

Parallel Lines? Policy Mood in a Plurinational Democracy

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Abstract

We usually think of democratic accountability in national terms – the people do not approve of a government, they can replace it. However, in a plurinational democracy it is not obvious that such a single national public exists. We consider this problem in the case of Scotland, providing the first application of the macro-polity approach to a plurinational democracy. We provide a systematic study of how public opinion in Scotland changes over time compared to that in the rest of Great Britain, using recently developed Bayesian IRT scaling techniques, and ask whether Scottish and British public opinion move in parallel. To the extent that there is a separate Scottish public opinion with a separate party system, this forces us to rethink the way that democracy and accountability work in plurinational political systems.

It has frequently been argued that the Scottish population is more left-wing than that of the rest of the United Kingdom. Indeed, former First Minister Alex Salmond has argued that Scotland has a “social democratic consensus” (Salmond 2013) that sets it apart from the rest of the UK. Similarly, the Scottish Government’s prospectus for independence (Scottish Government 2013) was framed in strongly social democratic terms. Academics, however, have found mixed support for this characterization. While they have found that public opinion in Scotland is somewhat to the left of that in England – in the sense of being more favourable toward public spending and redistribution – the differences are rather modest (Rosie and Bond 2007; Curtice and Ormston 2011; McCrone 2017).

The fact that public opinion may work very differently in different national groups forces us to rethink how democracy and accountability work in the United Kingdom, and also in other “plurinational democracies” (Keating 2001) such as Spain, Belgium, Canada and Switzerland. In a “Westminster” or “majoritarian” democracy, accountability depends on the alternation between single-party governments – if the public does not like the policies a government pursues it can rectify this by voting for the opposition (Powell 2000; Lijphart 1999). However, this model of democracy assumes that the public acts like a “national jury” that decides between alternative governments. When we have a plurinational democracy in the sense of Keating (2001) – made up of groups with separate (though overlapping) national identities – it is not clear that such a national public exists. Of course, this model of democratic accountability does not apply to all plurinational democracies. For example, Belgium and Switzerland have coalition governments and consociational arrangements that do not place so much reliance on a single national public. Nevertheless, the “majoritarian” model of accountability is relevant to plurinational democracies where single-party government is the norm, such as the UK, Spain and Canada.

Previous research using the macro-polity approach finds that the traditional Westminster model of accountability fits the UK as a whole, albeit imperfectly -- when the public becomes dissatisfied with high taxes and spending, public opinion shifts to the right, which leads to a Labour government being replaced by a Conservative one, and vice versa (Bartle, Dellepiane-Avellaneda, and Stimson 2011a; Bartle, Dellepiane-Avellaneda, and McGann 2018). However, when we consider the UK as a plurinational democracy, we face additional issues. It is not obvious that Scottish public opinion will react to government policies in the same way as public opinion in the rest of the UK. Indeed, given that Scotland has had its own government since 1999, it is possible that Scottish public opinion will react to the policies of government of Scotland rather than that of the UK. Furthermore, Scotland now has a different party system to the rest of the UK, currently dominated by a party that does not run candidates elsewhere. All of these factors challenge the usual model of national democratic accountability.

We thus use Scotland as a case study of how national democratic accountability can work in a country composed of more than one nation. In so doing, we provide the first application of the “macro polity” approach to a plurinational democracy. We systematically assess how public opinion in Scotland is different from that in the rest of Great Britain in terms of economic policy, moral issues and the European Union, together with attitudes towards autonomy.¹ We consider not only the degree to which public opinion is different in Scotland, but also the degree to which Scottish public opinion moves left to right over time in parallel to that in the rest of Great Britain. That is to say, it tests the degree to which public opinion in

¹ We compare Scotland to the rest of Great Britain as opposed to the United Kingdom, because we do not have comparable data for Northern Ireland. The British Social Attitudes survey does not cover Northern Ireland and the Northern Ireland Social Attitudes Survey only ran between 1989 and 1996. Great Britain includes England, Scotland and Wales. The United Kingdom is comprised of Great Britain and Northern Ireland.

Scotland and Great Britain behaves as if they were part of a single public, or at least “parallel publics” in the sense of Page and Shapiro (1992). Furthermore, we consider the degree to which Scotland has its own party system oriented around distinct issues (such as independence) affects the possibility of national democratic accountability.

In addition to providing a case study of the consequences of plurinationalism on democratic accountability, we establish a methodology that can be applied to other plurinational democracies. Studying public mood requires us to estimate public opinion in a way that is comparable across time. The challenge is that the same survey questions are not asked every year, with most questions asked in only a fraction of the years. This has required the development of new techniques, such the dyad-ratio algorithm (Stimson 1991) and the application of item response theory (IRT) to aggregate public opinion data (McGann 2014a). We provide the first application of the Bayesian IRT approach of McGann (2014a) to the study of public mood. Furthermore we extend this technique to allow us to compare public opinion in Scotland to that in the rest of Great Britain, and to take account of responses with more than two categories.

The Macro Polity in a Plurinational Democracy

The macro polity approach considers how aggregate public opinion develops over time. In *The Macro Polity*, Erikson, McKuen and Stimson (2002) argue that while individual voters may be poorly informed or disinterested, aggregate public opinion can still accurately track economic performance and provide feedback and accountability to governments (see also Enns and Kellstedt 2008; Ellis and Stimson 2012). In addition to the United States, this approach has been adapted and applied to a variety of countries – the United Kingdom, France (Stimson, Thiébaud, and Tiberj 2009), Italy (Bellucci and Pellegata 2017) and the Netherlands (McGann and Dellepiane-Avellaneda 2015). Bartle et al. (2018) find that public opinion in Great Britain

reacts in a thermostatic manner to policy (as measured by aggregate domestic government spending), following Wlezien (1995) and Soroka and Wlezien (2010). That is to say, high government spending leads to public opinion moving to the right, as people signal their demand for lower taxes. Conversely, when public spending is low, public opinion moves to the left, as people demand better public services.

These demands are eventually translated into public policy. However in the case of the United Kingdom, Bartle et al. (2018) find that this is through electoral turnover, not policy accommodation. That is to say, governments do not raise or lower spending in response to changes in public opinion. Rather parties act according to their ideologies – Labour typically raises taxes and spending, while the Conservatives cut these. Eventually changes in public opinion contribute to the government being replaced and policy moves back in line with public opinion. However, this process works imperfectly. Even when public opinion moves against a governing party, it may continue to win elections if the public believes that it is more competent than the opposition. This government will continue to increase or decrease taxes/spending even though the public now want the opposite., leading to cycles where public spending rises and falls and successive governments over-correct for their predecessors.

Thus public opinion controls government policy in the long-run, providing democratic responsiveness. However, this model assumes that we can talk about policy mood in United Kingdom as a whole, and that this policy mood affects elections in a similar way across the United Kingdom. There are a number of reasons why these assumptions need to be questioned. The United Kingdom is after all a union state, created by historic agreement amongst separate nations (McLean and McMillan 2005; Keating 2009), although it has frequently been treated as a unitary state, both empirically and in constitutional terms (notably Dicey 1915).

Firstly, public opinion in Scotland may simply function differently from that in the rest of the Great Britain. Empirical studies do, in fact, suggest that public opinion in Scotland is somewhat more left-wing than that in the rest of Great Britain, although the difference is less than is often assumed (Rosie and Bond 2007; Curtice and Ormston 2011). From a macro polity perspective, however, it does not greatly matter whether Scotland is more left-wing than England and Wales at any point in time. Rather, it is how preferences move and respond over time that produces the “signal” that government may – or may not – respond to. Does public opinion in Scotland move in parallel with that in the rest of Great Britain, reacting to the same stimuli? That is to say, are the Scottish public and the public in the rest of Great Britain “parallel publics” in the sense of Page and Shapiro (1992)? When public spending goes up, does mood in Scotland move to the right together with that in the rest of Great Britain (even if at any time point it is somewhat more left-wing)?

Secondly, policy mood in Scotland might not react to the policy of the UK government, but rather to that of the Scottish government. Where there are multiple levels of government, there may be ambiguity as to who is held accountable for policy (Anderson 2006). Since 1999 Scotland has had its own parliament, and various government functions have been devolved to it. Admittedly, these have mostly been functions that were previously the responsibility of the Scottish Office and where Scotland has had considerable administrative autonomy, such as education and justice (Mitchell 2014). Generally devolution has respected that principle laid out by Bulpitt (1983/2008) that “high politics” (control over the economy, foreign policy and defence) has remained in the control of the UK government, while “low politics” (delivery of services) has been devolved. The 2016 Scotland Act does extend power over income tax bands to the Scottish parliament, but only for earned income. If Scottish public opinion reacts to the policy of the Scottish government as opposed to the UK government and these institutions have

different policies, we would not expect public opinion in Scotland and the rest of Great Britain to move in parallel.

Thirdly, even if public opinion in Scotland does move in parallel with that in Great Britain in reaction to UK government policy, this does mean that elections in Scotland necessarily provides thermostatic feedback on UK government policy and the level of government spending. It is possible that Scottish voters cast their votes on the basis of other issues, such as independence or the desire for more autonomy. That is to say, they might vote not on the basis of *what* policies they desire, but rather on *who* should get to decide. As various commentators have pointed out (McCrone 2001, 2017; Keating 2010), having different policy preferences is in no way a necessary condition for Scotland having a separate identity and desiring greater autonomy.

Scottish voters certainly face a different party system to voters in the rest of the UK (see Cairney and McGarvey 2013). The macro polity model in Bartle et al (2018) -- and the usual justification of the Westminster model -- assumes that voters face a choice between two alternatives and can make a decisive choice between them. That is, voters face a choice between Labour (representing higher taxes/spending) and the Conservatives (representing lower taxes/spending). However, since 1997 this has not been the choice facing most Scottish voters. In most constituencies, the choice has been between one of the unionist parties (usually Labour) and the Scottish National Party.

After outlining the methodology used to measure changes in public opinion over time, we will consider the degree to which Scotland and the rest of Great Britain share a single public opinion that moves in parallel. We will then consider the implications of this for democratic accountability in the UK and other plurinational democracies.

Methodology and Data

In order to compare public opinion in Scotland and the rest Great Britain over time, we need to be able to measure public opinion in a way that is comparable across time and space. The problem is that the same survey questions are not asked every year and the wording of similar questions varies over time. Nevertheless it is possible to overcome this problem, provided that identical questions are asked in multiple years and there is sufficient overlap between the years in which different questions are asked. Techniques include the Kalman filter approach proposed by Beck (1989) and the more widely used dyad-ratio approach of Stimson (Stimson 1991; Stimson, Thiébaud, and Tiberj 2009; Bartle, Dellepiane-Avellaneda, and Stimson 2011a). In psychometrics, item response theory provides techniques to simultaneously estimate a trait and the difficulty of questions used to measure it. McGann (2014a) adapts the item response theory model to problems where we do not have individual responses, but only the aggregate responses from the whole population. He argues that this has important advantages over the dyad-ratio approach, not least that it is based on an explicit theoretical model of individual behaviour. It also provides considerably better model fit than the dyad-ratio algorithm, at least when applied to British policy mood data (McGann 2014a).

Another significant advantage of the item response theory approach is that it is easily adapted. We develop the method in McGann (2014a) in two ways. Firstly we extend it to deal with ordinal responses, as opposed to just dichotomous answers. This is important as the answers to survey questions are often on three or five point scales, as opposed to simple yes/no answers. There is often also a neutral category that is substantively very important. For example, a question on taxes and spending may ask whether respondents want more spending even if it means more taxes, less taxes and spending or about the current level. Secondly, we extend the method so that it can place the aggregate mood from two populations (Scotland and the rest of Great Britain) on a single scale.

In the standard item response theory model, we would model the probability of giving the correct answer to a question in terms of the ability of the respondent and the characteristics of the questions. When we extend this to public opinion we replace ability with some other trait we are interested in, such as being “left-wing”. We need to estimate both how left-wing the public is, and how each question item measures this public opinion. We can illustrate the intuition behind this process.

Let us consider the following question that has been asked in the British Social Attitudes Survey since 1986: “Do you agree that government should redistribute income from the better-off to those who are less well off”. There are five possible responses, but we have collapsed these into three – “agree”, “neither agree nor disagree”, and “disagree. The response curves for this question are shown in Figure 1. These curves give the percentage of the public who replies in a left-wing way for each level of “leftism” in the population. The curve on the right gives the percentage of people who agree with the statement, while the curve on the left gives the percentage of people who answer “agree” or “neither agree nor disagree”. Imagine that we know (or have guessed) what these curves look like. Then if we know what percentage answered the question a particular way, it is straightforward to estimate the underlying leftism of the population. For example, in 2015, 39.9% of the population agreed with the statement. From the graph we can see that this implies a population leftism score of -0.48. Similarly in 2015 66.3% answered either “agree” or “neither agree nor disagree”. This implies a population leftism score of -0.25. By combining these scores (and all the scores derived from other relevant questions asked in 2015), we can produce an estimate of the population’s position in 2015.

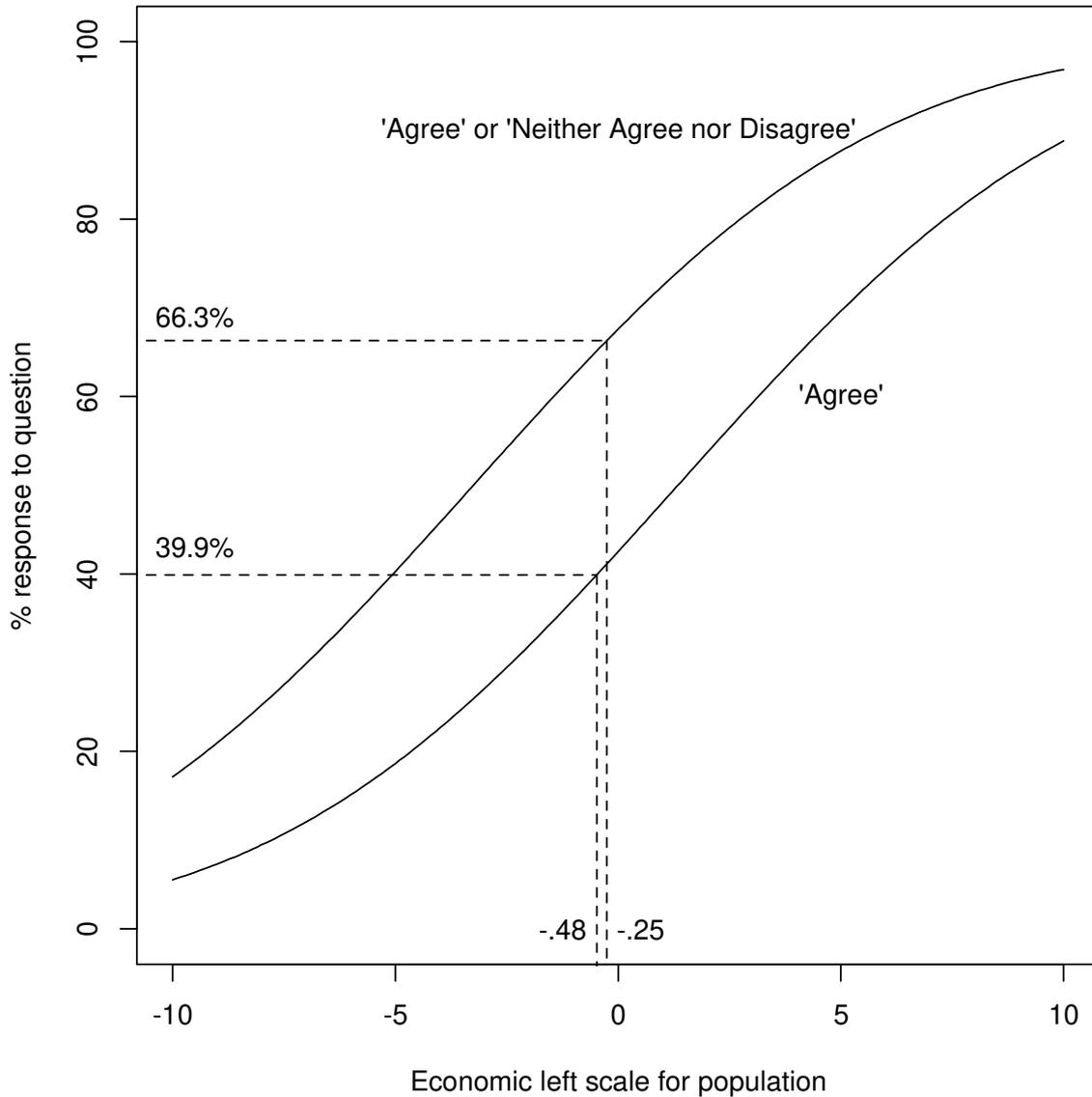


Figure 1 – Response curves for BSA question “Government should redistribute income from the better-off to those who are less well off”.

Given that we now have estimates of the population’s leftism for each year, we can use these to re-estimate the response curve for the question, which of course is asked in multiple years. (The response curves are modelled as cumulative normal functions and thus only have two parameters, one indicating how left-wing the population needs to be for 50% to give the left-wing answer, and another indicating how quickly the percentage response increases as the population gets more left wing.) A crude estimation strategy would be to guess what the response curves look like, use these to estimate the population leftism for each year, then use these estimates to re-estimate the response curves and so on, continuing back and forth until

our estimates converge. We use Bayesian updating to achieve essentially the same end. In order to identify the model, we need to fix the scale of our leftism measure. One way to do this would be to assign a leftism score of 1 to a year we expect to be left-wing (say 1997) and a score of -1 to a year we expect to be conservative (say 1979). What we actually do is assume that the leftism scale is normally distributed with a mean of zero and standard deviation of one.

We can now lay out the model formally. We model the probability of respondent i giving a left-wing answer to question q in year y , given the ideology of respondent i in year y (x_{iy}), how difficult the question is to answer in a left-wing manner (λ_q) and how well the question discriminates (α_q). We model this using a cumulative normal distribution function, with the difficulty parameter (λ_q) as the mean and the discrimination parameter (α_q) as the standard deviation. This gives us equation (1).

$$(1) \text{ Expected } p \text{ of left answer from } i \text{ in year } y \text{ to question } q = \Phi(x_{iy}, \lambda_q, \alpha_q)$$

We, however, do not have individual level data on survey responses, but only aggregate responses. Following McGann (2014a) we can extend the model to cover this. Let us assume that we have a population of respondents distributed normally with mean ideology μ_y and standard deviation σ_y . Then the probability of giving a left answer to question q in year y will be the probability of an individual replying left-wing integrated across the population of individuals. This is given by:

$$(2) \text{ Expected } p \text{ of left answers to question } q \text{ in year } y = \int_{-\infty}^{\infty} \Phi(x, \lambda_q, \alpha_q) \phi(x, \mu_y, \sigma_y) dx$$

This integral has a simple closed form solution:

$$(3) \text{ Expected } p \text{ of left answers to question } q \text{ in year } y (m_{yq}) = \Phi(\mu_y, \lambda_q, \sqrt{\alpha_q^2 + \sigma_y^2})$$

This can be used to estimate the mean and the standard deviation of the population's ideology, as well as the characteristics of each question.

We can now extend this model to deal with responses that are ordinal scales. We do this by adapting the graded response model of Samejima (1969, 1974, 1997). Samejima provided a model for tests where the response is graded in terms of its quality, as opposed to simply being right or wrong. This, of course, is similar to the situation in public opinion where a respondent may give an answer that is on a five-point scale from the most right-wing to most left-wing answer. Modelling such ordinal scales is awkward, because the probability of given an intermediate level answer at first increases as the respondent becomes more left-wing, but then decreases as the respondent becomes likely to choose even more left-wing responses. However, Samejima showed that the cumulative probability of answering at least at a certain level can be modelled in the same way as a binary question. That is to say, we can model the probability of the respondent giving a response of at least level 2, or at least level 3 and so on. We can thus revise equations (1) to (3) so that they model the probability of a response passing at a certain threshold of "left-wingness", rather than simply being "left-wing". We need to replace the difficulty parameters λ_q with a set of parameters λ_{qg} , with a separate parameter for each response level g of each question q . Apart from this, the model is exactly the same.

$$(1') \text{ Expected } p \text{ of answer } \geq \text{ level } g \text{ from } i \text{ in year } y \text{ to question } q = \Phi(x_{iy}, \lambda_{qg}, \alpha_q)$$

$$(2') \text{ Expected } p \text{ of answer } \geq \text{ level } g \text{ to question } q \text{ in year } y = \int_{-\infty}^{\infty} \Phi(x, \lambda_{qg}, \alpha_q) \phi(x, \mu_y, \sigma_y) dx$$

$$(3') \text{ Expected } p \text{ of answer } \geq \text{ level } g \text{ to question } q \text{ in year } y (m_{yqg}) = \Phi(\mu_y, \lambda_{qg}, \sqrt{a_q^2 + \sigma_q^2})$$

Following McGann (2014a) we add a beta distributed stochastic term to account for the possibility that questions may be understood differently in different time periods. We then

estimate the proportion of answers above a certain level using a binomial distribution. This model can be estimated from within R using a MCMC package such as JAGS, BUGS or STAN. We provide code in JAGS.

$$(4) \text{ Probability of answer } \geq \text{ level } g (p_{yqg}) \sim \text{beta} \left(\frac{m_{yqg}}{1-m_{yqg}} \beta, \beta \right)$$

$$(5) \text{ Proportion of answers } \geq \text{ level } g \text{ to question } q \text{ in year } y \sim \text{binomial}(p_{yqg}, n_{yq})$$

It is straightforward to extend the model to put Scottish and British responses on the same scale. We simply constrain the difficulty and scale parameters of the questions to be the same for both the Scottish and British subsets of the data. This allows us to calculate policy mood estimates for both Scotland and the rest of Great Britain that are comparable. We are able to do this because we only use questions that are asked in identical form in both Scotland and the rest of Great Britain as part of either the Scottish Social Attitudes or British Social Attitudes scales.²

We use a related technique to study support for independence and fiscal autonomy over a long time period. This uses the model from Jackman (2005). This was designed to model the support of different parties based on opinion polls from different survey houses, each of which has a systematic bias or “house effect”. We have a great many opinion polls concerning independence around the time of the referendum, but polls from different houses vary considerably. We have far fewer polls before the referendum campaign, and these seem to differ systematically from the election polls. We can model this as a simple linear model, where Y_{ht} is the proportion supporting independence at time t in a poll by survey house h , a_h is the

² We correct algebraically for the fact that some respondents to the BSA survey are, in fact, Scottish.

“house effect” or systematic bias of survey house h and b_t is the true level of support for independence at time t .

$$(6) Y_{ht} = a_h + b_t + \epsilon_t$$

We modelled this on a monthly basis, using a random walk adjustment process for the error term ϵ_t .

Parallel Lines: Scottish and British Policy Mood

Firstly we can consider the relationship between attitudes on taxes and spending in Scotland compared to the rest of the United Kingdom. Previous work has shown that the common perception that Scotland is more left-wing than the rest of Great Britain on economic policy is generally true, but that the difference is quite modest (Rosie and Bond 2007; Curtice and Ormston 2011; McCrone 2017). However, we are interested not just in whether Scottish voters are systematically more in favour of higher spending and taxes, but also whether Scottish public opinion moves in parallel with that in the rest of Great Britain. We also want to know whether public opinion in Scotland reacts to the level of UK public spending in a thermostatic manner, as it does in Great Britain as a whole (Bartle, Dellepiane-Avellaneda, and McGann 2018).

Figure 2 graphs public mood on economic policy for Scotland and the rest of Great Britain. These scales are derived using the IRT algorithm described using survey questions on taxes, spending and economic inequality. The algorithm produces a measure of the policy mood for each year, with higher scores indicating a more left-wing response. The scores produce no intrinsic scale (they are normalised with mean 0 and standard deviation 1), but to ease with interpretation we have transformed them to predict the probability of giving a left-wing response to an average question.

Inspecting Figure 2, we can see that Scottish mood on economic policy does indeed appear to move in parallel with the mood for the rest of Great Britain. Public opinion moves steadily to the left in the 1980s and 1990s, in response to the policies of the Conservative government. It then moves sharply back to the centre as Tony Blair becomes Prime Minister in 1997. It then continues to drift to the right, until the Labour government was replaced in 2010. This is same pattern is visible in both Scotland and the rest of Great Britain, although public opinion in Scotland did not move as far to the right in the mid-2000s and began moving back in a leftward direction sooner.



Figure 2 – Economic policy mood in Scotland and the rest of Great Britain

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.5590	0.4312	5.934	1.68e-06
mood rest UK pre-1997	1 2.0755	0.6519	3.184	0.00338
Adjusted R ²	0.87			
Augmented Dickey-Fuller	-6.07 (lag=0)	p-value	0.01	

Table 1 – Economic policy mood in Scotland and the rest of Great Britain

We can formally test the relationship between economic policy mood in Scotland and Great Britain. We do this by regressing policy mood in the rest of Great Britain on policy mood in Scotland, while constraining the slope parameter to one. This allows us to test whether the two series move in parallel, and also allows us to interpret the intercept as the degree to which Scottish mood is more left-wing than that in the rest of Great Britain. The two series are clearly highly correlated ($R^2 = 0.87$). However, correlation can be highly misleading with time series data. Indeed, two random sequences will often correlate in a statistically significant manner, especially if they have some trend. What we need to show is that the two sequences are cointegrated (Enders 2004). Roughly speaking, this means that the two sequences move up and down together in parallel. More formally it means that the error term is stationary – that is whatever relationship there is, it remains approximately the same throughout the time period. This is indeed the case for these two sequence, as shown by the augmented Dickey-Fuller test score of -6.07.

As expected, economic policy mood in Scotland is somewhat to the left of that in the rest of Great Britain. As we can see from the intercept, policy mood in Scotland is on average 2.55 percentage points to the left of that in Great Britain. Before 1997, Scottish mood was another 2.08 points more left-wing than Great Britain, making a total difference of 4.63%. While these differences are statistically significant, they are rather modest compared to the total variation in policy mood, which varies over the time period in Great Britain from 43% to

59%. Policy mood in the rest of Great Britain in the 1980s and 1990s was far more left-wing than it is in Scotland today. Furthermore, the difference in mood between Scotland and the rest of Great Britain has decreased over time – economy policy mood in Scotland is now far less distinct than it was in the 1980s and 1990s.

Furthermore policy mood in Scotland appears to react to economic conditions in the same way that it does in Great Britain. Bartle et al. (2018) show that economic policy mood in Great Britain behaves in a thermostatic manner, in the sense defined by Wlezien (1995). We can model Scottish economic policy mood in the same way. We use essentially the same error correction model³ as Bartle et al. (2018) with the same economic variables (domestic spending, average direct tax and the unemployment rate). We also include a dummy variable for the year 1997, given that there is a sudden and dramatic change in policy mood in that year. The results are given in Table 2. For an error correction model to be appropriate, it is necessary to show that there is a cointegrated relationship between the dependent and independent variables (Enders 2004; Grant and Lebo 2016). We show that this is the case.⁴

The results in Table 2 shows that policy mood in Scotland reacts in a strongly thermostatic manner to government policy and economic conditions, just as Bartle et al. (2018) find that it does in Great Britain as a whole. When public spending and tax is low, this leads to a strong leftward movement in public opinion, and vice versa. None of the short-term direct impact coefficients of the three independent variables are statistically significant. However, the error correction term is 0.70, which is both substantively and statistically significant. Roughly

³ The error correction model has the form $\Delta Y_t = b_0 + b_1 \Delta X_t + a (Y_{t-1} - g_0 - g_1 X_{t-1})$, where a is the error correction term.

⁴ The augmented Dickey-Fuller statistic is -3.67, which is significant at 5% level. Thus we can reject the null hypothesis that the stochastic term is non-stationary and conclude that there is cointegration. In addition, the t-statistic of the error correction term is 3.37, which is greater than the 10% critical value calculated from Ericsson and McKinnon (2002).

speaking, this means that if the level of policy mood is more left-wing than the model predicts for a given level of government spending, tax and unemployment, then policy mood will move to the right and remove 70% of this excessively left-wing mood in one year. Government spending, tax and unemployment have the expected significant effects on the long-run equilibrium mood – higher spending and tax leads to a more right-wing mood while higher unemployment leads to a more left-wing mood. Of course, it is not surprising that economic policy mood in Scotland reacts to government policy in the same way as economic policy mood in Great Britain as a whole, given that Scottish economic policy mood closely tracks that in the rest of the UK.

<i>Error correction</i>	-0.71 ^{***} (0.21)	t = 3.37 MacKinnon p<0.1 critical t value: 3.23
<i>Unemployment_{t-1}</i>		
Long-term	1.82 ^{***} (0.56)	
Short-term	0.65 (0.72)	
<i>Average direct tax_{t-1}</i>		
Long-term	-0.81 ^{**} (0.56)	
Short-term	0.07 (0.86)	
<i>Domestic spending_{t-1}</i>		
Long-term	-0.62 ^{**} (0.25)	
Short-term	-0.12 (0.57)	
1997 dummy	-7.60 ^{***} (3.37)	

N	33
Adjusted R ²	0.55
Root MSE	2.56
Augmented Dickey-Fuller value for integrating equation: -3.67 (lag order 3) ^{**}	

*** = p < 0.01, ** = p < 0.05 * = p < 0

Table 2 – Economic determinants of Scottish policy mood

Economic policy has usually been considered the main axis of political competition in the UK (Webb 2000). However, we can also consider the relationship between Scottish and British public opinion on other issues. We derived a scale that measures mood towards the welfare state. Some of the questions used to produce this scale concern the general responsibility of the state to provide for its citizens, but others focus on unemployment benefit and the responsibility of the unemployed to seek work. Inspecting Figure 3, we see a similar pattern to that in economic policy mood. Mood in Scotland and the rest of Great Britain appear

to move in parallel, with Scotland more left-wing than the rest of Great Britain, particularly before 1997. As with economic policy mood, welfare policy mood moves sharply to the right in the mid-1990s, and continues moving in this direction until around 2010. It is notable, however, that the rightward movement begins somewhat earlier than with economic policy mood. This starts to happen in 1994, before Tony Blair had become Prime Minister (but not before he had become leader of the Labour Party). Why public opinion moves in this way is beyond the scope of this paper, but we might speculate that it may be affected by the emphasis that Tony Blair and New Labour put on reforming the welfare state.

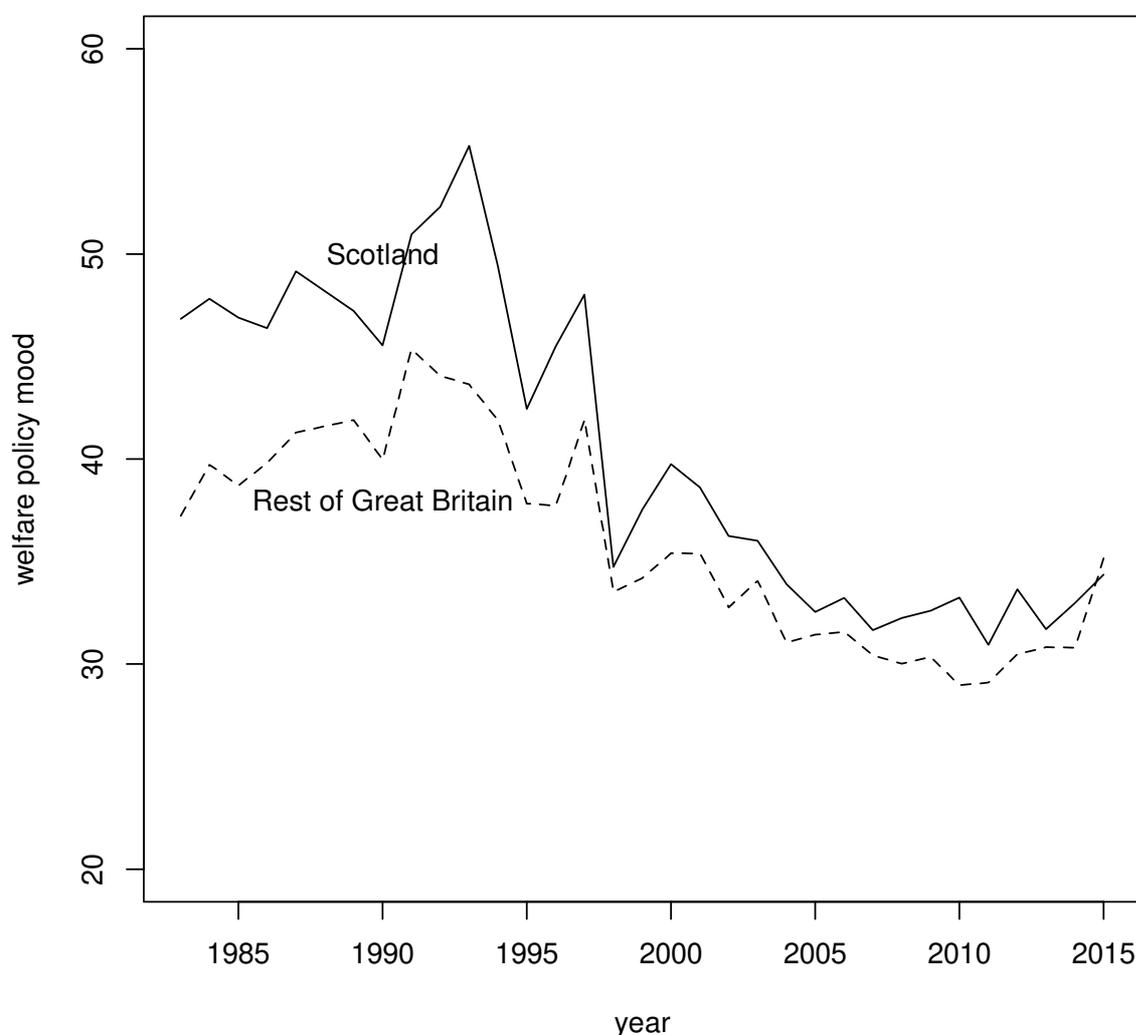


Figure 3 – Welfare policy mood in Scotland and the rest of Great Britain

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.2460	0.3713	6.049	1.22e-06
mood rest UK pre-1997	1 5.0888	0.5613	9.065	4.27e-10
Adjusted R ²	0.95			
Augmented Dickey-Fuller	-4.306 (lag=0)	p-value	0.01	

Table 3 – Welfare policy mood in Scotland and the rest of Great Britain

When we regress UK welfare policy mood on Scottish mood, we find that the R² is extremely strong (0.95). We also find that the two series are cointegrated, as shown by the augmented Dickey-Fuller score of -4.31. That is to say, the two series do indeed move in parallel. Scottish mood is slightly to the left of UK mood post-1997 (2.25%), but considerably to the left prior to 1997 (7.3%). Once again Scottish public opinion today is far more similar to that in the rest of Great Britain than it was in the 1980s and 1990s.

Next we consider mood on social policy. This is derived from questions on what we might call “moral politics” – for example, attitudes towards abortion, homosexuality, marriage equality and censorship. Once again we find that Scottish mood closely tracks that in the rest of Great Britain. However, as can be seen from Figure 4, the pattern over time is quite different to that we observe for economic or welfare politics mood. Attitudes towards social politics become steadily more liberal over the entire time period. Inspecting Table 4, we find that Scottish and UK mood are highly correlated (R² = 0.81) and that the two series are cointegrated (ADF = -4.45). Scottish mood is slightly more liberal after 1997 (the intercept is 1.45%), but very slightly less liberal prior to 1997.

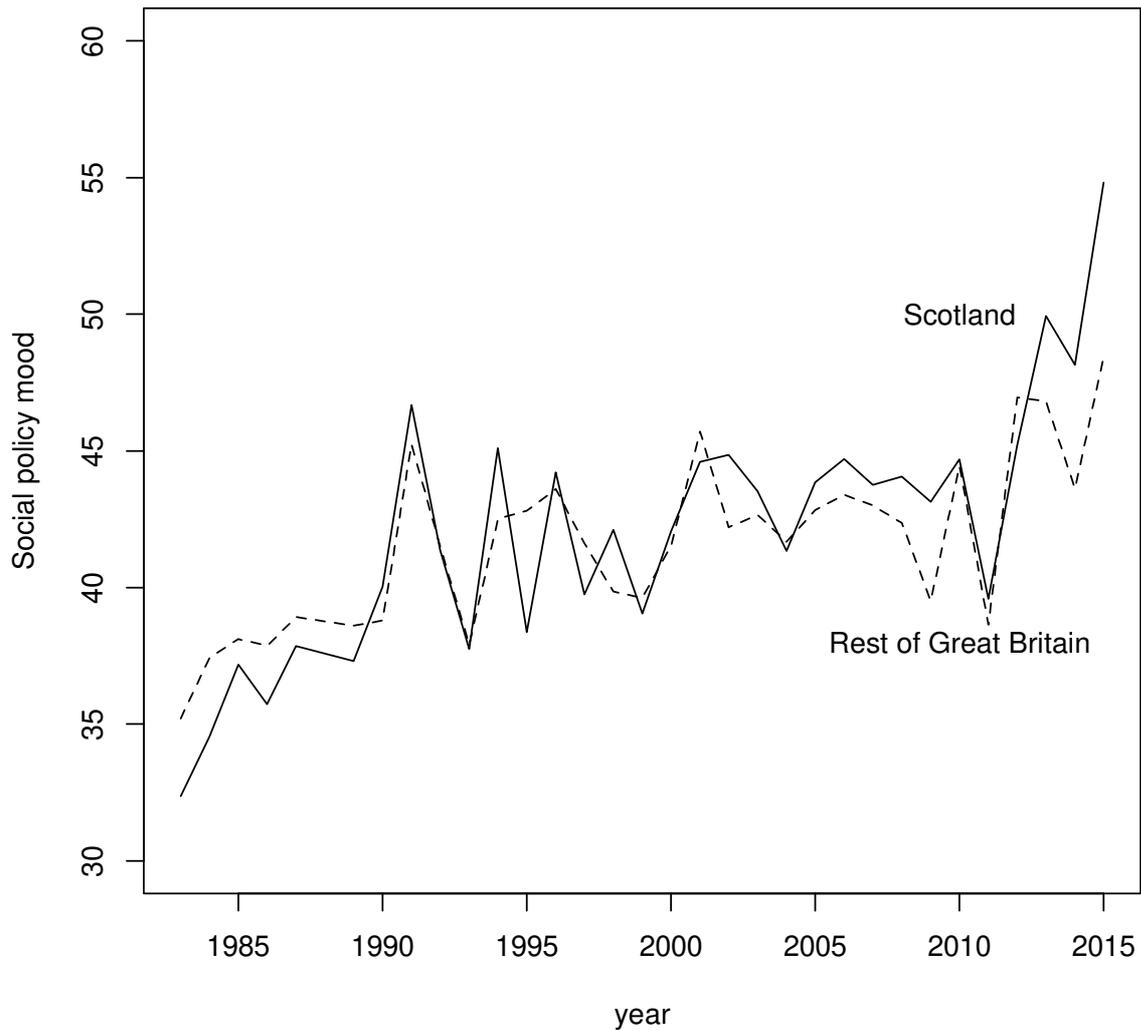


Figure 4 – Social / moral policy mood in Scotland and the rest of Great Britain

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	1.4535	0.4697	3.095	0.00647
mood rest UK pre-1997	1			
	-2.3022	0.7101	-3.242	0.00291
Adjusted R ²	0.81			
Augmented Dickey-Fuller	-4.45 (lag=0)	p-value	0.01	

Table 4 – Social / moral policy mood in Scotland and the rest of Great Britain

Finally we consider attitudes towards the European Union. Of course, in the 2016 EU referendum, Scotland voted quite differently from the UK as a whole, with 38% of Scottish voters voting leave, while the UK leave vote was 52%. However, when we consider more general attitudes to the EU, as opposed to referendum voting intentions, we find that Scottish

mood is rather more similar to that in the rest of Great Britain. Our measure of EU policy mood does not include questions about referendum voting intentions, but rather questions concerning general attitudes toward the EU, extension/reduction of its powers and the Euro. As can be seen in Figure 5, mood towards the EU in Scotland follows similar patterns to that in the rest of Great Britain. Support for the EU grows strongly in the early 1990s. There is then a sudden drop in support at the time of the ban of British beef exports due to BSE in 1996, but support recovers to its previous level the following year. However from that point support generally declines in both Scotland and the rest of Great Britain, reaching its low point in 2012.

As can be seen from Table 5, Scottish and UK mood towards the EU are highly correlated ($R^2 = 0.74$). However, the Augmented Dickey-Fuller test is not statistically significant, so we do not have evidence of cointegration. Inspecting Table 5 reveals why this is the case. The two sequences do not quite run parallel to each other. There are a considerable number of consecutive periods in the middle of the time period when Scottish mood is considerably more favourable towards the EU. However at the beginning and end of the period, Scottish mood is actually less favourable to the EU than the rest of Great Britain. While the vote in Scotland to remain in the EU was 14 points higher than in Great Britain as a whole, this does not appear to be the result of the Scottish public feeling more favourable to the EU in any general sense.

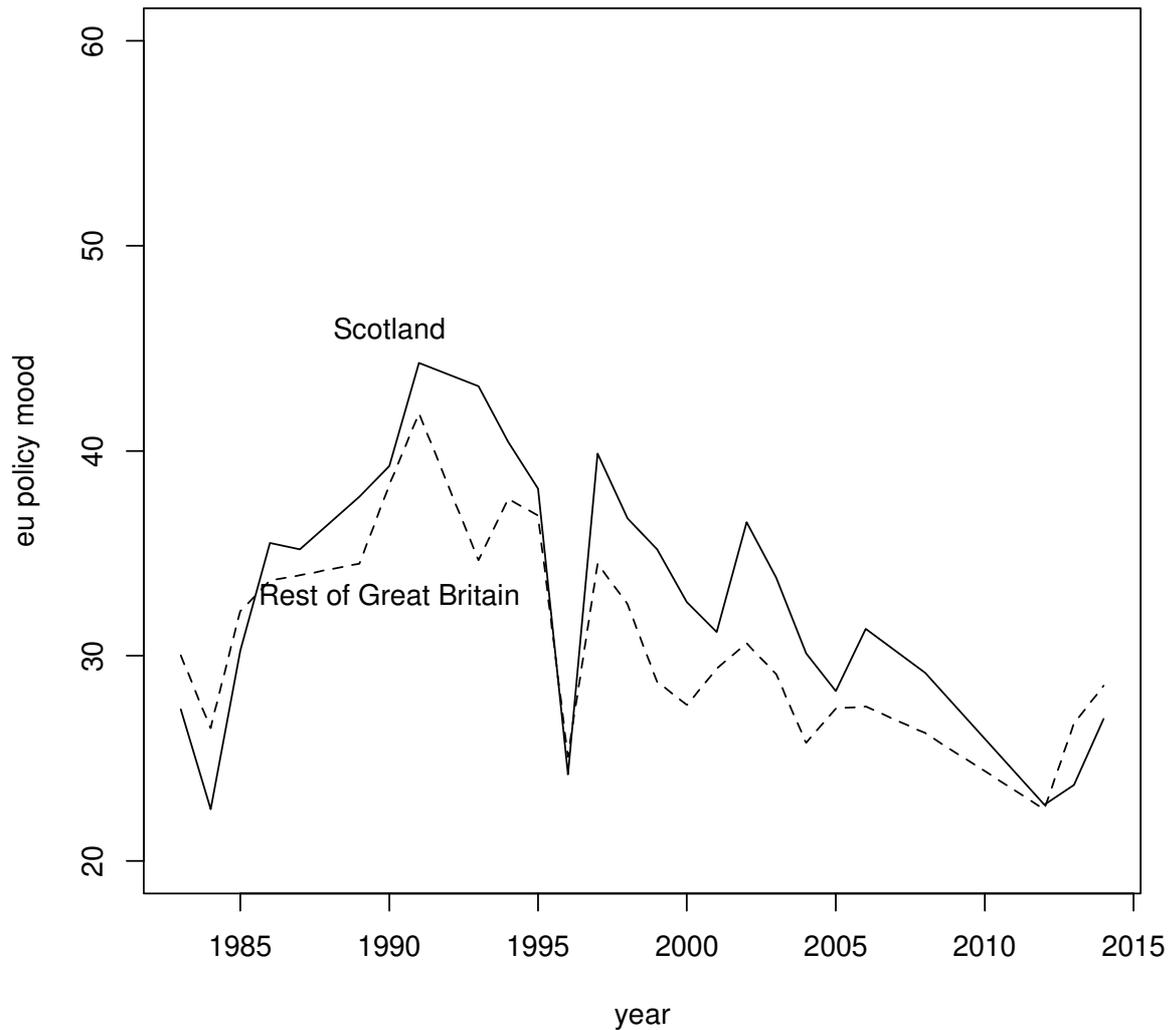


Figure 5 – EU policy mood in Scotland and the rest of Great Britain

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.7380	0.8699	3.147	0.00436
mood rest UK pre-1997	1			
	-1.3297	1.2303	-1.081	0.29052
Adjusted R ²	0.74			
Augmented Dickey-Fuller	-2.75 (lag=0)	p-value	0.29	

Table 5 – EU mood in Scotland and the rest of Great Britain

Thus we find not only that policy mood in Scotland is quite similar to that in the rest of Great Britain, but that it tracks it over time very closely – that is to say, the two sequences move in parallel with one another. Scotland may be slightly more left-wing in terms of preferences for economic policy, but when Great Britain moves to the left or right, Scotland

tends to move in parallel. Indeed, the difference between preferences in Scotland and the rest of Great Britain has decreased since the 1980s, at least in the case of economic and welfare policy mood. Furthermore, economic policy mood seems to react thermostatically to the same factors (such as the size of government and unemployment) as it does in Great Britain as a whole. Of course, the fact that policy mood in Scotland and Great Britain as a whole move in parallel should not be particularly surprising. While the Scottish parliament manages a considerable amount of spending, the overall levels of taxation and spending have been controlled by Westminster, although the 2016 Scotland Act grants the Scottish Parliament considerably greater authority over income tax (at least on earned income). Likewise policy towards the EU is determined by the UK as a whole. While Scotland has considerable autonomy over moral legislation, even in this area policy mood does not appear to have diverged much from that in the rest of Great Britain.

How Scotland is different: Independence and the party system

We have seen that policy mood in Scotland on most issues closely tracks that in the rest of Great Britain, as if Scotland and the rest of Great Britain were parallel publics reacting to the same stimuli. However, there are two respects in which the Scottish public is clearly very different from the rest of Great Britain. Firstly, there is considerable support for being independent of the UK altogether. Secondly, Scotland votes differently. Indeed, Scottish voters face a different party system to voters in England and Wales. In most Scottish constituencies, the realistic choice is not between one party advocating higher taxes and spending and one advocating lower, but rather between one party in favour of independence and one against.

We can track support over time for Scottish independence and also for the devolution of all tax and spending powers to the Scottish parliament (sometimes called “Devomax” or “Full Fiscal Autonomy”.) The scaling techniques we have described allow us to compare

opinion polls on independence from different survey organizations, taking account of the fact that certain polling houses systematically found more support for independence than others (“house effects”). They also allow us to measure support for the Scottish parliament having complete control of tax and spending, even though the question asked about this have changed over the years.⁵ Figure 6 charts these two series.

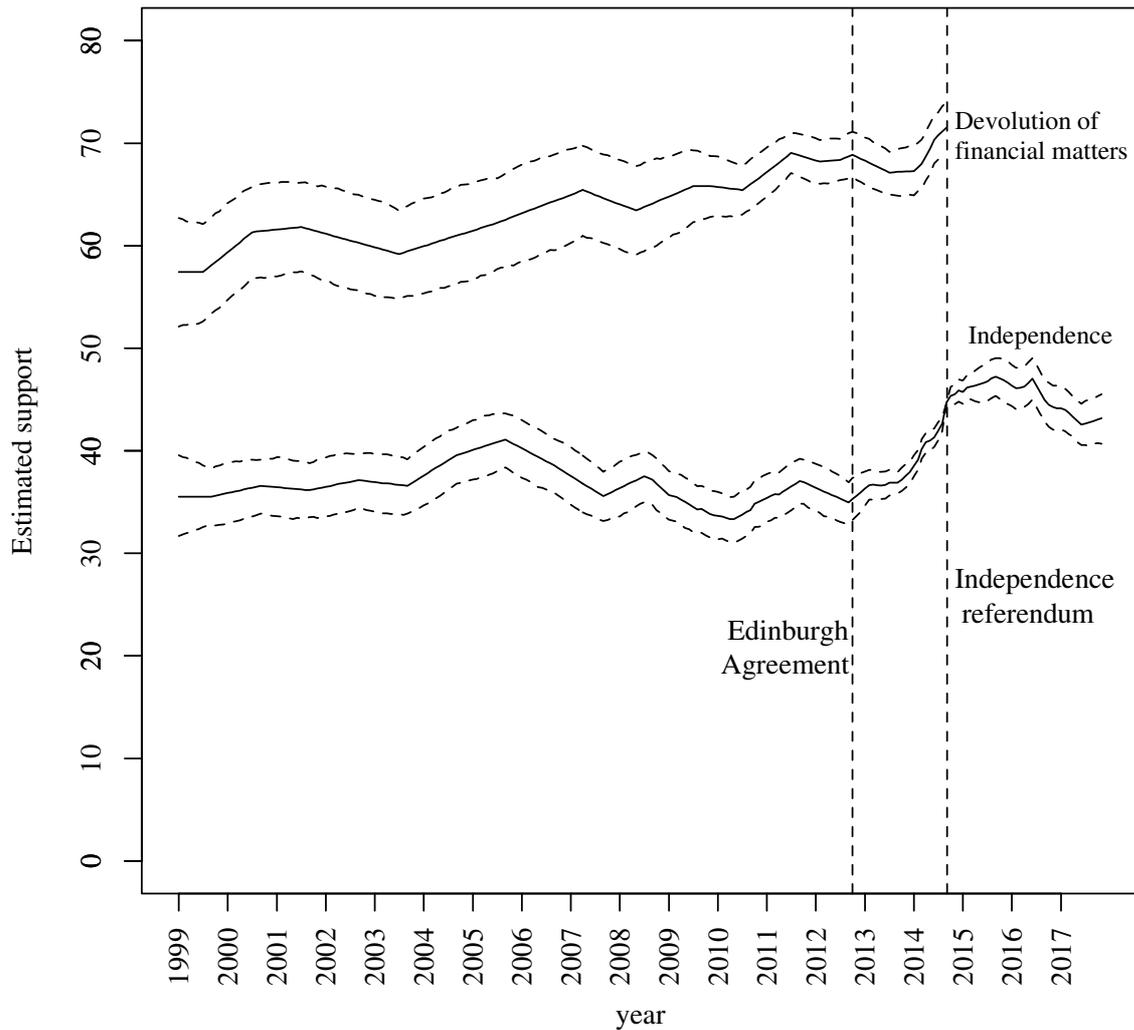


Figure 6 – Support for independence and devolution of financial matters

We find that support for independence fluctuated around 35% from 1999 to 2012, but then increased around 10 percentage points during the referendum campaign. In contrast to the

⁵ The scale only uses questions that mention control of taxes and spending or increasing the powers of the Scottish parliament, and not those that merely reference devolution, because devolution is no longer particularly controversial.

findings of Liñeira et al. (2017, 169), we find that that support for independence grew continuously during the campaign, and not just in the final few weeks (see also McGann 2014b).⁶ We estimate that support for financial devolution increased from 58% in 1999 to 72% in 2014.⁷ Thus in addition to those who support independence, there appears to be another 25% of the populations that favours the Scottish Parliament having complete control of domestic policy. As Liñeira et al. (2017, 168) argue, the median voter at the time of the independence referendum was a Devomax supporter. This support for greater autonomy is also compatible with the fact that Scottish voters have persistently expressed more far trust in the Scottish government than the government of the UK.⁸

It is clear that Scotland votes differently to the rest of the UK. The dominant party in Scotland, the Scottish National Party, does not even contest seats in the rest of the UK. However, Scotland has had a different party system to England and Wales even before the SNP became the largest party. In 1997, the Conservative Party ceased to be the main opposition to

⁶ The difference in the results is probably due to the fact that we control for “house effects” (the systematic biases of the various polling organizations). Until the very end of the campaign, the various polling houses varied greatly in their prediction, and this “noise” may have obscured the underlying trend. Once we control for the fact that polls from certain sources are always higher than others, we find a steady increase in support for independence from the time the referendum was agreed.

⁷ This series ends in 2014 because the survey questions asked about fiscal autonomy after the Independence Referendum were differently worded and thus not comparable. There was no overlap between new and existing question wordings. However, the new questions suggest that support for fiscal autonomy remains around 70%. For example, in a YouGov poll dated March 14, 2107, 70% of respondents supported either independence or more powers being devolved to the Scottish Parliament (as opposed to remaining in the UK with the powers devolved by the 2016 Scotland Act). See <http://whatscotlandthinks.org/questions/how-would-you-vote-in-a-referendum-in-which-the-options-were-independence-more-table>.

⁸ In 1999 32% of respondents trusted the UK government to work in Scotland’s long-term interest “all of the time” or “most of the time”. In 2012 this number was also 32%. Trust in the Scottish government to work in Scotland’s interest all or most of the time was 74% in 1999 and 64% in 2012. Trust in the Scottish government has fluctuated considerably over the time period, but has never fallen under 50%. Source: Scottish Social Attitudes. See <http://whatscotlandthinks.org/questions/how-much-do-you-trust-the-uk-government-to-work-in-scotlands-long-term-interes-5#table> and <http://whatscotlandthinks.org/questions/how-much-do-you-trust-the-scottish-government-to-work-in-scotlands-long-term-i-5#table>.

Labour in Scotland. It lost all its Scottish parliamentary seats, and only managed to finish second place in 23 out of 72 seats. From 1997 the choice in most Scottish constituencies was not between Labour and Conservative, but between Labour and SNP. The recovery of the Conservative Party in 2017 did not change the centrality of the SNP in the Scottish party system – the SNP was still first or second in all Scottish constituencies, competing with Labour in urban constituencies and with the Conservatives in rural ones.

Accountability in a Plurinational Democracy

In a Westminster system, democratic accountability works through the alternation of government. According to the macro-polity model we have laid out, the public can control policy – say the level of taxes and spending – by choosing between a party that will increase tax and spending (Labour) and one that will cut them (Conservative). This, of course, assumes that there it makes sense to talk about a single “British” public opinion that decides between these options, which is not obvious in a union state. We have outlined three ways in which the plurinational nature of the United Kingdom could make accountability problematic. Firstly, Scottish public opinion could be detached from that in the rest of the United Kingdom – not only more left-wing, but not even reacting to the same issues and events. Secondly, accountability could be confused because of devolution – Scottish voters could assign responsibility to the Scottish government rather than the UK government. Thirdly, even if Scottish public opinion moves in parallel with that of the rest of the UK, Scottish voters may not use their votes to influence who should be the UK government, but rather to express an opinion on other issues, such as Scottish independence.

In the first two respects, we find that Scottish public opinion works in the way necessary for the macro-polity model to function. Scottish public opinion is not detached from that in rest of the UK. In fact, public opinion in Scotland moves in parallel with that in England and

Wales, evidently responding to the same events and issues. Furthermore it appears to be reacting to the policies of the UK government, not the government of Scotland. However, in spite of this, many Scottish voters clearly no longer vote to choose between having a Labour or Conservative government for the UK. Rather, many of them vote to express that view that Scotland should or should not be independent. The traditional chain of Westminster accountability breaks down at the electoral stage.

It should be noted that the accountability problem that we are concerned with here applies to the UK government rather than the devolved Scottish government. It might appear that there is a problem with holding the Scottish government to account, given the fact that Scottish public opinion closely parallels that in the rest of UK. This would indeed be the case if Scottish voters treated Scottish parliament elections as second-order in the sense of Reif and Schmitt (1980). If it was the case that Scottish voters were primarily concerned with UK elections, and based their Scottish parliament vote on their preferences as to who the UK government should be, then the Scottish parliament could not be held properly accountable for the areas of policy it does control (but see also Norris 1997; Rallings and Thrasher 2005; Heath et al. 2003). However, it does not appear that Scottish voters treat Scottish parliament elections as second-order, at least not in a simple way (Johns 2011). Indeed in recent elections it appears that specifically Scottish valence factors, such as the evaluation of the Scottish government's performance, have been the best predictor of vote (Johns et al. 2009; Johns, Mitchell, and Carman 2013).

Instead it appears that Scottish voters treat Westminster elections as second-order, and this raises questions about UK-wide accountability. It is clear that independence was the crucial issue for Scottish voters in 2015 (Green and Prosser 2015), and to a lesser degree in 2017 (Curtice 2017; Prosser and Fieldhouse 2017). That is to say, Scottish voters are using their

Westminster vote to express a preference for or against Scottish independence, as opposed to which party they would like to form the British government.

Furthermore, this tendency for Westminster elections in Scotland to be about Scotland specific issues like has become ingrained in the Scottish party system. Westminster elections, of course, use single-member district plurality voting, which means that often the only realistic choice voters have is between the top two candidates. Before the 1990s, the top two parties in most constituencies were Labour and Conservative, giving most voters a choice between the two UK-wide parties. Indeed, Conservative vote and seat share in Scotland increased in years like 1979 and 1983 when the Conservatives did well nationally. However, since 1997, the SNP has been at least second placed in an overwhelming majority of Scottish constituencies. As a result in most (and more recently, all) constituencies, Scottish voters have faced a choice between the SNP, advocating independence, and one of the unionist parties (usually Labour).

The existence of a separate party system in Scotland forces us to question whether it still possible to provide democratic accountability through the traditional Westminster model, relying on the alternation of (majority) governments. Currently 11% of the British electorate – Scotland and Northern Ireland – faces a party system where the main issue is not the size or role of government, but rather autonomy/independence with regard to the UK government. As a result it becomes harder for a single party to win a majority, and coalition or minority government will be more frequent. To win a majority without Scottish or Northern Irish seats would require a party to win around 57% of the seat in England and Wales (slightly less if it wins a handful of Scottish seats). This has only happened intermittently over the last fifty years (1983, 1987, 1997, 2001, 2015). While the Labour Party was dominant in Scotland, this consequence was less obvious. The result of the Conservative Party being uncompetitive in Scotland was simply that Labour had a structural advantage in the UK as a whole – Labour

could win a Westminster majority with a smaller percentage of the vote than the Conservatives would require (Electoral Reform Society 2010; Borisyuk et al. 2010; Curtice 2010). However, now that the SNP is the largest party in Scotland, gaining a majority becomes harder for both parties.

Conclusion

Previous studies have found that policy mood in the United Kingdom reacts thermostatically to government policy (when government spending is high, public opinion moves to the right and vice versa) and that in the long run this leads to a change of government, which in turn brings policy back in line with public opinion (Soroka and Wlezien 2010; Bartle, Dellepiane-Avellaneda, and Stimson 2011b; Bartle, Dellepiane-Avellaneda, and McGann 2018). This provides a degree of democratic accountability, in a way that is very consistent with the standard justification of the Westminster system – alternation of government allows the people to hold the government accountable for its policy (Powell 1999, 2000). However, this “macro polity” model assumes that there is a single public opinion for the UK as a whole. The existence of a distinct Scottish politics puts this story into question.

However, we find that the patterns of public opinion in Scotland are quite compatible with the macro-polity model. In fact, Scottish public opinion closely tracks that of the rest of Great Britain. Previous studies have shown that while Scottish public opinion is to the left of that in England, the difference is less than has been claimed (Rosie and Bond 2007; Curtice and Ormston 2011; McGarvey and McConnell 2012; McCrone 2017). What we show is that Scottish public opinion moves in parallel with the rest of Great Britain. Furthermore, we find the same thermostatic relationship between policy mood in Scotland and the level of government spending as Bartle et al. (2018) find in the rest of Great Britain. We also find that Scottish mood on other issues – welfare, moral politics, even to some degree attitudes towards

the European Union – move in parallel to mood in Great Britain. It is as if the Scottish and UK electorates form a single public on these issues, reacting to the same stimuli and events. Of course this is not surprising given that control over tax and spending remains largely under the control of the UK government, although the 2016 Scotland Act does devolve some additional powers over income tax and welfare.

The Westminster model of accountability becomes problematic when we consider the voting behaviour of the Scottish electorate. The Scottish public may have preferences for issues (such as the size of government) that run parallel to those in the rest of Britain, but they do not seem to vote on them. Instead they seem to vote on the basis of attitudes towards Scottish independence and autonomy, or perhaps their assessment of competence of the Scottish government. Of course, as various commentators have pointed out, it is quite possible for Scotland to have similar preferences over policy, but still desire greater autonomy (McCrone 2001, 2017; Keating 2010). Even if Scottish voters desire similar policies to English and Welsh voters, they can still have greater confidence in a Scottish government than the UK government to deliver those policies. Nevertheless this causes problems for the Westminster model of accountability – Scotland does not contribute to selecting the government of the UK and the fact that most Scottish seats are “out of play” means that it is hard for any party to win a single-party majority.

We can speculate on the future effects of this. One possibility is that Scotland simply becomes irrelevant to which party governs the UK, and thus has no influence on UK government policy. This is likely to be the case if the SNP retains its dominant position in Scotland and both main UK parties continue to rule out any possibility of it being a coalition partner. Of course, we would expect this to increase the demand for increased autonomy for Scotland. Alternatively the SNP could hold the balance of power and at least one of the main

UK parties is willing to deal with it. This would give the SNP a great deal of influence. However, various commentators (McLean and McMillan 2005; Keating 2009) have argued that this situation may well make increased devolution or even independence a desirable option for elites in England, and greater autonomy would almost certainly be demanded by the SNP as the price of its support.

A further stage of research would be to apply the same methodology to other plurinational democracies. The case of Spain and Catalonia appears comparable in many ways, not least that support for Scottish and Catalan independence surged at approximately the same time. Although Spanish elections have proportional representation elections, the system is not completely proportional and often gives a significant advantage to large parties. As a result single-party governments (majority or minority) have been the norm, and thus Spain has had two party electoral dynamics similar to those in the UK. It will be interesting to see if public opinion in Catalonia moves in parallel with that in the rest of Spain, as public opinion in Scotland and rest of Britain has. It appears that independence has become the dominant political cleavage in Catalonia, and this has consequences for the ability to form governments in Spain, especially given the fact that the Spanish party system has become more fragmented in recent years. It will also be interesting to consider plurinational democracies with coalition government and more consociational systems, such as Belgium and Switzerland. These systems would appear to be premised on negotiation between different regional groups, as opposed to alternation of government, and we would expect democratic accountability to work in a different manner. However, it is notable that regional and populist parties within these countries, such as the VB and N-VA in Belgium and the SVP in Switzerland, have argued for a more majoritarian style of politics (Dalle Mulle 2018; McGann and Kitschelt 2005).

Bibliography

- Anderson, Cameron D. 2006. Economic Voting and Multilevel Governance: A Comparative Individual-Level Analysis. *American Journal of Political Science* 50 (2):449-463.
- Bartle, John, Sebastian Dellepiane-Avellaneda, and Anthony J. McGann. 2018. Policy accommodation versus electoral turnover: Policy representation in Britain, 1945-2015. *Journal of Public Policy*.
- Bartle, John, Sebastian Dellepiane-Avellaneda, and James Stimson. 2011a. The Moving Centre: Preferences for Government Activity in Britain, 1950–2005. *British Journal of Political Science* 41 (2):259-285.
- Bartle, John, Sebastian Dellepiane-Avellaneda, and James A. Stimson. 2011b. The Policy Mood and the Moving Centre. In *Britain at the polls 2010*, edited by N. Allen and J. Bartle. London: SAGE.
- Beck, Nathaniel. 1989. Estimating Dynamic Models Using Kalman Filtering. *Political Analysis* 1:121-156.
- Bellucci, Paolo, and Alessandro Pellegata. 2017. Citizens' policy mood, policies and election outcomes in Italy. *Contemporary Italian Politics* 9 (1):8-29.
- Borisyuk, Galina, Ron Johnson, Michael Thrasher, and Colin Rallings. 2010. A method for measuring and decomposing electoral bias for the three-party case, illustrated by the British case. *Electoral Studies* 29 (4):733-745.
- Bulpitt, Jim. 1983/2008. *Territory and Power in the United Kingdom: An Interpretation*. Colchester: ECPR Press.
- Cairney, Paul, and Neil McGarvey. 2013. *Scottish Politics*. Basingstoke: Palgrave MacMillan.
- Curtice, John. 2010. So What Went Wrong with the Electoral System? The 2010 Election Result and the Debate About Electoral Reform. *Parliamentary Affairs* 63 (4):632-638.
- Curtice, John. 2017. The Three Characteristics of the Scottish Conservative Revival. In *What Scotland Thinks*, edited by J. Curtice.
- Curtice, John, and Rachel Ormston. 2011. Is Scotland more Left-wing than England? *British Social Attitudes* 28 (42).
- Dalle Mulle, Emmanuel. 2018. *The Nationalism of the Rich: Discourses and Strategies of Separatist Parties in Catalonia, Flanders, Northern Italy and Scotland*. London: Routledge.
- Dicey, Albert Venn. 1915. *Introduction to the Study of the Law of the Constitution*. London: MacMillan.
- Electoral Reform Society. 2010. *The UK General Election 2010 In-depth: Report and Analysis*. London.
- Ellis, Christopher, and James A. Stimson. 2012. *Ideology in America*. New York: Cambridge University Press.
- Enders, Walter. 2004. *Applied Econometric Time Series*. Hoboken, NJ: John Wiley & Sons.
- Enns, Peter K., and Paul M. Kellstedt. 2008. Policy Mood and Political Sophistication: Why Everybody Moves Mood. *British Journal of Political Science* 38:433-454.
- Ericsson, Neil R., and James G. MacKinnon. 2002. Distributions of Error Correction Tests for Cointegration. *Econometrics Journal* 5 (2):285-318.
- Erikson, Robert S., Michael MacKuen, and James A. Stimson. 2002. *The Macro Polity*. New York: Cambridge University Press.
- Grant, Taylor, and Matthew J. Lebo. 2016. Error Correction Methods with Political Time Series. *Political Analysis* 24:3-30.
- Green, Jane, and Chris Prosser. 2015. *The Ongoing Independence Referendum in Scotland: Implications for 7th May 2015*. British Election Study 2015 [cited 21/11/2018].

Available from <https://www.britishelectionstudy.com/bes-impact/the-ongoing-independence-referendum-in-scotland-implications-for-7th-may-2015/> - .W8ySzS-ZOHo.

- Heath, Anthony, Iain McLean, Bridget Taylor, and John Curtice. 2003. Between first and second order: a comparison of voting behaviour in european and local elections in Britain. *European Journal of Political Research* 35 (3):389-414.
- Jackman, Simon. 2005. Pooling the Polls Over an Election Campaign. *Australian Journal of Political Science* 40 (4):499-517.
- Johns, Robert. 2011. Credit Where it's Due? Valence Politics, Attributions of Responsibility, and Multi-Level Elections. *Political Behavior* 33 (1):53-77.
- Johns, Robert, James Mitchell, and Christopher Carman. 2013. Constitution or Competence? The SNP's Re-election in 2011. *Political Studies* 61 (S1):158-178.
- Johns, Robert, James Mitchell, David Denver, and Charles Pattie. 2009. Valence Politics in Scotland: Towards an Explanation of the 2007 Election. *Political Studies* 57:207-233.
- Keating, Michael. 2001. *Plurinational Democracy: Stateless Nations in a Post-Sovereignty Era*. Oxford: Oxford University Press.
- Keating, Michael. 2009. *The Independence of Scotland: Self-Government and the Shifting Politics of Union*. Oxford: Oxford University Press.
- Keating, Michael. 2010. The Strange Death of Unionist Scotland. *Government and Opposition* 45 (3):365-385.
- Lijphart, Arend. 1999. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. New Haven: Yale University Press.
- Liñeira, Robert, Ailsa Henderson, and Liam Delaney. 2017. Voters' Response to the Campaign: Evidence from the Survey. In *Debating Scotland: Issue of Independence and Union in the 2014 Referendum*, edited by M. Keating. Oxford: Oxford University Press.
- McCrone, David. 2001. *Understanding Scotland: The Sociology of a Nation, 2nd edn, London, Routledge, 2001*. 2nd ed. London: Routledge.
- McCrone, David. 2017. *The New Sociology of Scotland*. London: Sage.
- McGann, Anthony J. 2014a. Estimating the Political Center from Aggregate Data: An Item Response Theory Alternative to the Stimson Dyad Ratios Algorithm. *Political Analysis* 22:115-129.
- McGann, Anthony J. 2014b. The Scottish referendum: steady increase in support for Yes over last nine months. *Significance* (9 July 2014).
- McGann, Anthony J., and Sebastian Dellepiane-Avellaneda. 2015. The Comparative Macropolity: Public Opinion and Policy in Majoritarian and Consensus Democracies. In *Annual Conference of the European Political Science Association*. Vienna.
- McGann, Anthony J., and Herbert Kitschelt. 2005. The Radical Right in The Alps: The Evolution of Support for the Swiss SVP and Austrian FPÖ. *Party Politics* 11 (2):147-171.
- McGarvey, Neil, and Allan McConnell. 2012. Process, Policy and Politics: Examining Some Convenient Scottish Political Myths. In *Annual Conference of the Political Studies Association*. Belfast.
- McLean, Iain, and Alistair McMillan. 2005. *State of the Union*. Oxford: Oxford University Press.
- Mitchell, James. 2014. *The Scottish Question*. Oxford: Oxford University Press.
- Norris, Pippa. 1997. Second Order Elections Revisited. *European Journal of Political Research* 31 (1-2):109-114.
- Page, Benjamin I., and Robert Y. Shapiro. 1992. *The Rational Public: Fifty Years of Trends in America's Policy Preferences*. Chicago, IL: University of Chicago Press.

- Powell, G. Bingham Jr. 1999. Westminster Model versus PR: Normative and Empirical Assessments. *Representation* 36 (2):117-126.
- Powell, G. Bingham Jr. 2000. *Elections as Instruments of Democracy: Majoritarian and Proportional Visions*. New Haven: Yale University Press.
- Prosser, Chris, and Ed Fieldhouse. 2017. A tale of two referendums – the 2017 election in Scotland. In *British Election Study*: British Election Study.
- Rallings, Colin, and Michael Thrasher. 2005. Not all 'second-order' contests are the same: Turnout and party choice at the concurrent 2004 local and European parliament elections in England. *British Journal of Politics and International Relations* 7 (4):584-597.
- Reif, Karlheinz, and Hermann Schmitt. 1980. Nine Second-Order National Elections - a Conceptual-Framework for the Analysis of European Election Results. *European Journal of Political Research* 8 (1):3-44.
- Rosie, Michael, and Ross Bond. 2007. Social Democratic Scotland? In *Scottish Social Democracy: Progressive Ideas for Public Policy*, edited by M. Keating. Brussels: Presses interuniversitaires européennes/Peter Lang.
- Salmond, Alex. 2013. Speech to SNP National Conference, 19 October 2013. *New Statesman*, 20 October 2013.
- Samejima, F. 1969. Estimation of latent ability using a response pattern of graded scores. *Psychometrika Monograph* 17 (34 (4 pt2)).
- Samejima, F. 1974. Normal ogive model on the continuous response level in the multidimensional latent space. *Psychometrika* 39:111-121.
- Samejima, F. 1997. Graded Response Model. In *Handbook of Modern Item Response Theory*, edited by W. van der Linden and R. Hambleton. New York: Springer.
- Scottish Government. 2013. *Scotland's Future: Your Guide to an Independent Future*. Edinburgh.
- Soroka, Stuart Neil, and Christopher Wlezien. 2010. *Degrees of democracy : politics, public opinion, and policy*. Cambridge ; New York: Cambridge University Press.
- Stimson, James A. 1991. *Public opinion in America : moods, cycles, and swings, Transforming American politics*. Boulder: Westview Press.
- Stimson, James, Cyrille Thiébaud, and Vincent Tiberj. 2009. The Structure of Policy Attitudes in France. In *Annual Meetings of the Midwest Political Science Association*. Chicago.
- Webb, Paul D. 2000. *The Modern British Party System*. London: SAGE.
- Wlezien, Christopher. 1995. The Public as Thermostat - Dynamics of Preferences for Spending. *American Journal of Political Science* 39 (4):981-1000.