

Norman Schofield · Gonzalo Caballero · Daniel Kselman *Editors*

Advances in Political Economy

Institutions, Modelling and Empirical Analysis

This book presents latest research in the field of Political Economy, dealing with the integration of economics and politics and the way institutions affect social decisions. The focus is on innovative topics such as an institutional analysis based on case studies; the influence of activists on political decisions; new techniques for analyzing elections, involving game theory and empirical methods.

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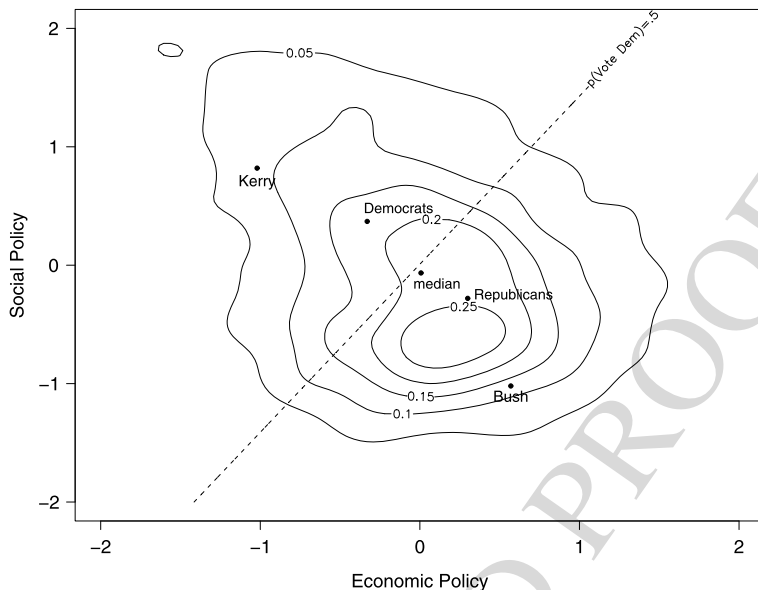


Fig. 1 Electoral distribution and candidate positions in the United States in 2004

(or attitudes) towards government expenditure and taxes and can be interpreted as a *economic* axis.¹⁹ The second north-south or *social* dimension reflects attitudes on social policy, particularly civil rights, as well as voter opinions about abortion etc.²⁰ Figure 1 also shows estimates of the positions of the two presidential candidates.

Because the political space is two-dimensional, parties in the United States must be coalitions of opposed interests. Figure 1 also shows a *partisan cleavage line* obtained from a simple logit model of the 2004 Presidential election. This cleavage line joins the preferred points of voters who, according to the logit model, would choose the candidates with equal probability of one half. The logit model gives

$$\rho_{dem} = \frac{\exp(a + bx_i + cy_i)}{1 + \exp(a + bx_i + cy_i)} \quad (1)$$

with $(a, b, c) = (-0.2, 1.34, -0.93)$. Setting $\rho_{dem} = \frac{1}{2}$ we obtain the equation

$$y = 1.44x - 0.21. \quad (2)$$

This equation almost passes through the point $(0, -0.21)$ and suggests that the Democrat candidate, Kerry, had a slight advantage over the Republican candidate,

¹⁹The economic axis is defined so that voters who believe in the free market and that spending on welfare programs should be decreased are located on the right of this x -axis.

²⁰The social axis is defined so that voters who support civil rights for gays and believe that abortion should be readily available are located to the north of this y -axis.

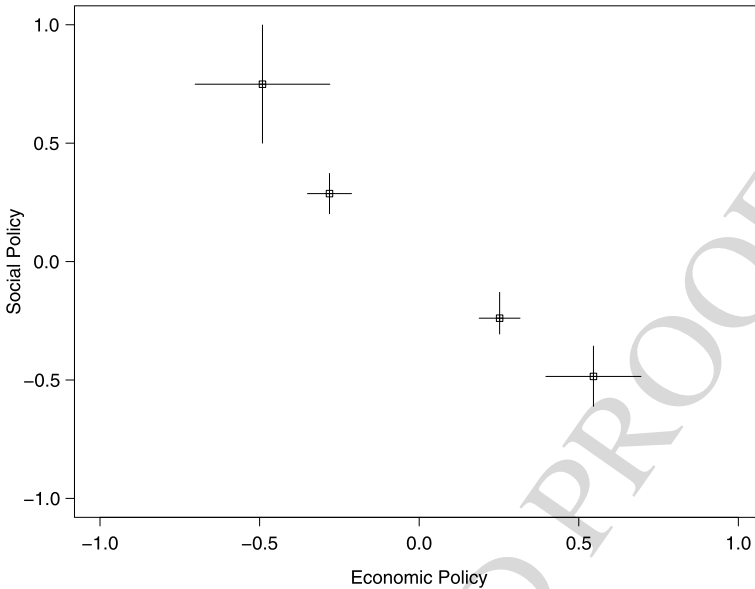


Fig. 2 Comparison of mean partisan and activist positions for Democrat and Republican voters in 2004 (error bars are larger for the mean activist positions)

Bush. This *partisan cleavage line* separates respondents who tend to vote Democrat, and generally are located in the upper left quadrant, from those who tend to vote Republican, in the lower right quadrant.

Figure 2 shows the mean positions of Democratic and Republican Party voters and activists.²¹ Figure 2 suggests that though the Republican party contains both socially conservative and socially liberal groups, almost all Republican activists are located in the lower right of the policy space. In opposition, all the Democrat party activists tend to be located in the upper left of the policy space. The mean activist estimates are

$$\begin{bmatrix} Act : 2004 & Rep & Dem \\ x & 0.55 & -0.49 \\ y & -0.48 & +0.75 \end{bmatrix}. \quad (3)$$

The two dimensionality of the political space is corroborated by work in social psychology that finds that there are in essence four “quadrants” to morality: Liberal secularists (upper left), the religious left (lower left), Libertarians (upper right) and social conservatives (lower right). The social psychological literature defines the

²¹The figure shows the standard error bars for these estimates, with larger error bars for activist estimates.

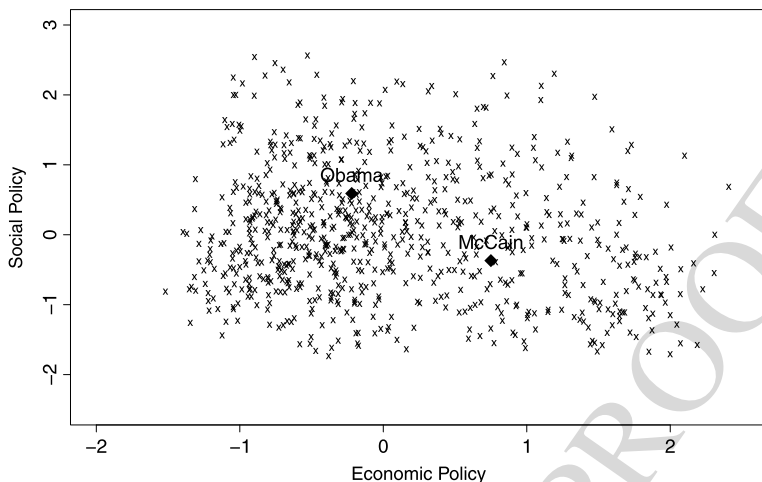


Fig. 3 Distribution of voter ideal points and candidate position in 2008

left hand domain in terms of an emphasis on justice while the right hand domain is defined in terms of authority.²²

An analysis for the 2000 contest between Gore and Bush gives a similar result with a partisan cleavage line given by

$$y = 1.87x - 0.34. \quad (4)$$

Figures 3 and 4 show the distribution of voter and activist preferred positions for the 2008 election. For this election, the *partisan cleavage line* is given by the equation

$$y = 0.82x - 0.4, \quad (5)$$

which passes through the point $(0, -0.4)$. This cleavage line suggests the greater advantage of the Democrat candidate, Obama, over McCain. Notice that the cleavage lines from 2000 to 2004 to 2008 had rotated slightly, in a clockwise direction, suggesting that the social axis had become increasingly important.

²²More precisely, Graham et al. (2009) use factor analysis on five moral traits, including “compassion”, “fairness”, “loyalty”, “authority” and “purity”. These define the four moral clusters. Mondak et al. (2010) uses regression analysis to explore the effects of personality traits such as “openness”, “conscientiousness”, “extraversion”, “agreeableness” and “emotional stability” on political choice. Using the 2006 Congressional Election Study (CES) he shows that “openness” and “conscientiousness” are correlated with liberal/conservative ideology respectively. Moreover, “openness” is associated with agreement with legalized abortion and weakly associated with opposition to Federal income tax cuts. This analysis is suggestive of a correlation between the two dimensional trait space and the two dimensional policy space.

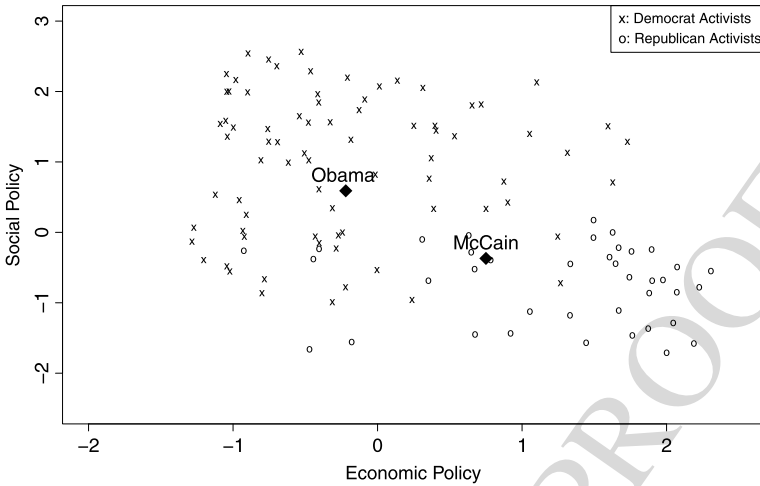


Fig. 4 Distribution of activist ideal points and candidate positions in 2008

Table 1 Factor loadings for economic and social policy

Question	Economic policy	Social policy
Less Government services	0.53	0.12
Oppose Universal health care	0.51	0.22
Oppose Bigger Government	0.50	0.14
Prefer Market to Government	0.56	
Decrease Welfare spending	0.24	
Less government	0.65	
Worry more about Equality	0.14	0.37
Tax Companies Equally	0.28	0.10
Support Abortion		0.55
Decrease Immigration	0.12	0.25
Civil right for gays		0.60
Disagree Traditional values		0.53
Gun access	0.36	
Support Afr. Amer	0.14	0.45
Conservative v Liberal	0.30	0.60
Eigenvalue	1.93	1.83

Table 1 gives the two dimensional factor model based on the ANES 2008 Survey, while Tables 2 and 3 give the results of the estimates of mean positions of voters, activists and the candidates in 2008.

Table 2 Descriptive data for the 2008 presidential election

	Economic policy			Social policy			<i>n</i>
	Mean	s.e.	95 % C.I	Mean	s.e.	95 % C.I	
Activists							
Democrats	-0.20	0.09	[-0.38, -0.02]	1.14	0.11	[0.92, 1.37]	80
Republicans	1.41	0.13	[1.66, 1.16]	-0.82	0.09	[-0.99, -0.65]	40
Non-activists							
Democrats	-0.17	0.03	[-0.24, -0.11]	0.36	0.04	[0.29, 0.44]	449
Republicans	0.72	0.06	[0.60, 0.84]	-0.56	0.05	[-0.65, -0.46]	219
							788

Table 3 Obama and McCain electorally perceived positions

Question	Obama	McCain
Estimated position on economic policy	-0.22	0.59
Estimated position on social policy	0.75	-0.37

The mean activist estimates are

$$\begin{bmatrix} \text{Act : 2008} & \text{Rep} & \text{Dem} \\ x & 1.41 & -0.20 \\ y & -0.82 & +1.14 \end{bmatrix}. \quad (6)$$

A comparison of (3) and (5) provides some evidence that activist average positions have become more extreme between 2004 and 2008. One way to check this inference is to compare (3) and (5) in terms of the electoral standard deviations obtained from the factor models for the two elections.²³ Using $(\sigma_x, \sigma_y) = (0.76, 0.76), (0.9, 0.91)$ for 2004 and 2008 respectively, this correction gives

$$\begin{bmatrix} \text{Act : 2004} & \text{Rep} & \text{Dem} \\ x/sd & 0.72 & -0.64 \\ y/sd & -0.63 & +0.99 \end{bmatrix}, \quad \begin{bmatrix} \text{Act : 2008} & \text{Rep} & \text{Dem} \\ x/sd & 1.56 & -0.22 \\ y/sd & -0.91 & +1.26 \end{bmatrix}. \quad (7)$$

The correction suggests that Republican activists have, on average, become much more radical in their preferences in both axes relative to the average distribution of electoral preferences. In contrast, Democrat Party activists have on average, become more moderate on the economic axis, and more radical on the social axis.

²³Details of the 2008 factor model is given in the next section.

Performing the same calculation for non-activists for the parties we find:

$$\begin{bmatrix} 2004 & \text{Rep} & \text{Dem} \\ x & 0.30 & -0.33 \\ y & -0.28 & +0.37 \end{bmatrix}, \begin{bmatrix} 2008 & \text{Rep} & \text{Dem} \\ x & +0.72 & -0.17 \\ y & -0.56 & +0.36 \end{bmatrix}, \quad (8)$$

$$\begin{bmatrix} 2004 & \text{Rep} & \text{Dem} \\ x/sd & 0.40 & -0.43 \\ y/sd & -0.37 & +0.49 \end{bmatrix}, \begin{bmatrix} 2008 & \text{Rep} & \text{Dem} \\ x/sd & 0.80 & -0.19 \\ y/sd & -0.62 & +0.40 \end{bmatrix}. \quad (9)$$

Average voter positions for the two parties have therefore shifted somewhat towards the two opposed quadrants, but not as much as the activist mean positions. The increasing dominance of “Tea Party” social conservatives in the Republican Party, and indeed the fact that the Congressional Republican positions in the recent election of 2010 appeared to be fairly “radical” in the lower right quadrant of the political space, caused some prominent Republicans to consider a change of party allegiance to the Democrats. Shifts in the activist coalitions for the two parties thus cause a transformation of the *partisan cleavage line*.

This phenomenon appears to be a fundamental aspect of US politics: as activists on the “trailing edge”²⁴ of the cleavage line change party allegiance, then the positions of the two parties shift. This can be interpreted as a clockwise rotation in the political space.

We argue that the fundamental changes in voter choice result not only from changes in the distribution of electoral preferences, but from the shifts in electoral perceptions about the competence and character traits of the political candidates.²⁵ These perceptions are influenced by the resources that the candidates command. In turn, these changes in perceptions are the consequence of the shifting pattern of activist support for the candidates. The essence of the underlying model is that it attempts to endogenize the resources available to candidates by modeling the contracts they can make with their supporting activists. The activists must solve their own optimization problem by estimating the benefit they receive from their contributions and deciding what resources to make available to their chosen candidate.

In recent years, the importance of activist contributions has increased, and this has enhanced the influence of activist groups.²⁶ The empirical and formal models

²⁴These would, on the one hand, be cosmopolitan, socially liberal but economically conservative Republicans (in the upper right quadrant) or on the other hand, populist, socially conservative but economically leftist Democrats (in the lower left quadrant).

²⁵Below we present an empirical model that links electoral perceptions to candidate character traits such as moral, caring, knowledgeable, strong, honest, intelligent, optimistic.

²⁶Indeed, Herrera et al. (2008) observe that spending by parties in federal campaigns went from 58 million dollars in 1976 to over 1 billion in 2004 in nominal terms. The Center for Responsive Politics estimates that election spending, including candidate spending, went from about \$3.5 billion in 2000 to \$4.6 billion in 2004 to \$5.3 billion in 2008.

691 that we discuss here provide a reason why electoral politics has become so polar-
 692 ized in the United States. This model of activist polarization accounts for the “dis-
 693 appearing center” in politics (Gelman 2009) and the paradox that poor states seem-
 694 ingly tend to vote Republican while rich states tend to vote Democrat (Abramowitz
 695 2010).²⁷

696 Moreover, this polarization appears to have benefited the wealthy in society and
 697 may well account for the increase in inequality in income and wealth distribution
 698 that has occurred over the last decade (Hacker and Pierson 2006, 2010; Pierson and
 699 Skocpol 2007).

700 Essentially there is an arms race between candidates over these resources due to
 701 a feedback mechanism between politics and economics. As the outcome of the elec-
 702 tion becomes more important, activists become increasingly aware that the resources
 703 they provide have become crucial to election victories, and they become more de-
 704 manding of their chosen candidates. Because of the offer of resources, candidates
 705 are forced to move to more radical positions, and polarization in candidate positions
 706 increases, even though there may be little change in the degree of polarization of the
 707 electorate.

708 Over the long run we see two forces at work. First, the continuing “circum-
 709 ferential” realignment induced by a slow rotation of the partisan cleavage line,
 710 as activists switch party allegiance. Secondly, a “radial” polarization that occurs
 711 at times of political quandary, caused by economic downturn or shocks to the
 712 global political economy, inducing a change in the distribution of voter preferred
 713 points.

714 In the next section we present an outline of the model that we use. In Sect. 3
 715 we discuss the effect of the 2008 election followed by Sect. 4 where we discuss
 716 the midterm election of 2010 and the ensuing conflict between the Presidency and
 717 Republican groups in Congress. The last section makes some brief comments about
 718 the viability of the constitutional balance between executive and legislature in the
 719 United States.

722 3 An Outline of the Model

724 In the standard spatial model, only candidate *positions* matter to voters. However,
 725 as Stokes (1963, 1992) has emphasized, the non-policy evaluations, or *valences*, of
 726 candidates by the electorate are equally important. In empirical models, a party’s
 727 *valence* is usually assumed to be independent of the party’s position, and adds to the
 728 statistical significance of the model. In general, valence reflects the overall degree
 729 to which the party is perceived to have shown itself able to govern effectively in the
 730 past, or is likely to be able to govern well in the future (Penn 2009).

733 ²⁷The recent 2011 census stated that the poorest state was Mississippi, followed by Arkansas,
 734 Tennessee, West Virginia, Louisiana, Montana, South Carolina, Kentucky, Alabama and North
 735 Carolina. All these are Republican strongholds.

Over the last decade a new literature has developed that considers deterministic or probabilistic voting models including valence or bias towards one or other of the candidates.²⁸

Recent work has developed an empirical and formal stochastic electoral model based on multinomial conditional logit methods (MNL). In this model, each political candidate, j , was characterized by an *intrinsic or exogenous valence*, λ_j . This model can be considered to be Downsian, since it was based on a pure spatial model, where the estimates of valence were obtained from the intercepts of the model. It was possible to obtain the conditions for existence of “a local Nash equilibrium” (LNE) under vote maximization for a parallel formal model using the same stochastic assumptions as the MNL empirical model. A LNE is simply a vector of candidate positions with the property that no candidate make a small unilateral move and yet increase utility (or vote share).²⁹

The *mean voter theorem* asserts that all candidates should converge to the electoral origin.³⁰ Empirical analyses of the 2004 and 2008 US presidential elections that are mentioned in this paper have corroborated the earlier work by Enelow and Hinich (1989) and shown, by simulation on the basis of the MNL models, that presidential candidates should move close to the electoral origin. However, the empirical work resulting in Figs. 1–4 also suggests that presidential candidates do not in fact adopt positions close to the electoral center.

This paper offers a more general model of elections that, we suggest, accounts for the difference between the estimates of equilibrium positions and actual candidate positions. The model is based on the assumption that there are various additional kinds of valence. The first is referred to as *activist valence*. When party, or candidate j adopts a policy position z_j , in the policy space, X , then the *activist valence* of the party is denoted $\mu_j(z_j)$. Implicitly we adopt a model originally due to Aldrich (1983). In this model, activists provide crucial resources of time and money to their chosen party, and these resources are dependent on the party position.³¹ Each candidate then uses these resources to enhance his image before the electorate, thus affecting his overall valence. In the empirical model we can also estimate two additional aspects of valence which we call *trait valence*³² and *sociodemographic valence*.³³

²⁸Adams (2001), Ansolabehere et al. (2001), Aragonés and Palfrey (2002), Banks and Duggan (2005), Grossman and Helpman (2001) and McKelvey and Patty (2006).

²⁹A Nash equilibrium (NE) is a vector of candidate positions so that no candidate has a unilateral incentive to deviate so as to increase vote share. Thus any NE must be a LNE.

³⁰The electoral origin is the mean of the distribution of voter preferred points.

³¹For convenience, it is assumed that $\mu_j(z_j)$ is only dependent on z_j , and not on z_k , $k \neq j$, but this is not a crucial assumption.

³²See Clarke et al. (2011) and Sanders et al. (2011) for empirical analyses using the voters' perceptions of candidate character *traits*.

³³Sociodemographic valence refers to the propensity of members of various groups to highly regard one or the other of the candidates.

Table 4 Factor loadings for candidate traits scores 2008

Question	Obama traits	McCain traits
Obama Moral	0.72	-0.01
Obama Caring	0.71	-0.18
Obama Knowledgeable	0.61	-0.07
Obama Strong	0.69	-0.13
Obama Honest	0.68	-0.09
Obama Intelligent	0.61	0.08
Obama Optimistic	0.55	0.00
McCain Moral	-0.09	0.67
McCain Cares	-0.17	0.63
McCain Knowledgeable	-0.02	0.65
McCain Strong	-0.10	0.70
McCain Honest	-0.03	0.63
McCain Intelligent	0.11	0.68
McCain Optimistic	-0.07	0.57
Eigenvalue	3.07	3.00

We assume voter utility is given by the equation

$$\begin{aligned}
 u_{ij}(x_i, z_j) &= \lambda_j + \mu_j(z_j) + (\theta_j \cdot \eta_i) + (\alpha_j \cdot \tau_i) - \beta \|x_i - z_j\|^2 + \epsilon_j \\
 &= u_{ij}^*(x_i, z_j) + \epsilon_j.
 \end{aligned}$$

Here $u_{ij}^*(x_i, z_j)$ is the observable component of utility. The constant term, λ_j , is the *intrinsic or exogenous valence* of party j . The function $\mu_j(z_j)$ is the component of valence generated by activist contributions to candidate j . The term β is a positive constant, called the *spatial parameter*, giving the importance of policy difference defined in terms of a metric induced from the Euclidean norm, $\|\cdot\|$, on X . The vector $\epsilon = (\epsilon_1, \dots, \epsilon_j, \dots, \epsilon_p)$ is the stochastic error, whose multivariate cumulative distribution is the Type 1 extreme value distribution, denoted by Ψ . The terms $(\theta_j \cdot \eta_i)$ are individual specific scalars giving the influence of sociodemographic characteristics of the voter on vote choice. Similarly the terms $(\alpha_j \cdot \tau_i)$ model the influence on voter choice of the voter's perceptions of the character traits of the candidates. The term $\mu_j(z_j)$, is j 's activist support function. We suggest that we can indirectly estimate $\mu_j(z_j)$ by modeling the election.

The ANES 2008 gave individual perceptions of the character traits of the candidates, in terms of "moral", "caring", "knowledgeable", "strong" and "honest". We performed a factor analysis of these perceptions as shown in Table 4.

ANES 2008 also gave socio-demographic characteristics of respondents by the gender, ethnicity, education, income and class. Table 5 shows the result of the logit models of the electoral response: (1) is a pure spatial, (2) is a spatial model with traits, (3) is a spatial model with socio-demographics while (4) is a full model with

Table 5 Spatial logit models for USA 2008^a

Variable	(1) Spatial	(2) Sp. & traits	(3) Sp. & Dem.	(4) Full
McCain valence λ	-0.84*** (7.6)	-1.08*** (8.3)	-2.60** (2.8)	-3.58*** (3.4)
Spatial β	0.85*** (14.1)	0.78*** (10.1)	0.86*** (12.3)	0.83*** (10.3)
McCain traits		1.30*** (7.6)		1.36*** (7.15)
Obama traits		-1.02*** (6.8)		-1.16*** (6.44)
Age			-0.01 (1.0)	-0.01 (1.0)
Gender (F)			0.29 (1.26)	0.44 (0.26)
African American			-4.16*** (3.78)	-3.79*** (3.08)
Hispanic			-0.55 (1.34)	-0.23 (0.51)
Education			0.15* (2.5)	0.22*** (3.66)
Income			0.03 (1.5)	0.01 (0.50)
Working Class			-0.54* (2.25)	-0.70** (2.59)
South			0.36 (1.5)	-0.02 (0.07)
Observations	788			
log likelihood (LL)	-299	-243	-250	-207
AIC	601	494	521	438
BIC	611	513	567	494

* $prob < 0.05$ ** $prob < 0.01$ *** $prob < 0.001$

^aBaseline Obama

socio-demographics and traits. Using Table 5 (Model 4) we can estimate vote maximizing equilibria for the model and compare this to the positions of the candidates.

In the theoretical model just proposed, activist valence is affected by party position. As party j 's activist support, $\mu_j(z_j)$, increases due to increased contributions to the party in contrast to the support $\mu_k(z_k)$ received by party k , then (in the model) all voters become more likely to support party j over party k .

The problem for each party is that activists are likely to be more extreme than the typical voter. By choosing a policy position to maximize activist support, the party

875 will lose centrist voters. The party must therefore determine the “optimal marginal
876 condition” to maximize vote share. Theoretical results give this as a (first order)
877 *balance condition*. Moreover, because activist support is denominated in terms of
878 time and money, it is reasonable to suppose that the activist function will exhibit
879 decreasing returns. When these activist functions are sufficiently concave, then the
880 vote maximizing model will exhibit a Nash equilibrium.³⁴

881 It is intrinsic to the model that voters evaluate candidates not only in terms of the
882 voters’ preferences over intended policies, but also in terms of electoral judgements
883 about the quality of the candidates. These judgements are in turn influenced by the
884 resources that the candidates can raise from their activist supporters.

885 Grossman and Helpman (1996), in their game theoretic model of activists, con-
886 sider two distinct motives for interest groups:

887 Contributors with an *electoral motive* intend to promote the electoral
888 prospects of preferred candidates, [while] those with an *influence motive* aim
889 to influence the politicians’ policy pronouncements.
890

891 In the activist model the term $\mu_j(z_j)$ influences every voter and thus contributes
892 to the electoral motive for candidate j . In addition, the candidate must choose a
893 position to balance the electoral and activist support, and thus change the position
894 adopted. This change provides the logic of activist influence.

895 We argue that the influence of activists on the two candidates can be characterized
896 in terms of activist gradients.

897 Because each candidate is supported by multiple activists, we extend the activist
898 model by considering a family of potential activists, $\{A_j\}$ for each candidate, j ,
899 where each $k \in A_j$ is endowed with a utility function, U_k , which depends on candi-
900 date j ’s position z_j , and the preferred position of the activist. The resources allo-
901 cated to j by k are denoted $R_{jk}(U_k(z_j))$. Let $\mu_{jk}(R_{jk}(U_k(z_j)))$ denote the effect
902 that activist k has on voters’ utility. Note that the activist valence function for j is
903 the same for all voters. With multiple activists, the *total activist valence function* for
904 candidate j is the linear combination $\mu_j(z_j) = \sum_{k \in A_j} \mu_{jk}(R_{jk}(U_k(z_j)))$.

905 Bargains between the activists supporting candidate j then gives a *contract set*
906 of activist support for candidate j , and this contract set can be used formally to
907 determine the *balance locus*, or set of optimal positions for each candidate. This
908 balance locus can then be used to analyze the pre-election contracts between each
909 candidate and the family of activist support groups. Below we define the balance
910 condition, and argue that suggests that the aggregate activist gradients for each of
911 the two candidates point into opposite quadrants of the policy space.

912 Consider now the situation where these contracts have been agreed, and each
913 candidate is committed to a set of feasible contracts as outlined in Grossman and
914 Helpman (1996). Suppose further that the activists have provided their resources.
915 Then at the time of the election the effect of this support is incorporated into the
916 empirical estimates of the various exogenous, socio-demographic and trait valences.
917

918 ³⁴A Nash equilibrium is a vector of candidate positions so that no candidate has a unilateral incen-
919 tive to deviate so as to increase vote share.
920