



The dynamics of issue introduction: A model based on the politics of ideology

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ABSTRACT

Many topics might be discussed in the course of any election, but problems that are in fact discussed, and which affect the electorate's choice, are located in the issue space of a relatively small dimension. Two factors contribute to this phenomenon: (a) party platforms are usually presented to the electorate as packages of issues, and (b) candidates tend to emphasize only a few particular issues in the campaign. We model a dynamic process of changing the issue space by candidates as a matter of their campaign strategy and study factors causing changes in the dimensionality or/and in the structure of the set of issues shaping the political conflict in the election. We show how particular features of an added new issue can change voter perceptions of the candidates or the structure of the political conflict in the election when the new issue is such that (1) voters care about it, (2) a majority of voters are interested changing the status quo of anything associated with this issue, and (3) the existing ideological differences among the candidates have clear reflections in voters' minds.

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0. Introduction: The dynamics of issues

In the standard spatial model of party competition, candidates choose platforms in a fixed policy space of large dimension. These choices are strategic, in the sense that the best platform for each candidate depends on what other candidates are expected to do. In a multidimensional policy space, there is in general no fixed point in platforms for any collection of two or more candidates, as a number of authors [1–4] have demonstrated. That is, there is no “equilibrium” strategy, where each candidate's position is the best response to the platforms selected by everyone else. It always pays at least one candidate to shift positions, which leaves all the others jockeying for new positions, also.

This paper is a contribution to an alternative model of political competition based on platform choice. The strategic element in this model is the strategic introduction of new issues, changing the space of debate in a way that benefits a candidate who otherwise expects to lose the election. A number of scholars [5–11] have offered models, some conceptual, some mathematical, of how this process of realignment of political conflict might work. Of this body of research, only Riker's model, and Aldrich's extensions relying on party activists, model changes as the results of strategic choices of professional politicians. The remainder have claimed that changes in the preferences of the mass electorate transform the basic “rationale” of political debate (e.g., [12, 1973; p. 37]). Other authors, such as [13–16] offered quite different conceptions of dimensionality. We extend the Riker approach, using an explicit model of issue competition developed by us in earlier work by Enelow and Hinich [2].

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A useful starting point is provided by Baumgartner and Jones [17], who note that the consequences of introducing “new” issues depend on the preconditions in the political system where the change takes place. They argue that most apparently new issues actually fit easily into the existing left-right political divide. But some issues cannot be articulated in this way, because they cut across existing coalitions and do not fit into the rhetorical logic that undergirds ideological debate. Baumgartner and Jones claim that this debate hinges on making new ideas promote and advance new issues, rather than on the simple position-taking logic of the classical spatial model. In other words, candidates decide what new issues to talk about, rather than deciding positions to take in the space of issues already established in the media or previous elections.

This insight is fundamental, and provides our point of departure: The impact of new issues depends on the context of ideological conflict, and falls into one of three categories. First, and most commonly, some candidates raise new issues only to have those issues ignored by the press, and the public. Presidential candidate Dennis Kucinich, for example, tried to emphasize “net neutrality” as one of his core positions in 2008. This may or may not have been good policy. But it was bad strategy, as his statements were largely ignored in debates.

Second, some issues “fit past frames of reference” well, and become part of normal political conflict, though as we shall see they may change the location of voter preferences in the contested political space. Lyndon Johnson, in 1964, used the issue of civil rights to transform political debate. This strategy was successful, in the sense that it moved civil rights opponents far to the right, in many voters’ minds. But it was not fundamentally a new issue, because it mapped naturally onto the existing left-right divide.

Third, every once in a great while some new issue wrecks, and then realigns, the political system. As a number of authors point out (for example, [4]), the introduction of the issue of abolition, and the related desire to block extension of slavery to new U.S. territories, came to dominate political debate that had focused for decades on tariffs and monetary policy. The existing logic of political conflict had no means of incorporating the “new” slavery issue, and the system collapsed, first into political chaos, and then into armed conflict.

The model of ideological conflict developed in previous work (see, for example [2,18–22]) provides an analytic tool for the derivation of specific results on the introduction of new issues, and that is the approach we will take in this paper. The theory of ideology can be used to derive a theory of new issues: some issues are inconsequential, some cause significant changes in electoral outcomes, and some fundamentally realign political coalitions for decades to come.

1. Ideology

The nature and origin of issues are outside the scope of the present paper. The introduction of new issues may be a strategy available to elites. Alternately, change can come from technological innovation or changes in tastes and preferences of the electorate. Our goal is simply to explore the implications of new issues for change in a political system organized around an ideology. To achieve our goal we have to explain out concept of an ideological space.

1.1. Ideology

A model based on ideology is useful, both theoretically and empirically. While it is impossible to make the full argument for the importance of ideology as an analytical concept here let us briefly review our definition of ideology in the spatial theory of elections. We define *ideology* a widely shared belief system rather than an integrated set of ideas with implications for “good” policy. An ideology provides a means to organize political thinking, and to let people understand each other. The key evidence that ideology is important is the now-established empirical regularity [19–21,23,24] that the space of political competition is of much lower dimensionality than the number of “issues.” There are three claims to be considered.

1. *Issue positions cluster*: If I know what you think on defense policy, abortion rights, and environmental policy, I can guess (with some error, but with less error than if I did not know those things) what you think of school lunch subsidies.

2. *Shared meaning*: This clustering phenomenon is not purely atomistic, so that ideological positions such as “liberal” and “conservative” have similar meanings to different people. It is worth noting that the perceptions of meaning of ideological terms are not identical across individuals. In some cases, as Conover and Feldman [25], demonstrate these terms may vary widely in meaning. The point is that terms have enough meaning, enough shared understanding, that they are useful for political communication. If this were not true, we wouldn’t use them. So, we will simply claim that the understanding of clusters of issues is shared enough to give the terms meaning. And we will call this clustering phenomenon “ideology.”

3. *Constraint*: If the effective space of political conflict is “ideological” in the sense described by #1 and #2, the strategies of candidates (and hence the choices for voters) in the policy space are highly constrained.

Is such an idea useful, or even accurate? One apparent difficulty is the manifest absence of ideological “constraint” in voters’ belief systems themselves. But this is a radically different meaning, something akin to sophistication. Converse [26] showed that internally consistent, logically consistent ideologies seem to be largely absent from the American political system. We can concede the point, as Converse made it, but would still argue that ideology is a useful concept, perhaps we because we are giving the word an entirely different meaning.

There is a crucial distinction between the “constraint” considered by Converse and that intended here. In Converse’s “nature of mass belief systems,” constraint is imposed by coherent and consistent individual belief systems. In our conception, constraint is imposed by people’s experience and their understanding of the regularities of political discourse.

The notion of consistency is not logical, but is rather temporal. (For another interesting perspective on mass belief systems, see Denzau and North [27].) In our view, ideology does not constrain voters' *preferences*, but rather represents a constraint on voters' *choices*. More simply, ideologies do not organize voter beliefs, necessarily. Ideologies organize political systems.

It is important to be clear about constraint: ideologies structure the terrain in which political conflict takes place in a way that is both complex and fragile. But it is nearly impossible to think of mass political conflict without ideology. Ideologies imply nonseparabilities across issues, and (as Downs [28] argued) constitute the only effective means of transmitting political information in elections.

We will consider three theoretical justifications for the claim of nonseparability in choices offered: *communication*, *commitment*, and *budgets*. The justifications are not mutually exclusive, and share one essential element: they imply tight empirical linkages across issues, so that the relevant space of political debate is of low dimensionality.

- **Communication:** To provide voters with a message they can understand and use to make choices, parties must simplify their message. Because only broad statements of principles can be used in advertising and position-taking, the latitude for more subtle distinctions and differences is highly circumscribed. Ideologies are a means of solving problems of uncertainty and lack of information.
- **Commitment:** To be able to persuade voters that they can trust the party to do as promised after the election, parties must give reasons and explanations rather than just take positions. But explanations require some sort of overarching system of justifications, and the advancement of values that can be applied to a variety of issues. Parties trade on reputations, but reputations are meaningful only if they provide potentially separating signals. If parties act on their ideologies when such actions do not appear self-interested, reputations gain value as signals.
- **Budgets:** Increasing spending in one area forces decreases elsewhere in the budget or else forces increased present or future taxes. Thus any change from the status quo forces a linkage to other issues, if only in terms of taxes or opportunity cost.

The cornerstone for the argument for ideology is the empirical regularity that the effective space of political conflict is of relatively low dimension. The justifications we have offered could support a one-dimensional, two-dimensional, or in fact any number of dimensions of conflict. Further these justifications, even if correct, offer no mathematically coherent explanation for a specific one, or two, dimensions structure political debate in a particular nation at one point in time and not some others. To construct such an explanation we need to present a model.

2. Issues and ideology: The simple model

Voters have preferences over issues in an m -dimensional issue space. Each voter i , with ideal point $\mathbf{x}_i = (x_{i1}, \dots, x_{im})'$ in the issue space Ω , chooses between two candidates (Alpha and Beta) based on their imputed platforms $\omega_\alpha = (\omega_{\alpha 1}, \dots, \omega_{\alpha m})'$ and $\omega_\beta = (\omega_{\beta 1}, \dots, \omega_{\beta m})'$ in Ω . We adopt the convention that lower case Greek letters are points and upper case letters are spaces. Thus for policy: $\omega \in \Omega$ for ideology: $\pi \in \Pi$, and so on. We will assume that the choice is based on a quadratic utility function:

$$U(\omega_\alpha) = -\|\omega_\alpha - \mathbf{x}_i\|^2 \quad U(\omega_\beta) = -\|\omega_\beta - \mathbf{x}_i\|^2. \quad (2.1)$$

But the imputed platforms ω_α and ω_β have to come from somewhere. What is the source of voters' belief that these positions represent the likely policies of Alpha and Beta if elected?

Our claim is that, though voters may have preferences defined over the m -dimensional policy space Ω , political competition takes place in the p -dimensional ideological space Π . In other words, Π is in \mathbf{R}^p , but Ω is in \mathbf{R}^m , where $p \ll m$. Consequently, the choices offered the voter (at least the choices voters can identify, and candidates can commit to) are constrained by ideology. The mapping from the ideological to policy spaces can be expressed as a set of issue-by-issue linear terms that take points in the m -dimensional policy space into a scalar that represents the induced or implied position on the various ideological dimension(s). Though the model can handle multiple dimensions quite easily [18,21], we will assume p is one for simplicity. The imputed platform (for Alpha, for example) is as follows:

$$\omega_\alpha = \mathbf{b} + \mathbf{v}\pi_\alpha \quad (2.2)$$

where $\mathbf{b} = (b_1, \dots, b_m)'$ is a vector of the status quo policies on the issues, and $\mathbf{v} = (v_1, \dots, v_m)'$ is the linear mapping from the ideological space to the policy space. The ideological position of each candidate is drawn from the set of feasible positions, that is, $\pi_j \in \Pi$ where in this case π_j is scalar and $\pi_0 = 0$ is the status quo ideological position.

The elements of \mathbf{v} capture voter beliefs about the mapping of ideology into policy. For example if v_k is large (in either a positive or negative direction), the voter believes that even apparently abstract ideological statements are highly meaningful for issue k . Conversely if v_k is near zero in absolute value, the issue is not accounted for by the ideology of the prevailing party system. This does not mean voters, or at least some voters, are indifferent about the issue. Instead if $v_k = 0$ then issue k is outside the issues voters associate with the orthodox political debate they hear from parties and candidates.

An example will clarify the status quo \mathbf{b} and mapping \mathbf{v} vectors. Consider two policies: T and S. "T" is spending on tanks for the military, primarily a policy espoused by the party on the right (call it party Alpha, which advocates ideological position π_α). "S" represents spending on schools for the education of children, advocated by party Beta, which runs on a leftist position

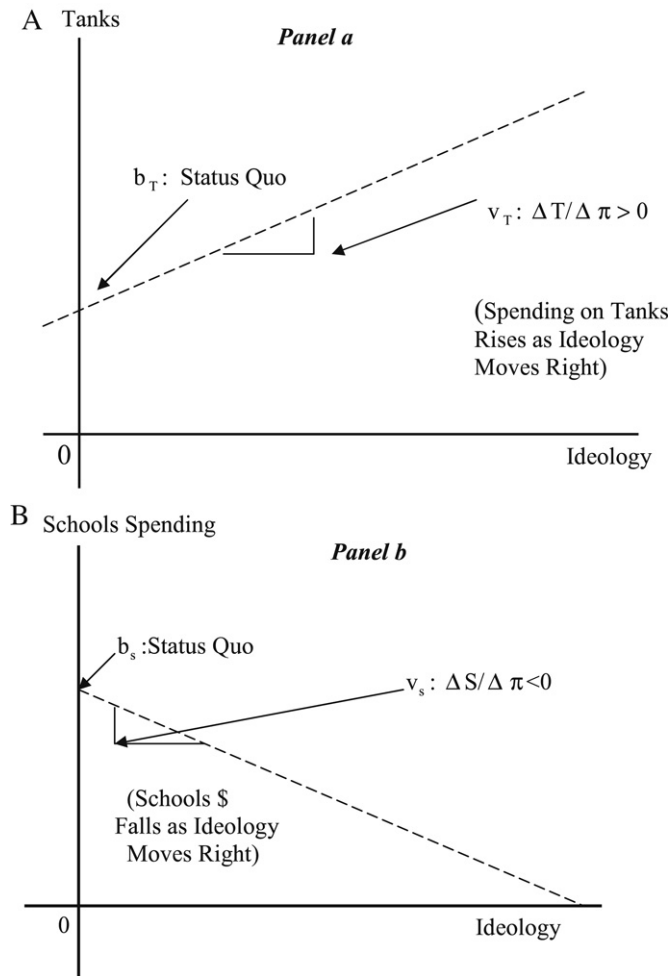


Fig. 1. The Relation between Ideology & (A) Tanks (B) Schools.

π_β . We depict the relation between ideological position on Π and policy position on each of the two issues (tanks, T, and schools, S) graphically as shown in Fig. 1. Panel A presents a mapping from a left-right ideology on the horizontal axis to tanks on the vertical axis: movements to the right represent increased military spending in voters' minds, so the slope of the linear relation is positive. Panel B depicts the analogous mapping for S, with the difference that, since rightists favor less school spending, the slope of the linear relation is negative.

The implied linkage between tanks and school lunches could have any of the origins discussed above, or some combination. Budget laws may require offsetting cuts to finance spending increases, parties may focus on their image as "tough" on foreign policy or "strongly supportive" of social programs, and so on. Provided this linkage across issues exists and that the understanding of the linkage is shared by many people, ideology is a useful conception of political competition.

The ideological linkage model implies that the utility function for a voter (assuming that the winning candidate is α , for the sake of example) can be rewritten by substituting Eq. (2.2) into (2.1), producing:

$$U(\omega_\alpha) = U(\mathbf{b} + \mathbf{v}\pi_\alpha) = -\|\mathbf{b} + \mathbf{v}\pi_\alpha - \mathbf{x}_i\|^2. \tag{2.3}$$

(The $\|\cdot\|$ notation implies one completes the square in the quadratic, and sums across issues to get a scalar number representing utility). Thus voters evaluate the utility of candidates' positions π_α and π_β on the ideological dimension even though those voters care about the issues.

For example, suppose that the policy space Ω is two dimensional and voter i has the ideal point $\mathbf{x}_i = (\omega_T, \omega_S)$. The voter's choice is between two candidates α and β , and the choice is based on their platforms π_α and π_β in the ideological space Π . Let preferences around \mathbf{x}_i be described by separable ellipsoidal rather than circular indifference curves. (This requires a matrix \mathbf{A} of weights, in a sense to be made precise in the next section). The correspondence between the policy space Ω and the ideological space Π given by Eq. (2.2) above is depicted in Fig. 2. The feasible positions in Ω are points on the dotted line with the status quo point in the policy space represented by $b = (b_T, b_S)$.

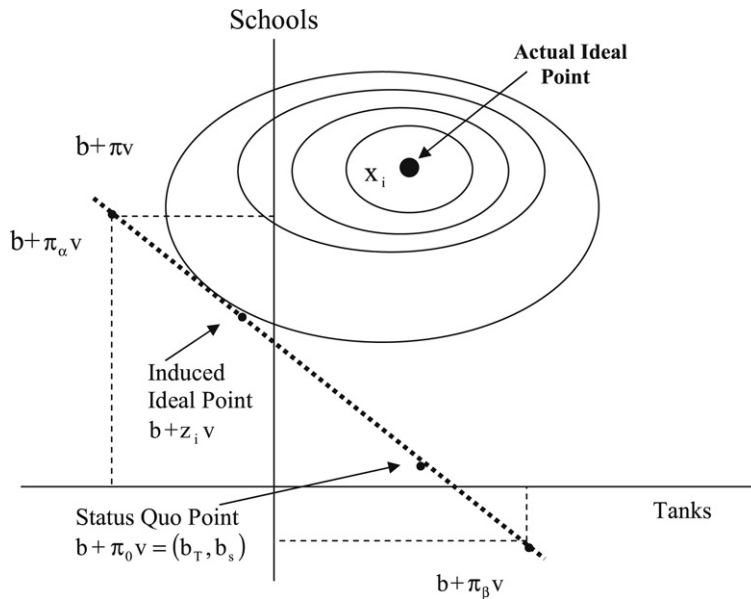


Fig. 2. Voter i chooses α , the candidate closest to z_i in Π , and closest to x_i in Ω .

The ideal point on the $\mathbf{b} + \mathbf{v}\pi_\alpha$ line is $b + z_i v$, the point tangent to the highest attainable indifference curve. The corresponding ideal point, or “induced ideal” in the ideological space Π is z_i . The voter would prefer x_i of course, but such a position is not feasible for politicians to take given the prevailing ideological cleavage in the society. The choice is between the partisans of the right, who favor more tanks, and the partisans of the left, who favor more school lunch programs.

This theoretical discussion sounds very similar to a related perspective, “directional” theory, advanced by MacDonald and Rabinowitz [29,30]. The *key difference*, and the main point of contention, between the two theories, is whether it makes sense to conceive of issues as being linked (as we have), or claiming issues are evaluated in isolation because individual belief systems are diffuse (as MacDonald and Rabinowitz have claimed). The key difference is that the theory of ideology claims that there are important linkages, *across* issues, in the way that issues are presented.

Consequently in Fig. 2 voter i chooses candidate α over β , because π_α is closer in weighted Euclidean space than π_β to x_i . This ideological cleavage is but one of many possibilities. In Fig. 3 the main consideration is a division of a balanced budget. If the slope of the ideological line is $- \$ 1.00$, we have a situation where the dispute is over how to divide a constant budget between two budget lines.

It is possible to place the same voter in a very different ideological context, as Fig. 3 shows. Suppose the “left” party is classical liberal, with a desire to reduce government at all margins. Suppose the “right” party is seeking a corporatist-statist society where most functions are performed by government. It is important to note that the only difference between Figs. 2 and 3 is the location of the prevailing ideological choice set. The voter’s preferences are identical, and fixed, in both cases.

Now, however, the voter clearly prefers party β , the statist party. Before the voter was a “leftist,” now she is a “rightist.” But she has not changed her preference in any way! What has changed is the structure of the party system, and the set of choices.

We will find it useful to define more formally the induced ideal point (denoted $b + z_i v$ in Figs. 2 and 3) of voter i on the ideological dimension. Starting, for the sake of simplicity with simple Euclidean distance (i.e., circular, rather than elliptical, indifference curves), Enelow and Hinich [2] show that the ideal point (in an m -dimensional policy space) of a voter presented with only those choices associated with existing parties, located along a single ideological dimension is

$$z_i = \frac{\sum_{k=1}^m v_k (x_{ik} - b_{ik})}{\sum_{k=1}^m v_k^2} \tag{2.4}$$

This expression for the induced ideal point z_i will be discussed at greater length below. For now, it is enough to establish that the voter’s induced ideal point on the ideological dimension is a weighted sum of the differences between the voter’s ideal point x_i and the status quo policy vector b . The weights are a function of the ratio of the ideological mapping terms v_k to the sum of squares of the weights on all issues. The expressions in Eq. (2.4) is a simple model of voter choice: Choose the candidate whose position on the ideological dimension on Π is closest to the voter’s induced ideal point z_i .

In the next section, we formalize the model of ideology and issues, and relax the assumptions of circular indifference curves, allowing voters to care more about one issue than the other, and to have separable preferences.

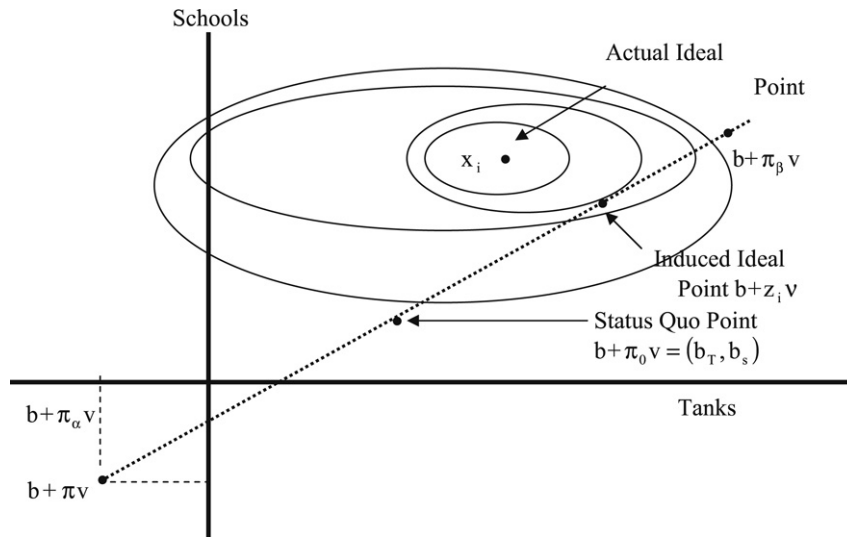


Fig. 3. Voter I chooses α , the candidate closest to z_i in Ω , and closest to x_i in Ω .

3. The new issue model

Let us begin the presentation of the model by fixing notation.

x_{ik} The ideal point of voter i on issue k where $i = 1, \dots, n$ and $k = 1, \dots, m$

V_k The weight, or ideological translation term, for issue k .

b_k Status quo policy for issue k .

π_p Ideological position of candidate p . For simplicity, we will assume the ideological space is one-dimensional.

z_i Induced ideal point of voter i in ideological space.

A_i m dimensional positive definite square matrix of weights for voter i 's utility function. If $A_i = I$ (where I is the identity matrix of rank m) then the voter's utility function is a function of simple Euclidean distance. If A_i is diagonal then the utility function is weighted Euclidean distance with ellipsoidal indifference curves, but preferences are still separable (marginal utility of one issue does not depend on the expected level of consumption of some other issue).

Ω n dimensional issue space, where the dimensions are the existing widely discussed issues in the electorate.

We will drop the subscript i so that unless otherwise noted all formulas refer to a representative voter. We begin with a diagonal A matrix of weights, implying preferences are separable. The intuition on the strictly positive elements along the main diagonal is that they are salience weights. The absolute size of the terms is arbitrary, but their relative size determines the relative impact of changes along different issue dimensions on utility.

The induced ideal point is

$$z = \frac{\mathbf{v}'\mathbf{A}(\mathbf{x} - \mathbf{b})}{\mathbf{v}'\mathbf{A}\mathbf{v}} \tag{3.1}$$

where the elements of the diagonal matrix A are a_k . Thus the induced ideal point before the introduction of the new issue is

$$z = \frac{\sum_{k=1}^m a_k (x_k - b_k) v_k}{\sum_{k=1}^m a_k v_k^2} \tag{3.2}$$

We call this induced point as z_{old} in order to distinguish it from the induced ideal point that results when a new issue enters the space. Now a "new" issue called $m + 1$ is raised in the campaign. Since the A matrix is assumed to be defined over all issues (i.e., individual preferences are complete) the diagonal A matrix is now augmented by one dimension, being now $(m + 1) \times (m + 1)$.

But this changes the induced ideal point of the voter on the ideological dimension since

$$z_{new} = \frac{\sum_{k=1}^m a_k (x_k - b_k) v_k + [a_{m+1} (x_{m+1} - b_{m+1}) v_{m+1}]}{\sum_{k=1}^m a_k v_k^2 + [a_{m+1} v_{m+1}^2]} \tag{3.3}$$

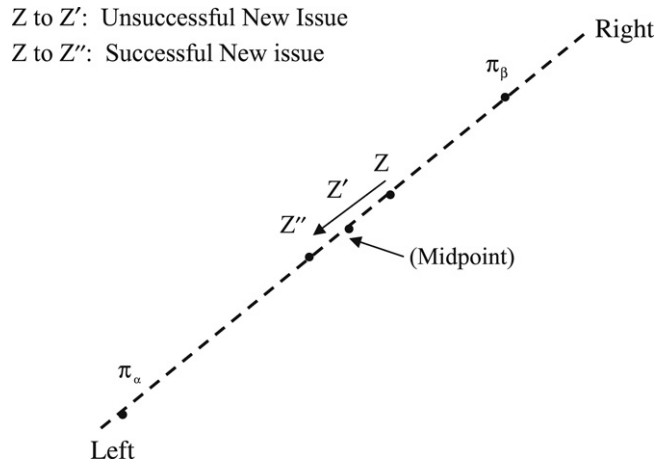


Fig. 4. The introduction of a new issue can change the election outcome.

where the bracketed terms in both numerator and denominator produce the change in the induced ideal points.

The change in the induced ideological position $\Delta z = z_{new} - z_{old}$ is

$$\Delta z = \frac{[a_{m+1}(x_{m+1} - b_{m+1})v_{m+1}] \sum_{k=1}^m a_k v_k^2 - a_{m+1} v_{m+1}^2 \sum_{k=1}^m a_k (x_k - b_k) v_k}{\left(\sum_{k=1}^m a_k v_k^2\right) \left(\sum_{k=1}^m a_k v_k^2 + a_{m+1} v_{m+1}^2\right)}. \tag{3.4}$$

All the values in (3.4) are finite. The change will be nonzero except for an almost impossible set of restrictions of the parameters in (3.4).

It is useful to consider some simpler examples of the conditions for ideological change. In particular we investigate the implications for change of some characteristics of the new issue, simplifying (3.4) by assuming that the representative voter's ideal point is at the current status quo on all the original issues.

Suppose that the voter's ideal is at the status quo for issues 1 through m . Then $x_k = b_k$ and (3.4) is simplified as follows:

$$\frac{\frac{x_{m+1} - b_{m+1}}{v_{m+1}}}{\sum_{k=1}^m \frac{a_k}{a_{m+1}} \left(\frac{v_k}{v_{m+1}}\right)^2 + 1}. \tag{3.5}$$

Using this simplification we can point out several important things about the nature of change in political choice.

- Components of the linear mapping: The larger the terms in the linear ideological mapping v_{m+1} , the smaller is the change in z . As v_{m+1} grows large the change in ideology vanishes. If the new issue is tightly linked to, the old ideology, it does not cause the voter to rethink his ideological position.
- Utility weights: The larger the utility weight a_{m+1} of the new issue compared to those of the old issues, the larger the change in the voter's ideology. As $a_{m+1} \rightarrow \infty$, Δz goes to $v_{m+1}^{-1} (x_{m+1} - b_{m+1})$.

In other words if the "new" issue has a high enough weight, it dominates all the other issues and defines all the changes along the entire ideological dimension, which remains one dimensional. For some people, at least, in the U.S. in the 1990s, abortion was very close to being such an issue. If, instead, $a_{m+1} \approx 0$, then $\Delta z \approx 0$: If the voter attaches no weight to the issue then of course it does not change his ideological identification.

- Status quo: The larger the difference between the voter ideal point and the status quo on the new issue, the larger the change of the voter's ideology. Notice that this has nothing to do with underlying preferences, which have been fixed, though latent, all along. Rather, the set of issues that make up the political world, and the ideology that organizes the information in that world, are transformed by the introduction of the new issue.

Because z is induced on the ideological dimension by the preferences of voter i in the m -dimensional policy space Ω , it is possible to dispense with the presentation of Ω and represent voter choices solely on the ideological dimension Π . Fig. 4 depicts an arbitrarily drawn example of the ideological dimension, with far left and far right positions. The voter's ideal z is drawn as before; the comparison for the voter is against π_α and π_β . The candidate is closer to z_i will receive i 's vote.

As Fig. 4 also shows, changes in z_i can change i 's vote. In our example, i votes for β , given the original z . But suppose that a new issue is introduced: From (3.4) the change in z can be in either direction, depending on the relative values of x_{m+1} and b_{m+1} . The magnitude of the change will depend on the weight a_{m+1} of the new issue in the voter's utility function,

and the mapping v_{m+1} of the issue onto the ideological dimension. If $x_{m+1} > b_{m+1}$ then the change in z resulting from the introduction of the new issue will be positive. If the utility weight of the new issue is large, the change will also be large. In Fig. 3, we have drawn z' and z'' as examples of possible changes in z caused by the strategic introduction of a new issue. As is clear from the figure, the change from z to z' does not change the vote; the change from z to z'' causes the voter to switch from candidate Beta to Alpha. Candidate Alpha, by introducing a new issue chosen to match the particular parameters needed to change voters' minds, has won the election.

This completes our discussion of the introduction of new issues when the prevailing party system and associated ideological cleavage accounts for the new issue. In the next section, we consider the implications of new issues when the new issue changes the dimensionality of the space of political debate itself.

4. Discussion of new issues and the space of political competition

In considering new issues not accounted for by the prevailing ideology, it is useful briefly to consider the larger literature on the stability of electoral processes over time. The consideration of the strategic addition of new issues makes the implied game dynamic, and potentially unstable. What are the implications for political strategy?

As is well known, majority rule election processes have a determinate Condorcet winner at the ideal point of the median voter, provided the relevant strategy set is one-dimensional and voter preferences are single-peaked. While one might quarrel with the assumption of single-peakedness, the obvious problem lies with the assumption of unidimensionality, particularly when we allow for strategic introduction of new dimensions. McKelvey [31] showed that if the core of the election game is empty, and voting is sincere, then it is possible to choose an agenda (sequence of pairwise votes) that lead to virtually any outcome in the policy space.

This result requires, it should be noted, noncontinuous voting trajectories, so that the agenda may imply the sequential consideration of enormous changes in the status quo policy. Such an assumption does not square well with the possibility of strategic voting; neither do we observe such wild swings in real democratic decision-making. If we restrict voting trajectories to be continuous, then if there are two dimensions cycles will still generally result, but outcomes will be restricted to the Pareto set [1]. For any continuous (nondictatorial) voting method, the "Voting Classification Theorem" [32] implies it is possible to assign an integer that describes the number of dimensions at or above which the system becomes generically unstable.

Thus, for the majority rule example, even if preferences are convex (the multidimensional analog of "single-peakedness"), if there are only two alternatives, and if voting trajectories are continuous, the election game becomes generically unstable when there are three or more dimensions. This means that there is no restriction to any subset of the strategy space: voting outcomes can wander anywhere.

The model of ideological dimension(s) embedded in a spatial choice framework in the present paper highlights the importance dimensionality in causing stability or instability in a polity. The results of McKelvey and Schofield [32] may have been given short shrift, because the policy space is assumed to be of very high dimension, and consequently n is always much larger than the number of dimensions that imply instability. But suppose the actual space where political debate takes place is usually of only two, and often one, dimensions, as Enelow, Hinich, MacRae, Munger, Poole, Rabinowitz, Rosenthal, and Schofield have all claimed in various works. Then the result of the Voting Classification Theorem are of great moment, and all political systems teeter constantly on the brink between stability and chaos.

There are two elements of this dynamic process that require some exposition to fit into our discussion above. First, the movement of the candidates takes place, not because they have changed their positions, but because the space itself has changed. The derivation of Δz , in earlier sections, is one possible theoretical description of how this takes place. Second, the ideological linkages between the new issue and all other issues supplant the old linkages, which supported the old ideology. Not all the roll calls are "about" the new issue, of course. Instead, as other matters increasingly link to the new main cleavage, the symbolic relations of other issues to the main cleavage increasingly become the basis for choice.

To sum up, the successful introduction of a new issue may be a victory for the disgruntled or out of power coalition that introduces it, but the victory may be Pyrrhic. The result of the introduction of a genuinely new (i.e., not accounted for by the existing ideological cleavage) issue is not an orderly transformation to a new political space with another dimension. Rather, the effect is to release the genie of chaos from its bottle. This gives more room for maneuver and strategic action, it is true, but maneuvering is now possible for all sides in the conflict. In the higher dimensional space, and with the collapse of the gate-keeping institutions designed by parties and legislatures to prevent multidimensional competition, anything can happen. At this point, our analysis might be bolted onto a number of analyses (for example, [33,34]) with broadly different implications for how the political system might handle change. We have tried to provide a simple but explicit microfoundations for representing that change.

5. Conclusions

This paper has laid out a theory of the effects of the introduction of a new political issue. We claim that the most realistic, and most important, strategy for candidates embroiled in an actual political campaign is the search for the key issue, or set of issues, to use to change the likely electoral outcome. The other "moving parts" of the spatial model of politics, such as

voter preference or party position, are not good candidates for the short-run political strategies that make up the campaign. Voter preferences are changed only by random (as far as the candidates are concerned) events, by socialization, or by the rhetorical messages candidates used repeatedly. Candidates, likewise, can commit to positions only through reputation and consistent use of ideology.

Though similar to Riker's "heresthetics," our approach of using ideology as a unifying device for communication enables us to derive explicit results on the parameters that affect voter preference. The importance of this general approach has already been highlighted, and explored empirically, by [15]. A good "new" issue is one (1) voters care about, (2) on which most voters have preferences that differ from the status quo and (3) for which the existing ideological cleavage allows clear and credible linkages. A candidate who is losing is constantly trying to find such an issue. A candidate who is winning is constantly trying to neutralize the opponent's attempts to bring such an issue to prominence. Though it may be difficult in practice to say if an issue is "new" (did the change come from new technology, or from a new framing of an old dispute?), the basic strategy or redefining the space of debate is fundamental to political competition.

The contribution of the present paper has been to identify a systematic means by which the issues that a party perceives as "theirs" can be identified. Issues accounted for by the existing ideological split change positions of candidates, while issues outside the prevailing ideology change the policy space itself. Consequently, issues that are truly new are risky, and will be used only in times of great strain or uncertainty.

Finally, it is important to note that we have made only limited claims about the set of issues that cause movement in the minds of voters. The key distinction in the paper has been between new issues that cause movement of candidate positions. Existing recovered new issues cause neither, because no one notices. But the changes, and movements, that we do observe are quite consistent with a model of strategic choice by political actors.

References

- [1] N. Schofield, Instability of simple dynamic games, *Review of Economic Studies* 45 (3) (1978) 575–594.
- [2] J. Enelow, Melvin Hinich, *The Spatial Theory of Voting*, Cambridge University Press, New York, 1984.
- [3] R. McKelvey, Covering dominance, and institution-free properties of social choice, *American Journal of Political Science* 30 (1986) 283–314.
- [4] M. Hinich, M. Munger, *Analytical Politics*, Cambridge University Press, New York, 1997.
- [5] W. Riker, Political science and rational choice, in: J.E. Alt, K. Shepsle (Eds.), *Perspectives on Positive Political Theory*, Cambridge University Press, New York, 1990.
- [6] J. Aldrich, A spatial model with party activists: Implications for electoral dynamics, *Public Choice* 41 (1983) 63–100.
- [7] J. Aldrich, A downsian spatial model with party activism, *American Political Science Review* 77 (1983) 974–990.
- [8] W. Burnham, *Critical Elections and the Mainsprings of American Politics*, Norton, New York, 1970.
- [9] V.O. Key, A theory of critical elections, *Journal of Politics* 17 (1955) 3–18.
- [10] W. Riker, *The Art of Political Manipulation*, Yale UP, New Haven, 1986.
- [11] W. Sundquist, *Dynamics of the Party System*, Brookings, Washington, DC, 1973.
- [12] W. Riker, *The Theory of Political Coalitions*, Yale UP, New Haven, 1962.
- [13] D. MacRae, *Issues and Parties in Legislative Voting: Methods of Statistical Analysis*, Harper and Row, New York, 1970.
- [14] H.F. Weisberg, J. Rusk, Dimensions of candidate evaluation, *American Political Science Review* 64 (1970) 1167–1185.
- [15] G. Miller, N. Schofield, Activists and partisan realignment in the United States, *American Political Science Review* 97 (2) (2003) 245–260.
- [16] S. Feld, B. Grofman, A theorem connecting shapley-owen power scores and the radius of the yolk in two dimensions, *Social Choice and Welfare* 7 (1990) 71–74.
- [17] F.R. Baumgartner, B.D. Jones, *Agendas and Instability in American Politics*, University of Chicago Press, Chicago, 1993.
- [18] M. Hinich, W. Pollard, A new approach to the spatial theory of electoral competition, *American Journal of Political Science* 25 (1981) 323–341.
- [19] J. Enelow, M. Hinich, The theory of predictive mappings, in: Enelow, Hinich (Eds.), in: *Advances in the Spatial Theory of Voting*, Cambridge University Press, New York, 1990.
- [20] K. Poole, H. Rosenthal, *Congress: A Political-Economic History of Roll Call Voting*, Oxford University Press, New York, 1997.
- [21] M. Hinich, M. Munger, *Ideology and the Theory of Political Choice*, University of Michigan Press, Ann Arbor, 1994.
- [22] William Dougan, Michael Munger, The rationality of ideology, *Journal of Law and Economics* 32 (1989) 119–142.
- [23] J. Enelow, M. Hinich, The location of American presidential candidates: An empirical test of a new spatial model of elections, *Mathematical and Computer Modeling* 12 (1989) 461–470.
- [24] Michael Laver, Norman Schofield, *Multiparty Government: The Politics of Coalition in Europe*, Oxford University Press, Oxford, 1990.
- [25] Pamela Conover, Feldman Stanley, How people organized the political world: A schematic model, *American Journal of Political Science* 28 (1984) 95–126.
- [26] Phillip Converse, The nature of belief systems in mass publics, in: David Apter (Ed.), *Ideology and Discontent*, Free Press, New York, 1964, pp. 219–241.
- [27] Arthur Denzau, Douglass North, Shared mental models: Ideologies and institutions, *Kyklos* 47 (1) (1994) 3–31.
- [28] Anthony Downs, *An Economic Theory of Democracy*, Addison Wesley Publishing, Chicago, 1957.
- [29] Stuart Elaine Macdonald, George Rabinowitz, The dynamics of structural realignment, *American Political Science Review* 81 (1987) 779–796.
- [30] George Rabinowitz, Stuart E. Macdonald, A directional theory of issue voting, *American Journal of Political Science* 83 (1989) 93–121.
- [31] R. McKelvey, Intransitivities in multidimensional voting models and some implications for agenda control, *Journal of Economic Theory* 12 (1976) 472–482.
- [32] D. Richard McKelvey, Norman Schofield, Structural instability of the core, *Journal of Mathematical Economics* 15 (1986) 179–198.
- [33] E.E. Schattschneider, *Party Government*, Farrar and Rinehart, New York, 1942.
- [34] J. Patty, Incommensurability and Issue Voting, *Journal of Theoretical Politics* 19 (2007) 115–131.