A Unified Theory of Voting

Directional and Proximity Spatial Models

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CHAPTER 1

Introduction

> . . . how should a rational voter calculate the expected utility incomes from which he derives his expected party differential?
>
> Anthony Downs, *An Economic Theory of Democracy* (1957: 39)

1.1 How Do Voters Decide?

Imagine that you, a voter, must choose between two or more candidates for elective office. How will you decide for whom to vote? Political scientists and others have studied this question from both theoretical and descriptive perspectives. Roughly speaking they have offered what we might think of as three basic types of answers:

Answer one is that you will tend to vote for the candidate whose political party you have come to identify with. In classic works such as *The American Voter* (Campbell, Converse, Miller, and Stokes, 1960), scholars at the University of Michigan and elsewhere have developed this idea into what is often called the Michigan model of party identification. While not everyone will simply vote their *party ID*, party ID is seen as the best single advance predictor of the vote, with changing circumstances (such as economic conditions) giving rise to short-run and longer-run electoral forces that favor one candidate/party or another and that lead voters to deviate from their historical party identifications.

Answer two is that you will tend to vote for the candidate whose policy views are closest to your own. Following Anthony Downs (l957), we may think of both voters and candidates as points in some *n*-dimensional issue or policy space. A voter's location in the space represents the voter's *ideal point* (a.k.a. *bliss point*), whose coordinates tell us the position espoused by that voter on each of the issues. A candidate's location in the space is taken to be an indicator of the

candidate's *platform*, i.e., her[1] statement about the policy outcomes on each issue she hopes to achieve were she to be elected. Under the basic Downsian (proximity) model, the voter chooses the candidate closest to his own ideal point.

Answer three is that you will tend to vote for the candidate who is most likely to change things in a way that will leave you most satisfied. It might appear that this answer is just a rephrasing of the previous model built upon relative proximity, but it is not. In this *directional* approach to voting it is critical to have a *neutral* or *status quo point* from which to judge expected direction of change. A voter may choose that candidate whose direction of movement – which involves both issue salience and policy preference – most resembles his own. Alternatively – if, for example, conservatives have been in power for a long time – a voter who is conservative, but less so than the party in power, may choose a liberal candidate. The latter can be expected to move the status quo back in the voter's direction in preference to a conservative candidate, who may attempt to move policy even further to the right.[2]

The search for a better understanding of voting behavior raises a number of questions. How do voters respond to advocates of policy positions more extreme than their own? Do voters always choose the candidate/party who advocates a policy position closest to their own most preferred position or might voters favor a candidate who takes a position somewhat more intense than their own on the principle that "more is better"? Or might a voter support a candidate who advocates moving the status quo beyond the voter's ideal policy on the grounds that – following the compromises of office – such a candidate might end up implementing what the voter really wants? In other words, do voters discount the claims of candidates who assert that their election will result in large changes from the status quo? How, if at all, do changes in the location of the status quo affect the choices made by voters?

Answers to such questions about voting behavior lead to further

[1] We use the following convention: To refer to candidates, female pronouns are used; to refer to voters, we use male pronouns.

[2] A further approach to voter choice – not as systematically developed as the first three – emphasizes candidate characteristics distinct from ideology such as perceived competence or perceived trustworthiness (see, e.g., Enelow and Hinich, 1984).

inquiries about the optimal response of candidates. What types of strategies should rational candidates adopt in their reaction to the distribution of voter preferences? In particular, should we expect *convergent* strategies, i.e., should all candidates/parties be expected to take similar stands, or does greater benefit lie in the adoption of *divergent* (i.e., dispersed) strategies? Should a party's strategy be more extreme than the positions of its supporters? How are desirable strategies altered as the policy status quo shifts over a sequence of elections? How closely do the optimal strategies predicted by different models resemble those actually used by parties and candidates in real elections? This book is addressed to political scientists and students of political science who seek answers to questions like the ones above.

In this book we present a unified model of voting behavior in which voters have not just one motivation but a mixture of motivations. We demonstrate how various models of voting behavior – entailing the combined effects of proximity, direction, intensity, and discounting – can illuminate how parties strategically choose policy positions in response to voters. We offer empirical tests of these models over a wide range of assumptions and for electorates that operate under a variety of voting systems and political cultures.

The empirical evidence suggests a picture intermediate between convergence and extreme divergence of party strategies. For example, in the United States, even though most presidential elections are not seen as sharply polarizing, the Democratic and Republican nominees almost inevitably favor different policies, are responsive to different constituencies, and are perceived to hold different positions by voters in the American National Election Studies. Despite claims to the contrary, the positions of the two major American parties are *neither* identical to one another, *nor* are they at the farthest possible opposite extremes of the American spectrum of political thought, i.e., there are both centripetal and centrifugal forces at work. Likewise, for most of the major parties in Western European polities – very different electoral systems and often very different political experiences notwithstanding – party positions are distinct but, except for some minor parties, not extremist.

A central concern of this book is to try to determine what – if any – models are compatible with the *mildly but not extremely* divergent

policy platforms that appear, empirically, to be characteristic of both two-party and multiparty competition. How can we understand this general phenomenon, which we might call *moderate extremism*? This book develops both traditional and alternative models of voter decision making, comparing and contrasting the utility functions that characterize each model. We place the models in a unified framework and study the implications – for both voter choice and candidate strategy – of how voters make choices. We fit models representing multiple voter motivations to data from national election studies in three nations that represent different political structures – the United States, Norway, and France – and summarize numerous empirical studies in other nations. The data we analyze suggest that a unified approach that combines elements of the traditional proximity model, the various directional and discounting models, and the Michigan model's emphasis on party identification is necessary to adequately understand the linkage between voter preferences and candidate issue positions.

1.2 Spatial Models

A principal concern in this book is the interdependence between the decisions made by parties and those made by voters. In this chapter we introduce several theoretical models of voters' evaluations of candidates; in subsequent chapters, we describe these models and their implications in greater detail and assess them empirically for two-party elections in the United States and multiparty contests in Europe.

The fundamental vehicle for the translation of issue positions to voter choice is the *spatial model* of issue voting; in spatial modeling we focus on how issue positions of both voters and candidates (or parties) are translated into voter preferences and candidate strategy. In any spatial model of electoral competition, both voters and candidates are located at ideal points in a multidimensional space, each dimension of which represents a substantive issue. For example, the issue dimension of health care might be represented by a scale that ranges from the belief that government should provide universal health care to the opinion that medical expenses should be paid by individuals and private insurance plans.

The spatial modeling approach pioneered by Anthony Downs

(Downs, 1957), and subsequently developed by numerous scholars, permits us to represent the preferences of voters and the strategies of candidates in a structured manner and to develop mathematical models of the relationships among voters, among candidates, and between voters and candidates. We may then ask: What factors influence the value (usually denoted *utility* in this economics-inspired literature) that voters attach to seeing particular candidates get elected? Once we know the utility placed by the voters on each of the candidates, we can then seek to model voter choice and candidate strategy.

The proximity version of the spatial model has dominated the thinking of political scientists about voting behavior. In literature stemming from Downs, closeness or agreement in political views between voters and candidates has played center stage in attempts to understand voter choice, but there are some aspects of politics that it simply does not do well at explaining. Other factors such as: (1) whether a candidate's direction of movement from the status quo can be expected to bring the new status quo closer to the voter, and (2) the fact that some voters may be much more concerned with outcomes on certain issues than on others (or have greater *intensities of preferences* for certain issues than for others) may also be of great importance in understanding voter preferences and the candidate strategies these give rise to. Moreover, (3) the issue positions that voters ascribe to particular candidates need not be the positions that a candidate formally espouses (or that are embodied in the platform of the candidate's party). Voters may *discount* platforms by taking into account the likelihood that particular policies will actually be implemented.

Under the traditional (Downsian) proximity spatial model, a voter's utility for a candidate is assumed to increase with proximity to his ideal point (i.e., set of policy preferences). In the most basic Downsian model, vote-maximizing party locations for two-party competition converge toward the median voter location[3] of the overall electorate. In general, in the Downsian model, voters' choices and

[3] The median voter is the voter with respect to whom 50 percent or more of the electorate is placed either at the voter's own position or to the left of it and 50 percent or more is placed to the right. The median voter theorem applies to a one-dimensional model.

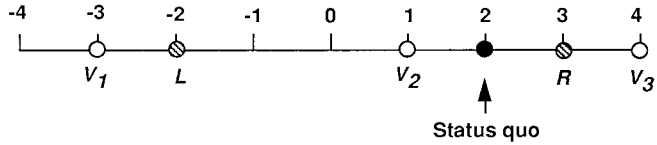

Figure 1.1 Directional voting with discounting.

preferences exert a centrist influence on the strategy of candidates seeking the voters' preferences. In contrast, alternative spatial models – that posit links between voter preference and the direction of movement from the status quo (Matthews, 1979), or the intensity with which issue positions are advocated as well as their direction (Rabinowitz and Macdonald, 1989), or the discounting of candidate claims (Grofman, 1985), or party identification (Campbell et al., 1960) – suggest that some or all candidates may benefit by moving outward from the ideological center in the direction of the preferences of particular constituencies.

To illustrate the difference between proximity, directional, and party identification models, let us consider a simple two-party example. Let L be the candidate of the left (say, Liberal) party and R the candidate of the right (say, Conservative) party. In a one-dimensional model represented by a nine-point scale ranging from -4 on the left to 4 on the right, let the platform of L be -2, and that of R be 3 (see Figure 1.1). Consider a world with three voters: V_1 with ideal point at -3, V_2 with ideal point at 1, and V_3 with ideal point at 4. Let voters V_1 and V_2 be Liberals and voter V_3 be a Conservative party identifier.

If party ID alone determines voting, then V_1 and V_2 will vote Liberal and L will win.

If issue proximity determines voting, then V_2 and V_3 will vote Conservative and R will win.

If the simplest directional model holds, then what will happen? Well, we don't yet have enough information to answer this question. Imagine, however, that the Conservatives have been in power a long time and the policy status quo is at 2. If the Conservative wins, then we expect the status quo to shift in a positive direction (say, from 2 toward 3). Even though voter V_2 is closer to R than to L, he may prefer

L to *R*, *in directional terms*, since a victory by *R* will move policy outcomes (i.e., the status quo) away from V_2's most preferred outcome. In contrast, a victory by *L* will begin to shift policies down from 2 closer to 1, where V_2 is located.

Of course, if the Liberals actually succeed in moving policies all the way (or even most of the way) to –2, voter V_2 would be quite upset, but if change in any given election period is only incremental, then voter V_2 can afford to vote for the Liberal this time and then wait until the next election to see how far the status quo has moved before he decides whether to vote for the Conservative position to which he is actually closer. Here voter V_2 is a moderate voter who is casting a kind of protest vote at the status quo having been shifted too far in one direction (in this case, toward the right).

This simple model might be compared with American politics in 1992 in which voter V_2 represents a conservative Democratic identifier willing to move the conservative status quo (following twelve years of Republican rule) toward the left. Two years later many such voters reversed this leftward movement by selecting a conservative Congress, only to apply the brakes once again in the election of 1996, by helping reelect a Democratic president and a diminished Republican majority in the House.

Note that, under the particular type of directional voting defined above, a voter may change his vote without any change in his own ideal point or in the policy platforms offered by the two party candidates. All that will have changed is the location of the status quo.[4] Note also that, in this model, we have natural forces restoring policy moderation, as well as forces fostering party competitiveness when the party in power has gone "too far."[5] For example, if the status quo was at 0, say, then the directional model predicts that voter V_2 should again vote for the Conservative platform.

A great deal of effort by many scholars (e.g., Markus and Converse, 1979; Page and Jones, 1979; Rabinowitz and Macdonald, 1989; Rabinowitz, Macdonald, and Listhaug, 1991; Platt, Poole, and

[4] This model has some resemblance to the balancing model of Fiorina (1992) or Alesina and Rosenthal (1995) but it is not identical. In particular it does not require strategic calculations on the part of the voter. The voter votes sincerely, but in directional rather than proximity terms. We shall return to this point in Chapter 9.

[5] Cf. Stokes (1963) in his famous essay on forces restoring party competition.

Rosenthal, 1992; Pierce, 1993, 1995a, 1997; Iversen, 1994; Westholm, 1997) including previous work of our own (Merrill, l994, l995; Merrill and Grofman, 1997a) has gone into trying to decide which of these three models (party ID, Downsian proximity, or some form of directional) fits the data best. In this book we take a rather heretical position. Namely, it is our view that *all* three models provide useful insights and that, as a practical matter, for any single election, it is difficult to determine which of the three pure models fits the data best, since there is a very large communality between the variance explained by each.[6]

We believe that the supposed incompatibility between the party ID approach and the approaches that focus on issues has been greatly exaggerated. In particular, those with a given party ID also tend to demonstrate issue proximity to the candidate of their party.[7] Also, if we look only at a single election, Downsian and directional models and the party ID model tend to give successful predictions for the same set of voters – namely those that are well-anchored to the political system and see policy differences between the parties/candidates. Perhaps even more importantly, the recent work of Frank Wayman (1996) on the only panel data set to allow us to follow U.S. voters over a substantial time period (nearly twenty years) makes it clear that, rather than party ID being largely immutable over a lifetime, eventually party ID is apt to change to reflect previous voting choices when these are relatively consistent over time and inconsistent with previous party ID.

One way to integrate both directional and proximity perspectives is to assume, following ideas in Grofman (1985), that some voters discount the policy positions announced by the candidates. In this *discounting* approach, if a candidate says she will implement a policy at, say, 4 and the status quo is at 2 (see Figure 1.1), then the voter may assume that the change from the status quo to be expected if that candidate is elected may not be 2 units (i.e., 4 – 2), but rather 2d units, where d is a discounting factor less than or equal to 1 and strictly

[6] For simplicity of exposition we have treated both the Downsian and Michigan models as pure models, although both draw on multiple factors to explain voting behavior.

[7] We will elaborate on this point in Chapter 5 and evaluate the importance of "rationalization" and "projection" effects.

greater than 0. Now, the voter chooses the candidate who he *perceives* will implement policy closest to himself. If the discounting factor d is 1, this is simply the proximity model; if the discounting factor d is close to 0, this is essentially a directional model, since each voter (except possibly a voter very near the status quo) will then pick the candidate who will move in the direction from the status quo toward the voter's bliss point. Thus, the discounting model can be thought of as a *mixture of proximity and directional voting* with the d value indicating how far along the continuum between directional voting and proximity voting we have gone.

Consider Figure 1.1 once again. With the status quo at 2, we have just noted that the swing voter V_2 (at 1) will vote for R (at 3) if d is 1 (the proximity model), while V_2 will vote for L (at –2) if d is near 0 (the directional perspective). A little arithmetic demonstrates that, in this example, V_2 will vote for L if and only if $d < 2/3$; that is, a mildly conservative voter would vote for the liberal if discounting is sufficient.

As before, voter V_2 might represent a moderately conservative American voter in 1996. Given the strength of the Republican Congress following the election of 1994, the overall status quo was distinctly conservative. Voter V_2 – if he sufficiently discounted the platforms of Clinton and the Republicans – might, according to the argument we have just presented, find a swing back in the Democratic direction preferable. Such support (along with other factors such as a healthy economy) helped Clinton win reelection. A similar phenomenon – in the reverse direction – may have occurred in 1980 as discounting of Ronald Reagan's platform helped him pick up otherwise slightly left-leaning voters.

The example we have worked through for Figure 1.1 shows that it can be useful to think about voter choice as a blend of directional and proximity calculations, with the discounting factor d indicating the relative importance of the two factors.[8] Thus, we may think of the notion of discounting as one way to integrate directional and proximity factors.

[8] Of course, it is possible that a voter may not apply the same discounting factor to both candidates. We shall take this possibility into account when we model voter choice and candidate strategy in Chapters 8 and 9.

1.3 Overview

Our desire to understand optimal candidate and party strategies leads us to investigate the behavior of voters upon which the rationale for these strategies rests. We will see empirically that these strategies are neither totally convergent (i.e., identical) nor totally divergent (i.e., arbitrarily far apart), but rather intermediate. The models of voter behavior that lead theoretically to the empirically observed behavior of parties are likewise intermediate in the sense that they blend aspects of proximity, direction, intensity, and/or discounting.[9] In turn, a multicomponented model of voter behavior is supported by the data from a wide range of national election studies.

A central concern of this book is to distinguish between directional and proximity models or combinations thereof – both theoretically and empirically. We do this in three different ways. We look at (1) differences in expectations about *voter utility* functions, (2) differences in expectations about *voter choice* functions, and (3) differences in expectations about *party strategies*. For each of these three we present empirical evidence.

Much previous work (e.g., Westholm, 1997; Macdonald and Rabinowitz, 1998) has sought to demonstrate that one pure model of voting behavior or another is superior to all others. We argue instead that the various models are complementary rather than competing and that a unified model that reflects multiple motivations is the preferred model to explain both voter choice and party response. It is not just that a more complicated model yields a better statistical fit – that is to be expected. Rather, it is that for a wide variety of national electorates and for different methodological assumptions, the best fitting models are fairly consistently intermediate between the pure models. Perhaps most striking is the evidence from party strategies. Empirically, these strategies reflect behavior that is nearly optimal if parties are responding to voter behavior stemming from a mixture of voter motivations. Such strategies, however, would be far from

[9] Despite our efforts in the volume, we are not really ready to distinguish between interpretations of our unified model as being motivated by discounting, or by a mixture of directional and proximity factors, or by a lack of consistency in employing these factors among individual voters, or by heterogeneity among different voters. We shall, however, have a great deal to say about whether voters use a blend of models rather than specific pure models (see Chapters 3–7 and 10).

optimal if those motivations were characteristic of any one of the pure models.

The remainder of this book is divided into two parts: one part dealing with choice seen from the perspective of the voter; and the second dealing with choice seen from the perspective of the party. Part I consists of Chapters 2–7; Part II consists of Chapters 8–11. A cross-cutting division is that between two-party/two-candidate competition on the one hand and multiparty and multicandidate competition on the other. Chapters 2–6 in Part I and Chapters 8 and 9 in Part II fall into the former category; Chapter 7 in Part I and Chapters 10 and 11 in Part II fall into the latter category.

Each part of the book begins with two theoretical chapters followed by two or more chapters that are primarily empirical. Chapters 2 and 3 introduce the separate spatial models of voting behavior and then bring them together into a unified model. Chapters 4–7 analyze these models empirically. Chapters 8 and 9 investigate stable patterns of party strategies, whereas Chapters 10 and 11 use the unified model to empirically assess these expectations of party decision making.

In Chapter 2 we review the family of proximity and directional spatial models, providing detailed descriptions of the utility functions of each and showing how they are related to one another. As noted previously, there is not just a single directional model, there are various directional models. Some can be thought of in terms of direction of a candidate's position on a dichotomous issue relative to a neutral point on that issue (Rabinowitz and Macdonald, 1989), some in terms of direction of movement along a vector from a neutral point (Matthews, 1979). Others (Grofman, 1985) make explicit use of the notion of direction of movement from a status quo point that changes from election to election. Some emphasize the vote-attracting powers of intense advocacy of issue positions (Rabinowitz and Macdonald, 1989), whereas others (Matthews, 1979) reflect only the relative salience of different issues and not the overall intensity of voter or candidate preferences. We compare these directional models with each other and consider how they differ in their implications from the classical proximity model.

Chapter 3 introduces a general unifying model that contains most of the existing models in the literature as special cases. In this chapter,

we develop a unified model for the shapes of voter utility functions – i.e., for the relationships between voters' evaluations of candidates and the voters' spatial locations – that encompasses both directional ideas *and* the standard proximity model as special cases. This unified model has as polar special cases the Rabinowitz–Macdonald directional model, the Matthews directional model, and the Downsian proximity model.

We envision a voter as preferring a candidate who proposes to move policy in the direction desired by the voter. The voter may be responsive to strong advocacy for this direction of movement – whereas less intense advocacy in the same direction may sound weak or may be dismissed as an instance of "me-too." At the same time, voter attitudes are assumed to be tempered by a concern that the candidate's policy not be too distant from the voter's own preferred position. The first of these motivations is one of direction; the second, one of proximity. These motivations are subsumed in the unified model and may induce a voter to support a candidate who proposes to move policy in the direction desired by the voter but is moderately more extreme than the voter himself.

The unified model is characterized by two parameters, labeled β and q. The model is economical in that it depends on only two parameters, yet it permits us to distinguish between proximity and directional models on the one hand and between different versions of directional models on the other.

The first of the parameters may be interpreted as the relative importance of proximity versus direction in the voter's calculations, or – following Iversen (1994) – as the degree by which directional voting is constrained by distance between voter and candidate. Alternatively, we may explain the first parameter, β, in terms of discounting and the location of the status quo. From the perspective of a given voter, under appropriate restrictions, β is equivalent to the discount factor d of the Grofman discounting model, that is, a mixed proximity/directional model can be interpreted as a pure discounting model.

The second parameter, q, is an indicator of the extent to which the directional component of voter choice corresponds to the Rabinowitz–Macdonald directional model as opposed to the Matthews directional model. Thus, q represents directional intensity,

i.e., the extent to which utility increases with both voter and candidate distance from the neutral point.

Chapters 4–7 develop empirical analyses of voter utility and voter choice. Chapter 4 provides a number of empirical analyses of voter utility – both graphical and numerical – that compare these alternative pure models for a variety of two-party and multiparty electorates in the United States and Europe. In discussing these analyses, we introduce several methodological considerations involved in such empirical testing.

Chapter 5 continues the empirical analysis, dealing with the statistical fitting of the unified model of voter utility and of models that are nested within the unified framework. We fit the unified model so as to draw inferences not just about the relative contributions of the various model components but also about the interaction of these components with candidate type (i.e., incumbent versus challenger). Following Markus and Converse (1979), we also seek to measure the importance of rationalization effects that occur as voters attempt to assign locations to candidates that may reflect projection or contrast effects based on the voter's own preferences for the candidates (cf. Page and Jones, 1979). The key result in this chapter is that all three components – proximity, direction, and intensity – are needed to explain variations in utility and that the mix of these constituents varies with type of candidate, with intensity being a greater factor for challengers than for incumbents.

In Chapter 6 we shift from a voter utility to a voter choice perspective and from a deterministic to a probabilistic framework. We argue that voter choice models either avoid or are less sensitive to the many methodological problems that bedevil empirical testing of the voter utility models to which so much attention has been paid in recent literature. For the two-party United States electorate, we estimate parameters of a unified model of voter choice that controls for partisanship of the voter and specifies the probability of voter choice for each party/candidate.

The voter choice version of the unified model (a conditional logit model) introduced in Chapter 6 is best suited for multiparty electorates. In Chapter 7, we fit this voter choice model for the multiparty/multicandidate elections of Norway and France.

In addition to looking at politics from the voters' perspective, we

look at voting from the perspective of parties or candidates. Voter preferences – mediated by party strategies that define the choices open to the voters – ultimately determine public policies via the outcome of elections. Because of this intermediating role of party strategies, we shift our concern in Part II to party and candidate strategy.

We wish to understand candidate/party strategies when voting is based on more than just simple issue proximity. The classic inference about candidate response is embodied in the median voter theorem: in a single-stage two-candidate race under majority rule and with only one dimension, both candidates – if rational – are drawn to the location of the median voter. Although this neat conclusion dissolves into instability or multiple potential equilibria for higher dimensions or more than two candidates, extensive recent work has shown that some degree of centrism is often associated with the proximity model.[10] What can be said about optimal candidate/party strategies when we integrate directional and proximity ideas? Are configurations of candidate positions that should remain stable over a period of time (termed *equilibria*) necessarily central or may they be dispersed? What happens if we introduce discounting, partisan voting, or more than two candidates?[11]

In Chapter 8, instead of looking directly at voter utility and choice, we focus on optimal candidate or party response to the behavior of the voters. Such a response is embodied in the concept of a strategy equilibrium, i.e., a set of candidate/party strategies (expressed as points in a spatial model) from which no candidate/party would have

[10] The work on centrality of outcomes is usually tied to geometric constructs such as the yolk and the heart (McKelvey, 1986; Feld, Grofman, and Miller, 1988; Miller, Grofman, and Feld, 1990; Schofield and Tovey, 1992; Tovey, 1992; Schofield 1993, 1996) that are known to be centrally located in the space of voter ideal points. See Chapter 8.

[11] There are really three different substantive areas of application of spatial models of parties: (1) models of committee voting tied to the literature on social choice and social welfare orderings stemming from Arrow (1962); (2) models of candidate competition, stemming from the work of Downs (1957); and (3) models of coalition formation (e.g., Axelrod, 1970; Grofman, 1982; Laver and Schofield, 1990). A number of the mathematical results in these literatures are equivalent or very similar, e.g., the search for the core of a spatial voting game is essentially equivalent to the search for an equilibrium location of candidates in two-party competition and is closely related to the search for a stable coalition structure. In various chapters we draw on work from the first as well as the second of these literatures.

an incentive to depart. A strategy equilibrium – if it exists at all – may differ under various models such as proximity voting, directional voting, and the unified model. First we show, for two-party/two-candidate competition in one dimension, that discounting (or equivalently, mixing proximity and directional effects) may give rise to a distinct pair of stable strategies for the two parties, i.e., a divergent equilibrium. The more disparate the discount factors for the two candidates, the greater the divergence.

Chapter 8 also considers the directional analog to the basic equilibrium concept in the proximity context, the *core*, which for majority rule games is also known as the *Condorcet winner*.[12] We refer to this equilibrium concept as the *Condorcet directional vector*. We summarize some key geometric results that characterize the spatial region of instability, i.e., the region of potential neutral (or status quo) points from which there is no Condorcet directional vector.

Next, in Chapter 9, we seek to understand the long-run dynamics of voter choice and party strategies. If voter choice is sensitive to the location of the status quo – which can be expected to change over time – then there should be forces restoring party competition, as one party takes the status quo "too far" in a given direction. We will show that, in contrast to a pure proximity model, the discounting model – and hence a model that combines directional and proximity aspects – implies either alternation in power between the parties or a pattern of repeated wins by one party, punctuated with single victories by the opposing party.[13]

On the theoretical side, we show how to extend our unified approach to party strategy from two-candidate/two-party contests to multicandidate and/or multiparty competition. On the empirical side we show in Chapter 10 that a mixed proximity and directional model

[12] A Condorcet winner is a candidate who is preferred over each of the others by a majority of the electorate, i.e., could beat (or tie) each of the others in two-way contests.

[13] In further work, we hope to link the spatial literature on party competition more closely to the literature on party realignment. Lubell (1952) has hypothesized that, generally, in the United States, one party has been the sun and the other the moon, i.e., that we have long periods of one-party dominance with the major party the driving force behind policy change. Our analysis, thus, provides an alternative to that of Riker's work on realignment (Riker, 1962, 1982), which holds that a long period of one-party dominance eventually ends when a majority coalition becomes too difficult to maintain.

is by far the best predictor of the actual locations assumed by parties in the multiparty electorates of Norway and France, which are indicative of many European polities. Thus, empirical fitting provides strong support for a model of voter choice that combines both proximity and directional aspects. On the theoretical side, for three or more candidates, we investigate equilibria for directional models and the influence of partisan preference on equilibria for a spectrum of models. We see that introduction of a probabilistic element into a model of voter choice can lead to a convergent equilibrium under proximity assumptions. Moreover, if party ID is added as an explanatory variable, the equilibrium may remain, but one in which the parties maintain distinct strategies. Also, as a directional component is entered into the model, these optimal party locations spread further and further apart.

Chapter 11 extends our analysis to types of voting rules where voters must do more than identify their single most preferred candidate, e.g., the Borda count, the single-transferable vote (STV), plurality with runoff, and approval voting. What stands out is that the preference for a mixed model over any pure one, which we have demonstrated for the standard plurality system of voting, extends to alternative voting rules as well.

The postscript reflects on what we have done and what is left to be done. We reiterate our findings that – regardless of whether evidence is drawn from voter utility, voter choice, or party strategies – a mixed model dominates any pure model. Thus, even if a reader objects to any particular methodology, the combined evidence is overwhelming. We also reiterate the other major finding presented in this book; namely, that moderate divergence in party strategies is both to be expected and empirically observed. Thus, for both voter utility and voter choice, the unified model predicts that voters will use a mix of proximity and direction, whereas for party strategies, the unified model predicts and we empirically observe moderate divergence. Finally, we consider topics that must be left largely for future research, including issue salience, voter heterogeneity, ambiguity of or uncertainty about candidate positions, persuasion, and distinctions between issue space and ideological space.