

# A Theory of Electoral Systems\*

Kenneth Benoit  
Department of Political Science  
Trinity College, University of Dublin  
kbenoit@tcd.ie

February 14, 2000

## 1 The Problem of Endogenous Electoral Systems

Electoral systems, states Maurice Duverger, “are strange devices—simultaneously cameras and projectors. They register images which they have partly created themselves” (Duverger 1984, 34). Yet it was originally Duverger’s propositions describing how electoral rules shape a nation’s political party system (1951) that led to the current preoccupation with electoral systems *consequences* at the expense of the study of their political *origins*. According to this view, political party systems are shaped by electoral institutions which exert both “mechanical” and “psychological” pressures (Duverger 1951) on voters and parties. The mechanical effect of electoral systems describes how the electoral rules constrain the seats that can be awarded from distributions of votes, while the psychological effect deals with the shaping of party and voter strategies in anticipation of the electoral function’s mechanical constraints. Their study has formed the two pillars of a research agenda which according to Riker (1982) in many ways exemplifies the scientific study of politics.

Despite the progressive accomplishments in this field, far more emphasis has been paid to the adaptation of parties and candidates *to* electoral institutions than to the way that electoral institutions themselves are adapted

---

\*Paper prepared for delivery at Re-Thinking Democracy in the New Millennium Conference, Omni Hotel, Houston, February 16–19, 2000. NOTE: This paper is a **working draft** of part of a longer project, namely a book in progress whose working title is *Setting the Rules of the Game: Electoral Regimes in Post-Communist Eastern Europe*. I’d appreciate any comments, and if you insist on citing this work please contact me first! This research is supported by the Social Science Research Council of the Royal Irish Academy. Thanks to Gary Cox, Gary King, John W. Schiemann, and Ken Shepsle for comments and ideas on earlier versions of the argument set forth in this paper, and to Tobias Klaus for research assistance.

*by* political parties. Political experience, however, demonstrates repeatedly that while actors do maximize their goals by adapting their strategies to institutions, they also adapt by changing the institutional setting that transforms their strategies into outcomes (Tsebelis 1990). In this field, however, theory has lagged behind empirical analysis, tending to focus on informal examinations of multiple cases (Elster, Offe, and Preuss 1998; Geddes 1996; Lijphart 1992) or inductively generating propositions drawn from single case studies (e.g. Benoit and Schiemann 2000; Ishiyama 1997; Remington and Smith 1996; Bawn 1993; Brady and Mo 1992). What is lacking is a single theory that attempts to reconcile propositions about electoral systems as effects with studies of electoral systems as causes. At the least, such a theory should explore the implications of the endogeneity of electoral systems for the vast corpus of studies which treat them as exogenous determinants of political outcomes. Of course such a theory ought also to go further and attempt to explain how parties adapt rules, and how rules in turn shape parties, until an equilibrium is reached where one or both become stable, including the conditions that may disturb this equilibrium.

Perhaps the most important recent political event to lead scholars to question established propositions about electoral systems has been the transition to democracy in Eastern Europe. The idea that electoral systems are endogenous, of course, predates 1989. Numerous accounts and case studies attribute variation in electoral rules to political and party interests rather than the converse, including the frequently cited “Rokkan hypothesis” (Rokkan 1970) explaining the adoption of proportional representation (PR) in Western Europe in the early 20th century.<sup>1</sup> Yet nowhere has the dynamic of change in electoral institutions and party systems been observed as rapidly or as frequently as in post-communist Eastern Europe (Elster, Offe, and Preuss 1998, 130).

A full accounting of this process of change means we must critically reconsider conventional notions of electoral systems as institutions that “tend to be very stable and resist change” (Lijphart 1994, 52; see also Boix 1999; Dunleavy and Margetts 1995). This means in part reconciling lessons from standard electoral studies with the lessons from the general literature on

---

<sup>1</sup>The “Rokkan hypothesis” (see also Lijphart 1992) attributes the introduction of PR in continental Europe to the extension of the franchise and the desire by established groups to protect their position while simultaneously granting a measure of representation to previously excluded groups. Lipson (1964) likewise reexamined many of the cases studied by Duverger (1951) and concluded that party politics or political traditions drove the electoral arrangements and not vice-versa (see also Grumm 1958, 375). More recent evidence also challenges the conventional Duverger model (Shamir 1985; Shugart 1992). Finally, nearly all examinations of the adoption of electoral of Eastern European electoral systems during their transitions to democracy indicate that electoral system design was at least partially motivated by partisan interests (Elster, Offe, and Preuss 1998; Geddes 1996; Lijphart 1992).

transitions to democracy. The latter explains that founding elections—the first election after the introduction of genuine competition—can have one of two distinct consequences. On one hand, they may have a “freezing effect upon subsequent political developments,” (O’Donnell and Schmitter 1986, Part IV, 62) establishing both the rules and players of the democratic game in a configuration that remains stable for subsequent repetitions of the democratic cycle. With the exceptions of France and Greece, for instance, the norm in post-war Europe has been for electoral systems not to change. On the other hand, founding elections may result in instability in both party systems and institutional rules, observed for many cycles (O’Donnell and Schmitter 1986, 62); examples are the French Fourth Republic, Argentina in the 1950s and 1960s, and many of the post-communist states of Eastern Europe. How is this explained by the literature on electoral systems? A recent article explains:

As soon as the electoral arena became stable and the party system froze along certain cleavages, policymakers lost interest in modifying the electoral regime. Abrupt changes in electoral laws have been rare in the last eight decades, with the exception of those nations in which party systems have remained unsettled. (Boix 1999, 609–10)

This account begs several important questions: What causes parties to have or to lose interest in modifying electoral institutions? What causes party systems to consolidate or to remain unsettled? How are the two related? The answer requires a theory about institutional equilibrium, which requires a model incorporating the effects of electoral institutions on parties with the incentives and ability which parties have to reshape electoral institutions. Only a theory which accounts for the equilibrium of endogenous institutions as well as of strategically adaptive behavior can truly claim to treat elections as “systems of exchange subject to equilibrating mechanisms” (Cox 1997, 6).

Such is the objective of this paper: to outline a theory of electoral systems which explains electoral system choice, both in cases of founding institutional choice and in subsequent electoral system reforms taking place under more “normal” political circumstances. Accordingly I first map the general universe of explanations of electoral system origins and change, then outline a single, parsimonious theory of change and persistence in electoral institutions. Because the purpose is to strictly outline a parsimonious and comprehensive theory of electoral institutions rather than to explain variation, I do not attempt here to apply it to actual cases, although the discussion is replete with examples. Instead I follow the presentation of the formal model with a discussion of its observable implications and then outline an

agenda for empirical research to support or infirm the model. The final section discusses limitations of the model and possibilities for its extension.

## 2 Explanations of the Origins of Electoral Systems

Electoral institutions constitute a very specific type of political institution: what Tsebelis (1990, 104) has termed “redistributive” institutions. Redistributive institutions have a zero-sum character which benefits one group in society at the expense of another, in contrast with “efficiency” institutions which may improve everyone’s welfare versus the status quo. This distinction is critical, since it means that the most of the rational choice literature on the emergence and stability of cooperative and efficiency institutions has no direct application to the origins and change of electoral laws.<sup>2</sup> Electoral laws are quintessentially distributive institutions, improving the share of one group at the direct expense of another. Moreover, alternative methods for dividing seats prescribed by electoral laws will have vastly different distributive consequences, yet all be equally efficient. The appropriate focus when examining the origins and evolution of electoral systems is therefore not on cooperative gains from efficiency, but rather on the struggles for distributive shares which institutional alternatives provide and the influence which those affected have in effecting institutional change.

Three issues can be identified when examining the origins of electoral institutions. First, does each party participating in the choice over institutional alternatives evaluate them based on each alternative’s expected effect on its own partisan interests? Second, does each party participating in the choice over institutional alternatives evaluate them based on each alternative’s expected effect on the general interest? Finally, do electoral institutions emerge from some process other than an evaluation of the consequences of systematically evaluated alternatives? The first two questions attempt to characterize a choice process according to its motivation: self- or general interest. The third question asks whether consequences and alternatives were considered at all, whether through a choice process or some completely different process. These three questions provide a heuristic for identifying three broad categories of specific theories all of which have been applied to explaining the origins of electoral systems.

---

<sup>2</sup>This approach has been most commonly applied to the emergence of cooperative institutions that promote efficiency by reducing transaction costs, enhancing information flow, and offering general gains to cooperation versus the institution-free state. For a foothold on this voluminous literature, see Knight and Sened (1995), also Shepsle (1986), Riker (1980). Bates (1988) and Knight (1992, 28-40; 1995) offer general critiques of the efficiency view.

## Self-Interest Derived Preference Explanations

The notion of *derived preferences* in institutional choice is the idea that the choice of institutions occurs as the first stage of a two-stage game. In the first stage, parties hold or derive preferences for alternative institutions based on expectations about the payoffs these institutions will have for them at a second stage (Tsebelis 1990). Here I generalize this notion to include all consideration of electoral institutions as instrumental objectives.

*Policy-seeking.* In policy-seeking theories, the origins of electoral rules is attributed to the outcome of a struggle by parties with preferences for alternatives based on the expected policy outcomes associated with the alternatives. Electoral system choice is directly linked to distributive shares in legislative power (the first stage), and this legislative power will then determine who is empowered to enact policy (the second stage). Each party involved in institutional choice at stage one will rank the electoral alternatives according to its utility for the exogenously preferred policy outcomes it associates with the institutional alternatives. This is the model applied by Bawn (1993) to the choice of electoral system in post-war Germany, for example, explaining both the adoption of PR in 1949 and a mixed system in 1953.

*Office-seeking.* Office-seeking theories of institutional choice are closely related to policy objectives in that the parties choosing institutions evaluate alternative institutions in terms of the utilities they will derive from their share of distributive goods associated with each institution. The office-seeking model is more general, however, since it posits both direct and indirect utility from holding office. Direct utility might be partisan power or representation of one's own constituency; indirect utility might be gains from additional shares of allocative resources determined by the balance of legislative seats, including (but not limited to) policy. The office-seeking model differs from the policy-seeking model in that it specifies that each party will prefer rules which maximize its own share of legislative seats—rather than those of any other party—regardless of the compatibility of the policy goals or ideology of other parties with its own. Such a model has tended to explain political motivations most clearly in transitional settings where second-stage goods such as policy outcomes are poorly defined or uncertain, and the most immediate concern for parties is maximizing legislative representation. For example, Benoit and Schiemann (2000) have explained the choice of Hungarian electoral system with an office-seeking model. Similar models have been applied to electoral system choice in post-communist Russia (Remington and Smith 1996) and in post-authoritarian Taiwan (Brady and Mo 1992).

*Personal Gain.* A personal gain model might explain parties' preferences for

electoral alternatives based on the expected personal gains for key individuals associated with the alternatives. Party leaders may favor a particular electoral alternative in order to maximize their personal power, or to make good on bargains struck such as promises of office or personal financial reward. In the 1989 roundtable deliberations in Poland, for instance, the communist Polish United Workers' Party appears to have conceded the free election of the senate in exchange for an arrangement which it expected to guarantee the presidency of General Jaruzelski (Olson 1993). Of course, such explanations raise questions whether parties are behaving as unitary actors. Nonetheless, the personal gain model links institutional preferences not to distributive shares for parties in terms of either office or policy, but instead to maximizing the personal welfare of selected individuals involved in institutional decision-making, quite possibly in what is expected to be a very short-term arrangement.

### **General Interest Derived Preference Explanations**

Parties may also rank alternative institutions according to their preferences for institutional outcomes that affect the general, rather than partisan, interest. Just as the framers of the U.S. constitution debated passionately over the merits of a federal versus a confederal design, parties may struggle to implement competing institutions on the basis of their different preferences for collective political outcomes. This may be a social concern such as fairness or representation, a concern with producing good government, safeguards against hyperconcentration of power, and so on. In many cases, however, parties whose real concerns are with self-interest may defend their preferred institution with arguments about the general interest. Especially with regard to the tradeoff between representation and governability, the former is often invoked by opposition parties who suddenly see the advantages of governability in a new light once in power. The motivations identified below assume that general interest concerns are sincere. The list is not exhaustive but identifies the most common approaches to explaining institutional choice in terms of the general interest.

*Representation.* A frequently expressed desideratum of electoral systems is representation, on the basis of simple fairness. Genuine representation entails legislative seats for one's own group, according to this argument, and this requires electoral institutions making it possible for such groups to gain seats. These groups may be sectors representing labor or agricultural interests, or ethnic, religious, or national minorities in heterogeneous societies. A preference for maximizing representation generally means maximizing proportionality, an option which affects all parties and potential parties rather than only one's own party. This preference for proportionality forms part of

a two-dimensional model of electoral system utility applied by Dunleavy and Margetts (1995) to explain the persistence of the British first-past-the-post system.

*Governability.* Governability is a general outcome of electoral institutions also affecting the general rather than partisan interests. Indeed, governability is the other leg of the two-dimensional Dunleavy and Margetts (1995) model of the debate over the British electoral system. Governability implies a general rather than a partisan interest because governability is concerned with maximizing the seat share of the largest party, rather than the seat share of any particular party.

*Social and Political Engineering.* This motivation refers to preferences for alternatives based on their ability to encourage conciliation and conflict management between rival, possibly violent, groups in society. For instance, Horowitz (1985, 639–41) ascribes the Sri Lankan adoption of the alternative vote in 1978 to the desire to promote intra-ethnic conciliation within a multiparty system. The rules for electing the Nigerian president prescribed by the 1978 constitution also were concerned with producing ethnically cross-cutting coalitions (Horowitz 1985). In cases where conflict management is paramount, this motivation may override other criteria in electoral system choice.

*Other General Motivations.* These include the goal of “making elections accessible and meaningful,” (Reynolds and Reilly 1997) referring to the general desire to choose electoral institutions that enhance political participation and efficacy. This includes designing systems that are easy to use, that minimize “wasted votes,” and that provide a meaningful identification between constituents and representatives. Other general concerns might include administrative capacity or cost. In practice such concerns tend to figure more in the rhetoric of electoral reform than in actual decision-making. When they do determine institutional alternatives, it is most often in determining the final shape of institutions already chosen in broad form for other reasons.

## **Other Explanations**

Non-derived preference theories of electoral system origins cover many explanations, including both those where choice was conscious as well as those explaining institutional change as the product of social forces without focusing on specific agents. The key feature characterizing all of these explanations is that institutional alternatives are not systematically evaluated based on their consequences, but rather become focal or simply emerge based on other considerations or as the result of convergent forces.

*Historical Precedent.* Especially in countries experiencing a return to democ-

racy after a period of authoritarian rule, institutional designers may be attracted to electoral laws used during earlier episodes of democracy, finding these solutions “focal” in the midst of intense pressure and institutional crisis (Elster, Offe, and Preuss 1998, 62). There is some evidence, for example, that the Civic Forum’s embrace of PR in 1990 was linked to the use of PR during the Czech inter-war period.<sup>3</sup> The electoral system of the French Fifth Republic likewise restored the two-round majority system used under most of the Third Republic, which was in turn used under the Second Empire from 1851 to its last election in 1869 (Mackie and Rose 1991, 131-2). A return to historically prior electoral institutions may also provide an attractive symbol of rejection against the existing regime. For example, some parties in Bulgaria’s transitional Grand National Assembly urged that the constitution to be adopted in 1991 resemble the 1879 “Turnovo” constitution, Bulgaria’s first post-independence liberal constitution. “A return to the 1879 constitution... would signal a clean break with the communist legacy and might contribute to reviving some of the positive aspects of precommunist political traditions,” suggested one observer (Engelbrekt 1991, 7). Indeed, the first post-communist legislative body in Bulgaria, the “Grand National Assembly,” was agreed to by the BCP at the insistence of the opposition who wanted to evoke the first post-independence parliament responsible for the 1879 constitution (Ashley 1990). On a smaller scale, historical precedent may influence specific elements of electoral systems, such as new district boundaries which may be fitted to historically focal administrative demarcations. Rather than debate over the drawing of PR districts, for example, in both the Bulgarian and Hungarian electoral systems the PR districts were formed around previously existing local governmental boundaries. On a less specific and more general scale, historical precedent explanations could also include what Frye (1997) terms “cultural approaches,” encompassing not only legacy institutions but also path dependence, general culture, and the institutional “culture” imposed by the character of previous regimes. Jowitt (1992)’s account of post-communist regimes in Eastern Europe, for example, attributes variation in institutional development to the degree of the “Leninist” legacy of state-socialism.

*Sociological.* Sociological explanations shift attention from agents and their preferences to the purposes for which electoral institutions were created. Rokkan, for example, qualified his original hypothesis in the context of ethnic and religious minorities, pointing out that the earliest moves toward PR occurred in the most ethnically heterogeneous societies of Western Europe (Rokkan 1970, 157). Horowitz (1985) has also suggested that ethnic concerns may be central in the design of electoral systems, although his account suggests more of a conscious choice over alternatives linked to expected consequences. Purely sociological explanations tend to omit or at

---

<sup>3</sup>Cite?

least downplay the conscious consideration of alternatives, simply linking the emergence of certain electoral arrangements to the result of convergent plural forces. For instance, Dahl and Tufte (1973) suggest that size itself may determine the shape of electoral regimes.<sup>4</sup>

*Economic.* Economic approaches to electoral system origins look to economic factors to explain political institutions. Rogowski (1987) has argued that the more an economically advanced state is dependent on external trade, the more it will drawn to the use of PR and large district magnitudes. This move to PR comes from the convergence of pressures from free trade groups seeking to maximize the state's insulation, strong parties seeking to boost state autonomy, and a need for the stability which Rogowski attributes to PR. His analysis of OECD countries in 1960 and 1975 suggests an association between trade and the number of electoral districts.

*Technocratic Decision.* Technocratic decision explains electoral institutions when the choices are made by an expert or group of experts on primarily technical or administrative grounds. Pure examples of technocratic origins are rare, but may explain the adoption of certain elements of electoral systems, particularly such complicated features as proportional representation formulas or district sizes and boundaries. The costs to understanding these factors for many decision-makers may simply outweigh the perceived potential benefits. The choice of PR formula in the Hungarian electoral law of 1989, for instance, was delegated by the roundtable negotiators to a small group of experts who purported to understand its implications and who cited technical criteria in justifying their choice (Benoit and Schiemann 2000). The single-transferable vote (STV) system in Ireland was also chosen apparently without a systematic consideration of the alternatives, largely because of a visit to Dublin in 1911 by Lord Courtney of Penwith, president of the British Proportional Representation Society. He convinced Arthur Griffith, founder of the Sinn Fein Party and later of the PR Society of Ireland, of the merits of STV. STV was subsequently adopted in the free Irish state over other PR alternatives without significant debate (Carstairs 1980, Ch. 17).

*External Influences.* External influences may explain the choice of electoral system when forces outside the national political context are determining in the choice of electoral institutions. One example would be the imposition of electoral laws by a conquering power after military defeat;<sup>5</sup> another the inheritance of electoral institutions from colonial rulers (see Blais and Massicotte 1997 for examples). More recent accounts also examine the role of international political and financial organizations in shaping electoral institutions. For example, accounts of the Lithuanian electoral law choice

---

<sup>4</sup>An example would be nice here. Perhaps in Milnor, Andrew J. Elections and political stability; an analytic study. Boston, Little, Brown, 1969.

<sup>5</sup>Example?

in 1992 attribute its content as having been drafted primarily by international organizations rather than by internal political parties (Gelazis 1995). While external influence may explain how electoral laws originate, however, it cannot explain why such institutions persist once the external influence is removed.

*Idiosyncratic Factors.* A final category of explanations might simply be termed idiosyncratic. This covers the adoption of institutions for reasons of accident, whim, error, or other idiosyncratic circumstances that can be regarded as historically unique. In practice such causes are uncommon, although examples do exist. For example, the previously mentioned Irish STV system was largely shaped by the visit of Lord Penwith to Dublin in 1911. The first free constitution mandated PR as a principle for the electoral system, later changed specifically to STV in the constitution of 1937 by de Valera, head of the *Fianna Fail* party in office since 1932 (Carstairs 1980). Successful passage of the constitution elevated the amendment rule for the electoral system to a constitutional level procedure, protecting the STV system against numerous challenges and two referendums. Idiosyncratic explanations also may treat institutions generally as products which simply emerge rather than which are consciously designed. This view has been expressed by (Sait 1938, 16): “When we examine political institutions...they seem to have been erected, almost like coral reefs, without conscious design... We ask for the name of the architect. There was no architect; nobody planned it.” This notion was echoed by Rogowski (1987), who suggested that:

Societies often adapt their institutions semiconsciously, responding to surface manifestations of root causes that their members only dimly comprehend: feudal dues were not commuted, nor absolutist government instituted, nor slavery abolished, nor even “Keynesian” fiscal policies first employed by groups fully cognizant of what most would now acknowledge to have caused those changes. (220)

In the theory below I present a distinctly different view: that at least with regard to electoral institutions, political actors are quite conscious of their range of actions and the consequences of those actions. The next section offers a formal presentation.

### 3 An Office-Seeking Model of Electoral Systems

The structure outlined here is specifically *a* model of electoral system change, rather than being presented as *the* model. Its purpose is to formulate explic-

itly one model of electoral system change and persistence, formally stating its assumptions and outlining the implications of these assumptions. By being deliberately parsimonious, the model will be just as useful for the cases which it does not explain as for those which it does, since it will point to which features should be examined and how. The model is therefore not intended to maximize explained variation in actual electoral system change and persistence, but rather to formulate a theory making unambiguous assumptions with strict implications that will serve as a guide to future investigations of this topic.

The model is explicitly *office-seeking*. It may be summarized as the following. Electoral systems result from the collective choice of political parties linking institutional alternatives to electoral self-interest in the form of maximizing seat shares. Political parties will rank institutional alternatives in descending order of the expected seat shares they expect the alternative to bring them in an election to take place under those rules. In order to most accurately link institutional alternatives to self-interest, each party will actively seek information that will enable it to estimate the vote share it expects under each alternative electoral rule. This includes both information about its own expected vote share as well as about the operation of the electoral system alternatives for transforming this vote share into seats.

A change in electoral institutions will occur when a political party or coalition of political parties supports an alternative which will bring it more seats than the status quo electoral system, and also has the power to fiat that institutional alternative. Electoral systems will not change when no party or coalition of parties with the power adopt an alternative electoral system can gain more seats by doing so.

In terms of the map of explanations previously developed, the model is a derived-preference theory of self-interest, assuming specifically that parties seek institutional change when that change will improve their expected seat share relative to the status quo. Why the explicit focus on office-seeking? First, seat shares are generally the most immediate political objective among parties contesting elections. Even if parties are concerned with policy, the most preferred way to effect the most preferred policy is for one's own party to gain sufficient seats to make its passage possible. Second, especially in founding elections or elections involving new political groups, representation may be a goal in itself, with the desire to implement specific policies secondary to the desire to participate in the legislature. Individuals want to be elected or reelected, and this desire will take precedence over policy preferences (Geddes 1991). Finally, many cases of institutional change involve fluid and unusual political circumstances, and policy preferences may be inchoate or poorly defined, with the participants themselves not necessarily certain of their own preferences or holding multiple policy preferences within

a single “party.” For example, in Remington and Smith 1996’s analysis of choice of 1993 and 1995 Russian electoral laws, office and not policy were seen as the key objectives motivating institutional decisions. A similar case has been outlined in the choice of the 1989 Hungarian bargaining over the electoral law (Benoit and Schiemann 2000).

The model may be formally stated as follows. Vector quantities have been expressed in bold.

Definitions:

1. Define a political setting  $S$  at time  $t$  as  $S_t$ :  $\{\mathbf{P}, \mathbf{L}, D, \mathbf{V}, \mathbf{V}^*, \mathbf{S}, \mathbf{S}^*, \mathbf{E}, \mathbf{R}\}$ . Each  $t$  refers to an election although the notation below generally omits this subscript unless it is directly relevant.
2. Let  $\mathbf{P}$  be a system of  $P$  political parties indexed by  $p$  from  $1, \dots, P$ . Parties are unitary actors holding a single set of preferences, beliefs, expectations, and utilities. A party may be a single political party or a coalition of political parties as long as the unitary actor assumptions are met.
3. Let  $\mathbf{L}$  be a vector of power to fiat institutional rules held by each party  $p$ . Properties:  $0 \leq L_p \leq 1.0$ ,  $\sum_{p=1}^P L_p = 1.0$ .
4. Let the scalar  $D$  represent the decision rule for exercising fiat power to change the electoral rules. Any party  $p$  will need  $L_p > D$  in order to exercise fiat power to implement an institutional change, where  $0 \leq D \leq 1.0$ . For example:
5. Let  $V_p$  represent the proportion of votes party  $p$  will receive in the election, and  $S_p$  the proportion of seats. Let  $V_p^*$  refer to the unobserved vote proportion that party  $p$  expects at the time of the electoral system choice to receive in the next election. Properties:  $\sum_{p=1}^P V_p^* = 1.0$ .
6. Let  $\mathbf{E}$  represent a set of  $E$  electoral system functions indexed by  $e$ :  $\{E_1, E_2, E_3, \dots, E_E\}$ .  $E_e(\cdot)$  is a function transforming vote shares into seat shares such that:
  - $E_e(V_p) \Rightarrow S_p$  is the transformation of vote share for party  $p$  into seat share for party  $p$  by electoral rule  $e$  for party  $p$ . Properties:  $\sum_{p=1}^P S_p = 1.0$ .
  - $E_e(V_p^*) \Rightarrow S_{pe}^*$  is the unobserved but expected transformation of vote share into seat share by electoral rule  $e$ . Properties:  $\sum_{p=1}^P S_{pe}^* = 1.0$ .
  - One electoral alternative will always be the status quo electoral system, designated additionally as  $E^{\text{SQ}}$ .

7. Each party  $p$  will hold a preference ordering over electoral law alternatives  $R_p = \{E_{p1} \succeq E_{p2} \succeq E_{p3} \succeq \dots \succeq E_{pE}\}$ , where  $E_{p1}$  is preferred most and  $E_{pE}$  is preferred least by party  $p$ .

Additional assumptions:

1. **Common knowledge of electoral system alternatives:** Each political party  $p$  will hold a common view of the range of plausible electoral system alternatives  $\mathbf{E}$ .
2. **Beliefs about relative political support:** Each political party  $p$  will have a belief about its expected vote share  $V_p^*$ .
3. **Beliefs about expected seat shares under each electoral system alternative:** Each political party  $p$  will have a belief on  $S_{pe}^*$ , the expected seats to be produced by each  $E_e(V_p^*)$ .
4. **Seat-maximizing preference among electoral system alternatives:** Each political party's utility for an electoral rule alternative will be defined by its expected votes under that alternative. The preference ordering  $R_p$  over  $\mathbf{E}$  will be therefore be ranked in descending order of  $S_{pe}^*$ .
5. **Electoral system change:** The status quo electoral law  $E_{et}^{\text{SQ}}$  will be replaced by another electoral law  $E_{ft+1}$  if for some subset of  $1, \dots, Q$  parties  $\mathbf{Q}$ ,  $\mathbf{Q} \subseteq \mathbf{P}$ , the following is true:  $\sum_{i=1}^Q L_i > D$  and  $S_{qf}^* > S_{qe}^* \forall q$ . In other words, the total fiat power of coalition  $\mathbf{Q}$  must exceed the institutional decision rule  $D$ , and each party in  $\mathbf{Q}$  must expect to gain more seat share under electoral institution  $E_f$  than under  $E_e$ .

The next section discusses the implications of the model and offers suggestions for its testing in empirical contexts.

## 4 An Agenda for the Study of Electoral System Change

### Empirical Implications

Models of institutional change are difficult to confirm or infirm by looking at empirical evidence. This is because most models make assumptions about motivations, and genuine motivations are notoriously difficult to discern. Yet this difficulty arises precisely because of the important and indeterminate nature of institutional choice, the same characteristics which despite the

challenges make it worth the attempt to study institutional choice using rigorously constructed models. This section seeks to clarify this task by outlining the empirical assumptions of the office-seeking model presented above, and then describing what observations might falsify the model.

The first task is to compile a list of what quantities deserve examination and how they might be empirically observed.

**P** What is the universe of parties, and how has this been defined? The model assumes that parties are unitary actors. This means that in practice, “parties” may be actual single political parties, or umbrella organizations or coalitions of political parties acting as a single unit. For instance, in negotiations over founding electoral institutions in Eastern Europe, opposition groups in Poland, Hungary, and Bulgaria forged a united stance against the regime and turned the roundtable talks into what was effectively bilateral bargaining. Conversely, it may be that within a single political party there are multiple sets of preferences which affect institutional choice. Of course, observation of such a non-unitary actor party would conflict with the definition of  $P$  required by the model.

**L** What is the fiat power assigned to each party? More importantly, how has this fiat power been determined? In some cases this will be formally defined power, such as numerical votes defined by seats held in a legislature; in other (transitional) contexts it may be set by extra-constitutional factors such as social force or popular legitimacy. Parties outside of the political framework may possess a degree of effective fiat power if their forces are sufficient to threaten political or social conflict if their views are not considered.

**D** This important quantity defines the institutional barrier to amending or adopting electoral laws. If there are two parties  $p, q$  such that  $L_p = L_q$  then neither has the power to impose a new rule on the other. For example,  $D = .50$  represents majority rule, under which if  $L_p > .50$  then one party  $p$  has the power to change the electoral system. Super-majorities, common in legislative contexts, involve a higher setting of  $D$  such as  $D = 2/3$  or  $D = 3/4$ . In well-defined legislative contexts  $D$  will be simple to observe; in transitional and extra-constitutional contexts  $D$  will have to be assigned based on the decision rules which actors adopt for themselves.

**V\*** This represents the estimates by each party of the votes they can expect to receive in the election. While sometimes difficult to observe, there are usually reliable proxies such as opinion polls; or previously held elections, often to other offices such as executive, local elections,

European Parliamentary elections, or by-elections. What does each party expect its votes to be? Are these expectations commonly held and agreed upon?

**E** Of course some identification of the range of electoral alternatives being considered must be identified. An interesting issue in its own right will be what is and who determines the universe of electoral arrangements considered as alternatives. In terms of the theory, however, viable alternatives not considered by institutional designers should also be evaluated, since the theory predicts that planners will seek all alternative institutions that maximize their seat shares relative to the status quo when such alternatives exist. Generally the range of options which choice participants considered is made plain in records of legislative and committee debates, public statements, and often personal interviews.

**S<sub>e</sub>\*** This quantity summarizes each party's expectation of its seat share for each electoral system alternative. Does each party have a clear understanding of **S<sub>e</sub>\***? This information is sometimes found in public or private recorded statements, such as legislative debates or party records, but often comes primarily from interviews with choice participants.

**R** This quantity can be examined in two ways. First, does each party systematically rank the electoral alternatives? And for each party, what is this ranking? Evidence for ranking of electoral alternatives can come from a variety of sources: public statements, records of private party meetings, *ex post* interviews with choice participants, transcripts of legislative debates or roundtable transcripts, or roll-call votes on electoral law bills.

Observing these quantities provides all of the the necessary information for an empirical test of the model. This test takes place by comparing the observed patterns among the quantities with observable implications directly from the model. These implications are:

1. *Formation of preferences over electoral alternatives.* During deliberations and bargaining over alternative electoral institutions, the positions of a political party should be clearly linked to its expectation of the seats to be gained by the electoral rules. A party's position should not reflect a motivation not linked to maximizing seat shares.
2. *Explaining electoral rule changes.* Observed changes in electoral rules should be engineered by a subset of parties collectively possessing the fiat power to change an electoral rule and each having the expectation

of improving its seat share by doing so. Each electoral law change should clearly reflect the perceived self-interest of the parties making the change.

3. *Predicting electoral rule changes.* When there exists a subset of parties with both the ability and electoral motive to alter the rules, electoral rules should not stay constant.
4. *Information-seeking and updating.* Each party  $p$  should actively seek information about  $S_{pE}^*$  in order to evaluate alternative electoral institutions. When new information becomes available that changes  $S_{pE}^*$ , then the party should update its ranking  $R_p$ .

## Electoral System Change and Persistence

A global result of the model is that absent external shocks, the political system  $S$  will eventually reach an equilibrium state of  $\mathbf{L}$  and  $E^{SQ}$  where both will become stable.

Consider the process of change outlined in Table 1. The cycle continues until no coalition of parties has sufficient fiat power to pass an electoral law alternative to the status quo that each member expects would improve its share of seats. The conclusion is that both  $\mathbf{S}$  (and therefore  $\mathbf{L}$ ) stabilize, creating an equilibrium  $E^{SQ}$ . Of course, this model assumes that  $\mathbf{V}$  is constant, and this is never the case in the more complicated real world. Because both the actual votes and the expected votes will change over the course of time, electoral institutions will change. Broadly speaking we can classify forces for change—disturbing this equilibrium—as belonging to four broad types.

1. Party’s expectations of their share of votes  $\mathbf{V}^*$  diverge from their current share of seats  $\mathbf{S}$ . This creates a gap wherein power to shape electoral laws no longer equals expectation of shares of votes expected to translate into future seat shares. This means that parties in power will then reconsider  $E_t^{SQ}$  in light of their new expected  $S_{t+1}^{*SQ}$ .

For example, the Socialist switch from the two-round majority system in France to PR for the 1986 elections reflected both the Socialists’ ability to pass an electoral law amendment (58 percent of the National Assembly seats) and the interest in doing so given that polls widely showed that the union of the Right was likely to surpass the Socialists at the polls (38 percent in 1985 opinion polls). The Socialist Party calculated that PR would mitigate the large-party bonus the Right could gain under the majoritarian system and therefore minimize the Socialist loss of seat shares. It then successfully adopted PR electoral

Time	Action	Notes
0	$E_t^{SQ}$	Founding electoral law is chosen.
1a	$E_t^{SQ}(\mathbf{V}_t) \Rightarrow \mathbf{S}_t$  shapes $\mathbf{P}$ shapes $\mathbf{V}$ shapes $\mathbf{S}$	Votes share in election become seat shares.  Psychological effect on parties Psychological effect on voters Mechanical effect of electoral rules
1b	$\mathbf{L}_t = \mathbf{V}_t$	Seat shares define fiat power.
1c	Each possible subgroup of parties $\mathbf{Q}$ , $\mathbf{Q} \subseteq \mathbf{P}$ considers $E^{alt}$	Consideration of alternatives to status quo electoral rules.
1d	$E^{alt}$ becomes $E_{(t+1)}^{SQ}$ iff: $\sum_{q=1}^Q L_q > D$ and $S_{(t+1)q}^{*alt} > S_{(t+1)q}^{*SQ} \quad \forall q.$	Alternative passes if it would improve group $\mathbf{Q}$ 's seat share relative to the status quo and if group $\mathbf{Q}$ has fiat power greater than the decision rule for amendment.
2a-2d	Repeat 1a-1d	New definition of $\mathbf{L}$ and reconsideration of electoral alternatives.  Eventually $E$ should reach equilibrium where no $\mathbf{Q}$ with the fiat power to change the law can gain seat share by doing so.

**Table 1: Convergence to Equilibrium**

rules under the simple majority decision rule, since its power  $L = .58 > D = .50$ .

In addition to a change in the popularity of established parties, other possible shocks to  $\mathbf{V}^*$  may come from the introduction of new groups of voters and political parties, as in Rokkan (1970)'s account in Sweden of the established parties' insistence on PR rules as a condition for introducing universal suffrage. Another source would be an electoral realignment, fundamentally altering previous patterns of party support.

2. The set of parties  $\mathbf{P}$  itself changes, possibly as the result of splits or fusions caused by factors exogenous to the consideration of votes and seats. For example, personality conflicts may play a role in the splits of some parties, and suddenly interests and possible institution-changing coalitions may be redefined. In addition, coalitions of parties previously sharing the same set of interests may splinter from one election to the next, as did Solidarity in Poland beginning in 1990,

the National Salvation Front in Romania in 1990, and the Union of Democratic Forces in Bulgaria in 1991.

3. A dominant interest may somehow change  $D$ , the permissible rules for altering  $E^{SQ}$ . For an example we may return to the case of the French electoral law manipulation in the 1980s. The coalition of the right led by Chirac won a slim parliamentary majority in the 1986 election under PR rules, including 35 seats won by the National Front. Chirac calculated not only that the vote plurality of the right would contribute to a large-party seat bonus under majoritarian electoral institutions, but also that the 35 National Front seats would become available again for more mainstream parties of the right in the second round of the majoritarian elections. Yet for this same reason the Right coalition to change the electoral law would not have been greater than the  $D = .5$  needed to change the electoral law back to the two-round majority system, since the National Front would have lost seats with this system relative to the status quo PR rules. So Chirac sought a constitutional mechanism with a different  $D$ : putting forth the electoral law change under Article 49.3 which transforms any project of law into a measure of confidence. The Right therefore had to accept his plan without a vote or otherwise bring down the government on a no-confidence measure. Unwilling to do this, the legislature accepted the bill. At the same time Chirac exploited Article 38 to change the decision rule for redistricting from legislative to executive jurisdiction (Tsebelis 1990).
4. The range of alternatives  $\mathbf{E}$  considered viable changes. When new alternatives may be introduced into the institutional agenda, it is possible that they will be chosen relative to the status quo. For instance, Kamiński (1999)'s analysis of the Polish electoral choice indicates that alternatives more proportional to the majoritarian system actually chosen for the 1989 election would have been both seat-maximizing for the communist party and acceptable to Solidarity. Yet the PUWP did not want to consider list PR because it would have meant recognizing Solidarity as a political party, which it was not prepared yet to do. Kamiński shows that the STV system, however, could have avoided this, yet it was not chosen probably because of a lack of knowledge about various electoral rules and their consequences.

A qualifier on the model must be added at this point, placing a limit on the real-world seat maximization that will occur. Under the pure seat-maximizing model, a coalition  $\mathbf{Q}$  with power to change the electoral law for its benefit will continue to do so until no more beneficial alternatives remain that it may pass. This implies that a majority party would ultimately seek a pure winner-take all rule. In practice this will not occur because there

are also limits of acceptability which constrain electoral rules independent of  $D$ . Some self-interested maximizing institutional changes will be excluded from consideration as being simply beyond the pale, according to the limits set by public acceptability, opposition threats to withdraw support for the democratic institutions, or the simple bounds of political propriety. Yet extensive political practice shows that considerable and meaningful institutional change may occur within these broad and vague constraints.

Another qualifier involves special cases of changes in electoral institutions, both of which have become recently relevant. These are the situations where fiat authority is temporarily invested in the public in the form of a referendum on institutional alternatives, and the situation where an electoral system must be chosen during a transition to democracy.

## **Special Cases**

### **Special case 1: Popular initiatives**

Here the decision-making power is removed from normal channels, either through design (Ireland), accident (New Zealand), or deliberate decision (Italy?). This is a two-stage decision, where parties must take steps first to determine whether a popular initiative is likely to yield a beneficial outcome, and whether therefore to put the process in motion to let the electoral institutions be decided by direct vote. The second step is then a consideration of prechosen alternatives by the electorate, who will have a different set of interests than seat-maximizing parties. (Elaborate.)

### **Special case 2: Founding Electoral Systems**

The model itself is inspired by countries recently becoming democratic, and is designed to explain precisely the sort of electoral reform they have experienced. Yet the adoption of rules for the very first election after transition from authoritarian rule is likely to be exceptional in many ways.

First, uncertainty and lack of information may make clear linkages by parties between positions and self-interest difficult or even impossible. Nonetheless updating should occur when new information becomes available.

Second, while the logic of self-interest begins to operate in the first elected parliament, the founding electoral law and the election of the first parliament itself may be based on other grounds. Many first elections in Eastern Europe, for example, were also “referendums against the previous regime.”

Third, the decision rules involved in determining founding electoral sys-

tems in transitional democracies are often not the products of institutions, but rather of bargaining power, social restraint, and informal agreements. They may be fuzzy to all participants and subject to manipulation and pressure during the choice process itself.

For example, the Russian electoral law did not result from an explicit agreement among the major organized forces over the rules of the game. No parliamentary body existed in 1993 to provide a mechanism for choosing the electoral law. Members of the old parliament had been working in 1993 on a new electoral law, and their recommendation served as the basis for Yeltsin's decree. "Within the very broad limits of acceptability of the general public, Yeltsin was free to choose the rules of competition and impose them by decree. No formal vote or parliamentary coalition-building process was involved" (Remington and Smith 1996, 1258).

Yet the theory does not purport to explain  $D$  or how it is established or changed. What it does serve to do is to explain how  $D$  affects subsequent change and persistence in electoral rules. In the choice of roundtable structure in transitional East Germany, for example, "almost unwittingly... adopted the principle of representativeness" (Preuss 1996, 105), with over 30 participants and the prior agreement to ratify its decision of electoral rules with a simple majority vote. This basically constrained the winning institutional rule to be highly proportional, which it was.

A final exceptional characteristic of founding electoral systems is that their choice may take place in a political and institutional vacuum where effectively no status quo institution against which to weigh alternatives. This may be equivalent to saying that in transitional settings, the status quo institutions may quickly become regarded by all participants as the lowest ranked—and hence unacceptable—alternative. Nearly all communist-era electoral laws governing the non-free elections, for example, used a single-member district system. In most countries it was immediately agreed that these same rules would not be acceptable for multiparty electoral elections, and that new laws would have to be drafted. Yet the fact that in some countries the communist-era systems were used in founding elections, such as in Albania and Latvia, points to the need for some explanation based on the power and incentive of the institutional decision-makers.

## 5 Further Challenges for a Theory of Electoral Systems

Reiterate the purpose of outlining the model: (1) to map other explanations and to contrast them explicitly to the office-seeking model; (2) to formalize

the office-seeking model, its components, and its assumptions; (3) to outline an agenda for empirical research to verify or falsify the model, based on clearly identified observable implications; and (4) to fit the model into a general account of institutional equilibrium predicting electoral system change and persistence.

Several areas in which model can be further explored and/or extended:

- Endogeneity of  $D$ . Who can change  $D$ , and when should changes occur? What are the implications of  $D$  as a form of structurally-induced institutional equilibrium? Can it provide political stability against manipulation?
- The model of how electoral alternatives are considered is naive and ignores the formal literature about issue cycling, agenda manipulation, etc. Who defines  $\mathbf{E}$  and the order of alternatives considered?
- The single-institution focus may yield only a partial picture, since bargains and even strategic preferences during bargaining may occur in the context of a larger institutional package, especially simultaneous negotiations about the executive structure.
- This model seems to assume perfect information. How will a lack of information and uncertainty change the preferences of parties over alternatives and affect the outcome of institutional choice?
- The unitary actor assumption may be unrealistic. Actual bargaining model may be more complex, such as the two-stage bargaining among first opposition parties then opposition v. regime (e.g. Hungary).
- There may be transaction costs to changing institutions which act as brakes on the institutional change predicted by the model.

Changing institutions imposes transaction costs. . . on the participants. The transactions' costs include not only those devoted to decision-making, but also those required to enforce the procedures of the new regime and for individuals to adapt to the new procedures.

In terms of institutional robustness, the transactions' costs of change provide an institution with something of a cushion, giving it a stability it might not otherwise endure because prospective gains from change are more than outweighed by the costs of effecting them. In a world full of uncertainty about future states, imperfect information and a modicum of risk aversion may make that cushion substantial. As a consequence, institutions may be robust, not because they are optimally suited to the tastes of participants

and the present environment, but rather because transactions' costs price alternative arrangements too high. (Shepsle 1989, 144)

These transactions costs may take the form of risk from promoting a change which proves uncontroversial or unpopular, or unsuccessful and thereby a waste of valuable legislative time (Dunleavy and Margetts 1995). It is also possible that over time a party that is seen to change the electoral law too frequently will be discredited as manipulating the rules for its own political gain.

Future research: (1) verify model of preference formation, and (2) verify model of changes to  $\mathbf{E}$  when model predicts. How? Case studies. Longitudinal cross-national case studies. Longitudinal studies of the adaptation of party systems to electoral institutions over time, if explored in greater depth, offer great potential to provide a more complete picture of the equilibrating process.

## References

- Ashley, Stephen (1990). Bulgaria. *Electoral Studies* 9(4), 312–318.
- Bates, Robert H. (1988). Contra Contractarianism: Some Reflections on the New Institutionalism. *Politics and Society* 16(2–3), 387–401.
- Bawn, Kathleen (1993, November). The Logic of Institutional Preferences: German Electoral Law as a Social Choice Outcome. *American Journal of Political Science* 37(4), 965–989.
- Benoit, Kenneth and John W. Schiemann (2000). Institutional Choice in New Democracies: Bargaining Over Hungary's 1989 Electoral Law. Unpublished manuscript.
- Blais, Andre and Louis Massicotte (1997, August). Electoral Formulas: A Macroscopic Perspective. *European Journal of Political Research* 32, 107–129.
- Boix, Carles (1999, September). Setting the Rules of the Game: The Choice of Electoral Systems in Advanced Democracies. *American Journal of Political Science* 93(3), 609–624.
- Brady, David and Jongryn Mo (1992). Electoral systems and institutional choice: a case study of the 1988 Korean elections. *Comparative Political Studies* 24(4), 405–430.

- Carstairs, A.M. (1980). *A Short History of Electoral Systems in Western Europe*. London: Allen and Unwin.
- Cox, Gary (1997). *Making Votes Count: Strategic Coordination in the World's Electoral Systems*. Cambridge, UK: Cambridge University Press.
- Dahl, Robert A. and Edward R. Tufte (1973). *Size and Democracy*. Stanford: Stanford University Press.
- Dunleavy, Patrick and Helen Margetts (1995). Understanding the Dynamics of Electoral Reform. *International Political Science Review* 16(1), 9–29.
- Duverger, Maurice (1951). *Political Parties: Their Organization and Activity in the Modern State*. New York: Wiley.
- Duverger, Maurice (1984). Which is the best electoral system? In Arend Lijphart and Bernard Grofman (Eds.), *Choosing an Electoral System: Issues and Alternatives*. New York: Praeger.
- Elster, Jon, Claus Offe, and Ulrich K. Preuss (1998). *Institutional Design in Post-communist Societies*. Cambridge: Cambridge.
- Engelbrekt, Kjell (1991, April 19). The Grand National Assembly to Adopt a New Constitution. *RFE/RL Report on Eastern Europe*, 5–8.
- Frye, Timothy (1997, October). A Politics of Institutional Choice: Post-communist Presidencies. *Comparative Political Studies* 39(5), 523–552.
- Geddes, Barbara (1991). A Game-Theoretic Model of Reform in Latin American Democracies. *American Political Science Review* 85, 371–392.
- Geddes, Barbara (1996). Initiation of New Democratic Institutions in Eastern Europe and Latin America. In Arend Lijphart and Carlos H. Waisman (Eds.), *Institutional Design in New Democracies: Eastern Europe and Latin America*, pp. 14–52. Westview Press.
- Gelazis, Nida (1995). Lithuanian Elections to the Seimas. Unpublished Paper.
- Grumm, J. G. (1958). Theories of Electoral Systems. *Midwest Journal of Political Science* 2, 357–376.
- Horowitz, Donald L. (1985). *Ethnic Groups in Conflict*. Berkeley: University of California.
- Ishiyama, John T. (1997, Spring). Transitional electoral systems in post-communist Eastern Europe. *Political Science Quarterly* 112(1), 95–115.

- Jowitt, Kenneth (1992). *New World Disorder: The Leninist Extinction*. Berkeley: University of California Press.
- Kamiński, Marek M. (1999, January). How Communism Could Have Been Saved: Formal Analysis of Electoral Bargaining in Poland in 1989. *Public Choice* 98(1/2), 83–109.
- Knight, Jack (1992). *Institutions and Social Conflict*. Cambridge: Cambridge University Press.
- Knight, Jack (1995). Models, Interpretations, and Theories: Constructing Explanations of Institutional Emergence and Change. In Jack Knight and Itai Sened (Eds.), *Explaining Social Institutions*. Ann Arbor: University of Michigan Press.
- Knight, Jack and Itai Sened (Eds.) (1995). *Explaining Social Institutions*. Ann Arbor: University of Michigan Press.
- Lijphart, Arend (1992, April). Democratization and Constitutional Choices in Czecho-Slovakia, Hungary and Poland 1989–91. *Journal of Theoretical Politics* 4(2), 207–223.
- Lijphart, Arend (1994). *A Study of Twenty-Seven Democracies 1945–1990*. New York: Oxford University Press.
- Lipson, Leslie (1964). *The Democratic Civilization*. New York: Oxford.
- Mackie, Thomas T. and Richard Rose (1991). *The International Almanac of Electoral History* (Third ed.). London: MacMillan.
- O'Donnell, Guillermo and Philippe C. Schmitter (1986). *Transitions from Authoritarian Rule: Tentative Conclusions about Uncertain Democracies*. Baltimore: Johns Hopkins University Press.
- Olson, David M. (1993). Political Parties and Party Systems in Regime Transformation: Inner Transition in the New Democracies of Central Europe. *American Review of Politics* 14, 619–58.
- Preuss, Ulrich K. (1996). The Roundtable Talks in the German Democratic Republic. In Jon Elster (Ed.), *The Roundtable Talks and the Breakdown of Communism*, pp. 99–134. Chicago: University of Chicago Press.
- Remington, Thomas F. and Steven S. Smith (1996, November). Political Goals, Institutional Context, and The Choice Of An Electoral System: The Russian Parliamentary Election Law. *American Journal of Political Science* 40(4), 1253–1279.
- Reynolds, Andrew and Ben Reilly (1997). *The International IDEA Handbook of Electoral System Design*. Stockholm: International Institute for Democracy and Electoral Assistance.

- Riker, William (1980). Implications from the Disequilibrium of Majority Rule for the Study of Institutions. *American Political Science Review* 74, 423–77.
- Riker, William H. (1982). The Two-Party System and Duverger’s Law, An Essay on the History of Political Science. *American Political Science Review* 76, 753–766.
- Rogowski, Ronald (1987, Spring). Trade and the Variety of Democratic Institutions. *International Organization* 41, 203–224. PER 77-220.
- Rokkan, Stein (1970). *Citizens, Elections, Parties*. Oslo: Universitetsforlaget.
- Sait, Edward M. (1938). *Political Institutions - A Preface*. Boston: Appleton-Century-Crofts.
- Shamir, M. (1985). Changes in Electoral Systems as ‘Interventions’: Another Test of Duverger’s Hypothesis. *European Journal of Political Research* 13, 1–10.
- Shepsle, Kenneth A. (1986). Institutional Equilibrium and Equilibrium Institutions. In Herbert Weisberg (Ed.), *Political Science: The Science of Politics*. New York: Agathon.
- Shepsle, Kenneth A. (1989, April). Studying Institutions: Some Lessons from the Rational Choice Approach. *Journal of Theoretical Politics* 1(2), 131–147.
- Shugart, Matthew S. (1992). Electoral Reform in Systems of Proportional Representation. *European Journal of Political Research* 21, 207–224.
- Tsebelis, George (1990). *Nested Games: Rational Choice in Comparative Politics*. University of California Press.