this sense, as we have noted, were economic policy and Northern Ireland. In what follows, because we have good survey information with which to compare alternative data sources, we concentrate upon economic, Northern Ireland, and social policy. The endpoints of the relevant expert scales were as follows:

Economic policy
Promotes increasing taxes to increase public services. (1)
Promotes cutting public services to cut taxes. (20)

Northern Ireland policy
Opposes permanent British presence in Northern Ireland. (1)
Defends permanent British presence in Northern Ireland. (20)

Social policy
Favours liberal policies on matters such as abortion, homosexuality, and euthanasia. (1)
Opposes liberal policies on matters such as abortion, homosexuality, and euthanasia. (20)

We now set out to derive the best possible estimates of the distribution of voter ideal points on these same scales.

IV MAPPING VOTER IDEAL POINTS IN THE EXPERT SURVEY POLICY SPACE

The Distribution of Voter Ideal Points on Economic Policy
The first task in mapping voters into the same policy space as the expert survey scales is to match question wordings and dimension meanings as closely as possible. This is not as easy as it looks because of a small but crucial difference between the wordings of expert survey and INES scales. As we have seen, the INES used an 11-point (0-10) scale to collect respondent self-placements on a range of issues, but only asked for respondent placements of *party* positions for three policy dimensions. The "taxes vs spending" dimension was one of these, but the endpoints of the scale for the INES question were as follows:

Government should cut taxes a lot and spend much less on health and social services. (0)
Government should increase taxes a lot and spend much more on health and social services. (10)

There is a huge difference between these endpoints and those of the 20-point expert scale. This difference was introduced to make the question meaningful to mass survey respondents as opposed to academic political scientists, but was substantively unfortunate in the context of a 2002 Irish election for which the poor performance of the public health service was one of the top election issues. Any party proposing to "cut taxes a lot and spend much less on health" would have been committing electoral suicide. Table 1 has already shown us the unusual pattern that respondents located themselves to the left of the most left-wing party on this scale. While relative party positions on the INES scale may well remain valid, the precise wording, in the context of the 2002 election, means that the health-oriented substance of the INES scale is nothing like the substance of the expert survey scale on economic policy more generally.

Accordingly, we looked elsewhere in the INES for a more general economic policy scale and constructed one from three closely related survey items on which respondent self-placements (but not respondent locations of parties) were collected. The three items were:

(B44.1) Business and industry should be strictly regulated by the State (0).
Business and industry should be entirely free from regulation by the State (10).

(B44.3) Public or semi-state companies are the best way to provide the services people need (0). Private enterprises are the best way of providing the services people need (10).

(B44.4) Most of business and industry should be owned by the State (0). Most of business and industry should be privately owned (10).

Combining these three items into an additive Likert scale generated a 0-30 left-right economic policy scale with good scale reliability.[2] Figure 4 shows the distributions of respondent self-placements on this scale, comparing this with the much more highly skewed distribution of self-placements on the arguably flawed "tax cuts vs public spending" scale. We therefore take this new "public vs private" scale as our best indicator of voter positions on economic policy.

The Distribution of Voter Ideal Points on Northern Ireland Policy
As with economic policy, the INES survey scale dealing with Northern Ireland on which respondents also located party positions – "… insist on a United Ireland now vs abandon the aim of a United Ireland altogether" is not the one that best corresponds with the substance of the scale used in the expert survey. Much closer in substance are two 7-point attitude items asking for respondent self-placement:

(A12.3) The long-term policy for Northern Ireland should be to reunify with the rest of Ireland.
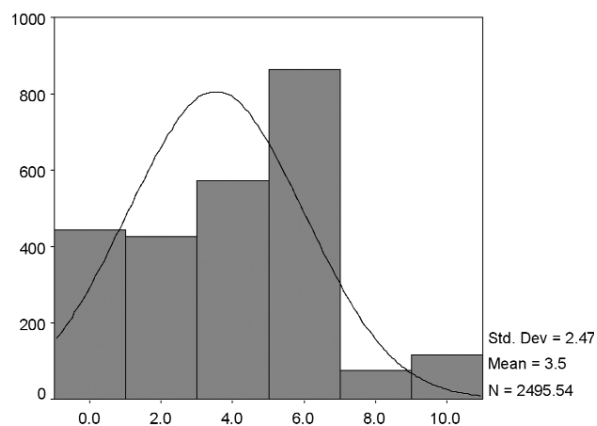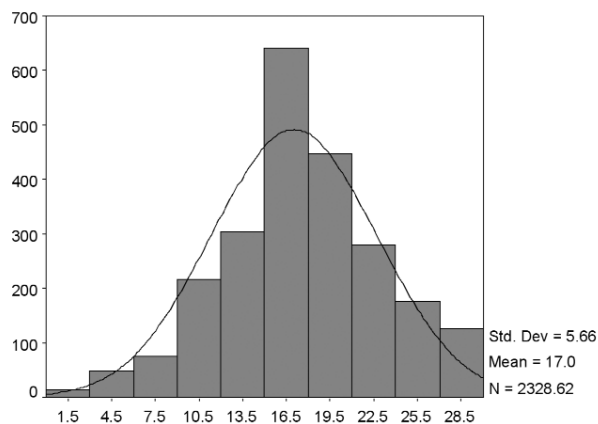(A12.4) The British government should declare its intention to withdraw from Northern Ireland at a fixed date in the future.[3]

[2] Cronbach's alpha = 0.541; lower if any item deleted.
[3] In each "strongly disagree" is coded 1. Thus low scores on the scale represent a unionist position, high scales a republican position.

Figure 4: *Distributions of Respondent Self-Placements on "Public vs Private"*
and "Spending vs Tax Cuts" Economic Policy Scales

Public vs private provision (B44.1 + B44.3 + B44.4)

Cases weighted by WGALL

Taxes vs spending: left vs right (Flipped C27.1)

Cases weighted by WGALL

If these scales are added together they form a 2-14 scale of respondent
self-placements on Northern Ireland policy that is substantively very similar
to the expert survey scale.[4] Figure 5 shows the distribution of respondent self-
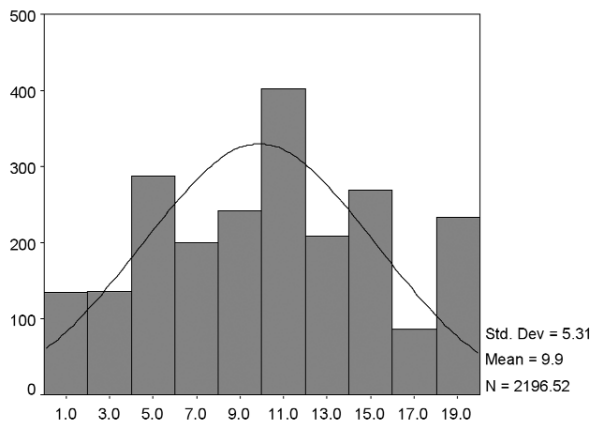placements on this new Northern Ireland policy scale.

_____

[4] The INES scale should be inverted to ensure both scales run substantively in the same
direction.

Figure 5: *Distributions of Respondent Self-Placements on Northern Ireland and "Social" Policy Scales*
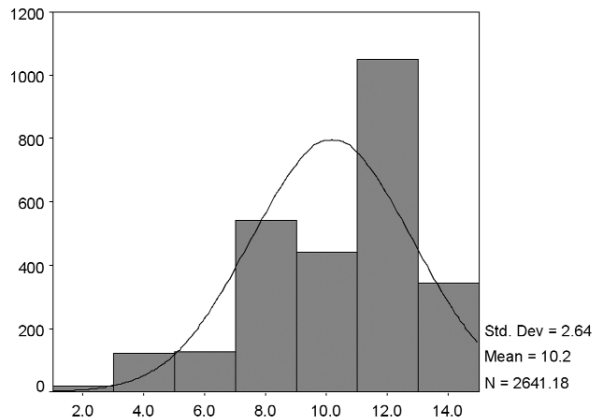
N. Ireland: Unionist vs Republican (A12.2 + A12.4)

Cases weighted by WGALL

Social Policy: Lib vs con (Flipped (B44.5 + C25.1))

Cases weighted by WGALL

The Distribution of Voter Ideal Points on "Social" Policy

The INES did not ask questions on euthanasia, but it did on abortion and homosexuality. These questions, asking for respondent self-placement on two 0-10 scales, were:

(B44.5) Homosexuality is never justified. (0) Homosexuality is always justified. (10)
(C25.1) There should be a total ban on abortion in Ireland. (0). Abortion should be freely available to any woman who wants to have one. (10)

If these scales are added, they form a well-behaved 0-20 scale of respondent self-placements on social policy which corresponds closely to the substance of the expert survey scale.[5] Figure 5 also shows the distribution of respondent self-placements on this social policy scale.

V COMPLETING THE MAP OF THE IRISH POLICY SPACE

*Fitting Voter Densities to Expert Locations of the Parties*
Using these INES scales of voter policy positions, we mapped survey respondents into two-dimensional spaces. The mapping technique used a bivariate kernel density estimation procedure to produce contour maps of the regions of highest concentration.[6] Figures 6 and 7 show these density graphs, with the darker regions indicating the areas of highest voter concentration, and the contour lines indicating the 5th, 25th, 50th, 75th, and 95th percentiles. Figure 6 represents the two-dimensional plot for the two most salient policy dimensions – economic policy and Northern Ireland. Figure 7 plots voter densities in a policy space defined by economic and social policy.

Overlaid on each graph are our expert survey estimates of party policy positions. Dividing these points are dashed lines showing two-dimensional Drichlet or Voronoi tessellations. These lines show the spatial boundaries between any pair of parties, with the interior regions thus showing the area of the policy space that is closer to one party than to any other. By considering the densities of the voter positions within each tessellation interior we can see whether winning parties are indeed occupying the regions of highest vote density in a particular policy space.

[5] Once again the scale must be inverted given the substance of the survey questions.
[6] The R statistical package using a customised version of the hdr2d add-on package was used to compute these graphics. The density estimations involve several smoothing parameters and we tested the graphics under a wide range of these. The representations presented here represent our judgement of the best balance between informative detail and noise reduction; they are also consistent with smoothing parameters previous bivariate density plots (e.g. Schofield *et al.,* 1998; Dow, 2001). Details and code are available from the authors or in the replication dataset for this paper (available from the authors).

Figure 6: *Irish Voters and Parties in Two-Dimensional Policy Space: Economic v. Northern Ireland*
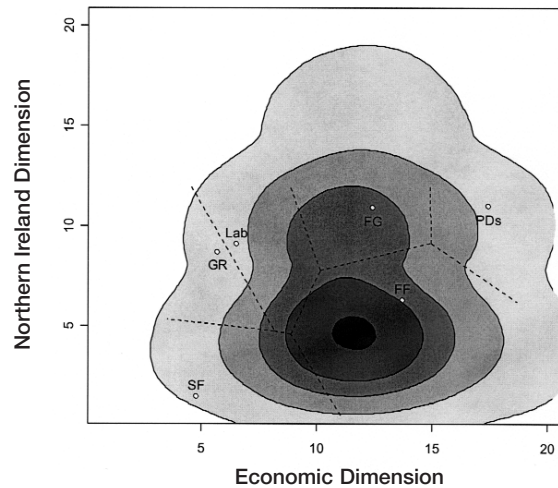
Note: Voter estimates are based on rescaled response items from the Irish National Election Study. The economic score is a scale of three questions B44.1 + B44.3 + B44.4, rescaled to the 1-20 metric; the Northern Ireland score is the inverted sum of A12.3 and A12.4 (1-7), rescaled to the 1-20 metric. Estimates of party positions come from an expert survey of political party positions taken from November-February 2002-2003. Contour methodology: the five contour levels represent the 5, 25, 50, 75, and 95 per cent density levels.

Figure 7: *Irish Voters and Parties in Two-Dimensional Policy Space: Economic v. Social*
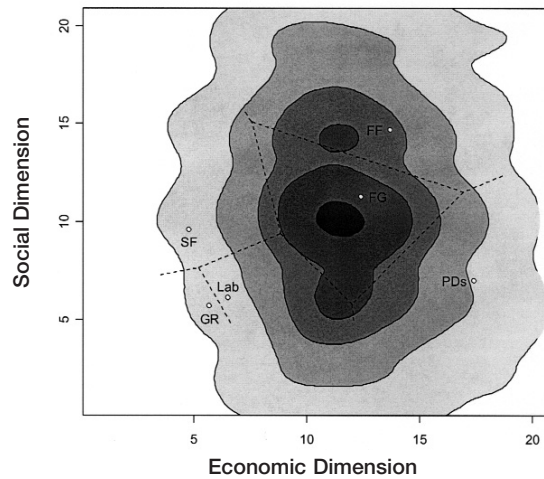
Note: Sources same as Figure 1; the social score for voter estimates is the inverted sum of B44.5 and C25.1 (0-20), rescaled to the 1-20 metric.

VI CONCLUSIONS

Our mapping of the Irish policy space makes three contributions. First, we draw on the new INES to describe and analyse the locations of the Irish voters on the most salient policy dimensions, providing new information on the Irish electorate, including two-dimensional contour maps of the Irish electorate. We show that respondent-self placements on these scales are highly biased and, while we can partially correct this with a form of standardisation, we then lose all substantive policy content. The approach we use instead is to develop new synthetic scales from respondents' answers to batteries of attitude questions. Second, we present previously unreported results of an expert survey of Irish party policy positions, and showing how these may be used to "tessellate" the policy space into policy regions closer to some party than to any other. These results map Irish parties and voters into a common space, and form a methodological basis for implementing spatial models in the Irish context, as well as many others for which a common space is required and voter positions on a priori scales used in expert surveys of party policy can be estimated by scaling responses to attitude questions in election studies.

REFERENCES

BENOIT, K. and M. LAVER, (Forthcoming) 2006. *Party Policy in Modern Democracies*, London: Routledge.

BUDGE, I., D. ROBERTSON, and D. HEARL (eds.), 1987. *Ideology, Strategy, and Party Change*, Cambridge: Cambridge University Press.

BUDGE, I., H.-D. KLINGEMANN, A. VOLKENS, *et al.*, 2001. *Mapping Policy Preferences: Parties, Electors and Governments: 1945-1998: Estimates for Parties, Electors and Governments 1945-1998*, Oxford: Oxford University Press.

DAVIS, O. A., M. HINICH, and P. ORDESHOOK, 1970. "An Expository Development of a Mathematical Model of the Electoral Process", *American Political Science Review*, Vol. 64, pp. 426-448.

DOW, JAY K, 1998. "A Spatial Analysis of the 1989 Chilean Presidential Election", *Electoral Studies*, Vol. 17, No. 1, pp. 61-76.

DOW, JAY K, 2001. "A Comparative Spatial Analysis of Majoritarian and Proportional Elections", *Electoral Studies*, Vol. 20, pp. 109-125.

DOWNS, ANTHONY, 1957. *An Economic Theory of Democracy,* New York: Harper and Row.

ENELOW, J. M. and M. HINICH (eds.), 1990. *Advances in the Spatial Theory of Voting*, New York: Cambridge University Press.

ENELOW, J. M. and M. HINICH, 1984. *The Spatial Theory of Voting: An Introduction,* New York: Cambridge University Press.

HINICH, M. J. and M. C. MUNGER, 1994. *Ideology and the Theory of Political Choice*, Ann Arbor: University of Michigan Press.

HINICH, M.J. and M. C. MUNGER, 1997. *Analytical Politics*, New York: Cambridge University Press.

IVERSEN, T., 1994. "Political Leadership and Representation in West European Democracies: a Test of Three Models of Voting", *American Journal of Political Science*, Vol. 38, pp. 45-74.

LAVER, MICHAEL and BEN HUNT, 1992. *Party and Policy Competition*, London: Routledge.

LAVER, MICHAEL and N. SCHOFIELD, 1990. *Multiparty Government*, Oxford: Oxford University Press.

LAVER, MICHAEL, KENNETH BENOIT and JOHN GARRY, 2003. "Extracting Policy Positions from Political Texts Using Words as Data", *American Political Science Review,* Vol. 97, No. 2, pp. 311-331.

MACDONALD, STUART ELAINE, OLA LISTHAUG and GEORGE RABINOWITZ, 1991. "Issues and Party Support in Multiparty Systems", *American Political Science Review*, Vol. 85, pp. 1107-1131.

MACDONALD, STUART ELAINE, GEORGE RABINOWITZ and OLA LISTHAUG, 1995. "Political Sophistication and Models of Issue Voting", *British Journal of Political Science*, Vol. 25, pp. 453-483.

MERRILL, SAMUEL III and BERNARD GROFMAN, 1999. *A Unified Theory of Voting: Directional and Proximity Spatial Models,* Cambridge: Cambridge University Press.

MERRILL, SAMUEL III, 1995. "Discriminating Between the Directional and Proximity Spatial Models of Electoral Competition", *Electoral Studies*, Vol. 14, pp. 273-287.

MYAGKOV, MIKHAIL and PETER ORDESHOOK, 1999. "The Spatial Character of Russia's Transition to Democracy", *Public Choice*, Vol. 97, pp. 491-523.

SCHOFIELD, NORMAN, ANDEW D. MARTIN, KEVIN M. QUINN, and ANDREW B. WHITFORD, 1998. "Multiparty Electoral Competition in the Netherlands and Germany: A Model Based on Multinomial Probit", *Public Choice*, Vol. 97, pp. 257-293.

SINNOTT, RICHARD, 1999. "The Electoral System", in John Coakley and Michael Gallagher (eds.), *Politics in the Republic of Ireland*, 3rd edition, London: Routledge and PSAI Press, pp. 99-126.

APPENDIX: QUESTION WORDING

(a) Expert Survey

Instructions: For each policy area, please indicate your judgement of the policy position of each political party. Please do this by writing the party abbreviation from the attached list near the scale position of this party, then drawing a line from this abbreviation to the position on the scale that you feel best sums up the position of the party.

Economic

Promotes increasing taxes to increase public services. (1)

Promotes cutting public services to cut taxes. (20)

Social

Favours liberal policies on matters such as abortion, homosexuality, and euthanasia. (1)

Opposes liberal policies on matters such as abortion, homosexuality, and euthanasia. (20)

Northern Ireland

Opposes permanent British presence in Northern Ireland. (1)

Defends permanent British presence in Northern Ireland. (20)

Environment

Supports protection of the environment, even at the cost of economic growth. (1)

Supports economic growth, even at the cost of damage to the environment. (20)

Immigration

Favours policies designed to help asylum seekers and immigrants integrate into Irish society. (1)

Favours policies designed to help asylum seekers and immigrants return to their country of origin. (20)

EU

Favours the extension of the EU to include new member states. (1)

Opposes the extension of the EU to include new member states. (20)

Left-Right

On a general scale of left to right, how would you place this party? Left (1) Right (20)

(b) Irish National Election Survey

Economic (Public v. Private)

On this card I have a number of opposing statements. People who agree fully with the statement on the left would give a score of '0'. People who agree fully with the statement on the right would give a score of '10'. Other people would place themselves somewhere in between these two views. Where would you place yourself on these scales?

(B44.1) Business and industry should be *strictly regulated* by the State (0). Business and industry should be *entirely free from regulation* by the State (10).
(B44.3) *Public or semi-state companies* are the best way to provide the services people need (0). *Private enterprises* are the best way of providing the services people need (10).
(B44.4) Most of business and industry should be owned by the State (0). Most of business and industry should be *privately owned* (10).

Economic (Taxes v. Spending – Not Used!)

I would like you to look at the scale from 0 to 10 on this card. A '0' means government should cut taxes a lot and spend much less on health and social services, and '10' means government should increase taxes a lot and spend much more on health and social services. Where would you place yourself in terms of this scale?

(C27.1) Government should cut taxes a lot and spend much less on health and social services. (0)
Government should increase taxes a lot and spend much more on health and social services. (10)
[inverted]

Social

On this card I have a number of opposing statements. People who agree fully with the statement on the left would give a score of '0'. People who agree fully with the statement on the right would give a score of '10'. Other people would place themselves somewhere in between these two views. Where would you place yourself on these scales?

(B44.5) Homosexuality is *never* justified. (0) Homosexuality is *always* justified. (10) [inverted]
(C25.1) There should be a total ban on abortion in Ireland. (0). Abortion

should be freely available to any woman who wants to have one. (10) [inverted]

Northern Ireland

I will now read out a series of statements. These cover a range of different areas and topics and I would like you to tell me how strongly you Disagree or Agree with each. For each statement I read please tell me whether or not you (1) Strongly Disagree; Disagree; Slightly Disagree; Neither Agree nor Disagree; Slightly Agree; Agree; or Strongly Agree. (7)

(A12.3) The long term policy for Northern Ireland should be to reunify with the rest of Ireland. [inverted]
(A12.4) The British government should declare its intention to withdraw from Northern Ireland at a fixed date in the future. [inverted]

Environment

On this card I have a number of opposing statements. People who agree fully with the statement on the left would give a score of '0'. People who agree fully with the statement on the right would give a score of '10'. Other people would place themselves somewhere in between these two views. Where would you place yourself on these scales?

(B44.8a) We should protect the environment even if this damages economic growth. (0)
We should encourage economic growth even if this damages the environment.(10)

Immigration

(A12.1) There should be very strict limits on the number of immigrants coming to live in Ireland (1 = strongly disagree, 7 = strongly agree).
(A12.6) Asylum seekers should have the same rights to social services as Irish people (1=strongly disagree, 7 = strongly agree). **[inverted]**

EU

On this card I have a number of opposing statements. People who agree fully with the statement on the left would give a score of '0'. People who agree fully with the statement on the right would give a score of '10'. Other people would place themselves somewhere in between these two views. Where would you place yourself on these scales?

(B44.2) Ireland's membership of the European Union is a *bad* thing. (0)

Ireland's membership of the European Union is a *good* thing. (10) [inverted]

(B44.6) European unification has already *gone too* far (0). European unification should be *pushed further* (10). [inverted]