

## Positive Political Theory II

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*Positive Political Theory II: Strategy and Structure*

# Positive Political Theory II

## Strategy and Structure

*David Austen-Smith and Jeffrey S. Banks*

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To the memory of

**Jeffrey S. Banks**

1958-2000

and

**Richard D. McKelvey**

1944-2002

You leave us too soon.

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*David Austen-Smith*

*April 2004*

# Preface

As with its precursor, *Positive Political Theory I: Collective Preference*, this book is concerned with understanding the connection between individuals' preferences within any society and the collective choices of that society. Motivated by the canonical rational choice theoretic model of decision-making, *Positive Political Theory I* [PPTI] explores "the possibility that individual preferences are directly aggregated into a collective, or social, preference relation which ... is then maximized to yield a set of best alternatives (where "best" is here defined as being most preferred with respect to the collective preference relation)" [PPTI, p.xi]. To the extent that this is possible, therefore, a theory of political behavior can be built around an appropriate "as if" assumption, whereby the society as a whole is treated anthropomorphically as a single, representative, agent endowed with the social preference relation. Perhaps unfortunately, it turns out that direct preference aggregation yields a well-defined theory of political decisions in this sense only when the environment is relatively simple, having few alternatives or limited heterogeneity in the distribution of individual preferences, or when the political system endows some individuals with veto power over all collective choices. In complex environments or in polities where the approval of some particular individual or individuals is not required for all social decisions, however, the existence of "best alternatives" is not assured and the value of the direct aggregation theory as a positive theory of collective choice is attenuated. But the direct aggregation of individual preferences is not equivalent to the indirect aggregation of preferences through the aggregation of individual actions; in particular, actions to determine the alternatives for collective choice (agenda selection) and actions to determine the choice of an alternative from those available (voting).

The difficulty with using a direct preference aggregation approach to develop positive (that is, explanatory or predictive) accounts of political behavior in relatively complex environments lies with an insistence that acceptable collective decisions respect a minimal democracy constraint, loosely,

that no single individual gets his or her way whenever he or she is unanimously opposed by the rest of society. The argument of *Positive Political Theory I* is that, while this sort of constraint does not bind for simple decisions or relatively homogenous populations, it essentially precludes any acceptable compromise when decisions are complex or preferences heterogeneous. Moreover, the indirect preference aggregation approach is not immune to this difficulty [PPTI, ch.7].

Developing an indirect preference aggregation theory requires developing a theory of how individual actions are linked, both to individual preferences and to the actions of others. The notion of a “wasted vote” in elections with, say, three candidates for a given office provides a clear example: an individual may strictly prefer candidate *A* to candidate *B*, and strictly prefer candidate *B* to candidate *C*; but if the individual believes or conjectures that sufficient numbers of other voters are voting for *B* and *C* to make *A*’s chances of election negligible, then the individual is better off voting for *B* to minimize the chance that his or her least favorite candidate, *C*, wins. At the least, therefore, a coherent explanatory theory of how individuals act in such situations entails some notion of mutual consistency or compatibility among individual actions; without such consistency, every imaginable pattern of behavior is admissible and there is no basis on which to build a systematic account of collective choice. The notions of mutual consistency of concern in the chapters to follow are the equilibrium concepts of game theory. Thus the analogue to exploring the existence and characterization of suitably defined maximal sets of alternatives in the direct theory of collective preference is exploring the existence and characterization of suitably defined equilibrium sets of actions and the collective choices they induce. And it turns out that while equilibrium sets of actions quite generally exist, they occasionally imply some violation of the minimal democracy constraint. That is, an equilibrium outcome can be an alternative that is strictly less preferred to a distinct (non-equilibrium) outcome by all but at most one member of the society. Therefore, the direct (collective preference) and indirect (game-theoretic) “approaches to the study of collective decision-making differ not with respect to existence of solutions *per se* but rather with respect to the implicit trade-off each makes between existence and minimal democracy” [PPTI, p.xv]. Analysing the implications of making this trade-off occupies the chapters to follow.

We are especially interested in indirect preference aggregation through agenda-selection and voting within more-or-less democratic political institutions. The simplest model of indirect preference aggregation falling under this rubric is perhaps that of direct democracy: individuals report a prefer-

ence over alternatives by voting and some rule is used to “add up” votes to arrive at the collective choice. Direct democracy is a special case of a more complicated model with intermediate stages between individual votes and the determination of a final policy or collective choice. In particular, representative systems typically involve first choosing a set of representatives who subsequently make the collective choice. The focus of the book, therefore, is on representative systems, loosely described by a two-stage process, elections and legislative decision-making. And throughout, the concern is with connecting individual preferences to collective outcomes and not with providing a comprehensive descriptive account of all aspects of representative democracy.

After reviewing some salient concepts and notation from *Positive Political Theory I* and elsewhere in Chapter 1, Chapter 2 considers the extent to which direct collective choice procedures provide incentives for individuals to misrepresent their preferences: if there are reasonable procedures that always induce truthful preference revelation, then there is little reason to worry about political outcomes being subject to manipulation as votes are direct representations of individuals’ preferences. We argue, however, that the opportunity for strategic manipulation of collective decisions is inherent in any reasonable (nondictatorial and responsive) polity. There are two responses to this result. The first, explored in Chapter 3, is to look for institutions and mechanisms that, conditional on a prior commitment to how outcomes should be associated with lists of individual preferences, offer incentives for individuals to take actions that yield precisely the outcomes chosen under truthful reporting of preferences. Although it is possible to design such mechanisms, they are typically sensitive to details of how individuals are presumed to behave and, at least in the absence of limitations on individual preferences, are peculiarly complicated, bearing at most a cursory resemblance to any observed political institution. Empirical political institutions, therefore, are necessarily more than instruments for identifying and implementing the collective decisions associated with sincerely revealed preferences. The second response, then, is to take the institutions we observe and study the connection between individual preferences, individual actions and collective choices induced through these institutions. We begin with legislatures.

Policy-making within legislatures involves many things and we simplify considerably. Chapter 4 considers committee voting over a fixed agenda and Chapter 5 exploits the analysis of Chapter 4 to provide some understanding of how agendas are formed in a variety of legislative settings. Voting is not the only legislative activity of interest, however, and Chapter 6 develops a

theory of bargaining over legislative policy. In the theory, legislators are periodically “recognized” and given the right to offer an alternative for the policy outcome; if a winning coalition of legislators supports the proposal then that fixes the decision and bargaining stops; if a proposal is rejected, another legislator is recognized and the sequence repeats until some decision is reached. An important lesson from the analysis of these three chapters is that having agenda-setting or proposal rights allows a legislator to influence final decisions to their particular advantage, even when individuals are otherwise identical up to the description of their preferences over outcomes.

Legislators are elected. The simplest nontrivial election involves two candidates competing for a single elected office and Chapter 7 considers the theory of these elections in some detail. Although some attention is paid to questions of voter turnout and abstention here, the emphasis, consistent with the underlying theme of indirect preference aggregation, is less on accounting for abstention *per se* and more on understanding how abstention affects candidates’ selection of electoral platforms. Despite the analytical importance of two-candidate elections, a great many elections involve more than two candidates and, furthermore, assuming any fixed number of candidates precludes any explanation of the number of electoral candidates choosing to compete. Chapter 8, therefore, concerns the theory of multicandidate elections, initially with a fixed and then with an endogenous number of candidates. The results here are complicated by the associated complexity of the voters’ decision: with only two candidates, instrumentally rational and policy-oriented voters have a clear decision rule; this is not (as the example of the wasted vote above suggests) true when there are more than two candidates for a given elected office.

In a considerably simplified environment, Chapter 9 ties electoral and legislative stages together with an integrated model of three-party electoral competition for legislative representation, followed by a legislative bargaining process to determine both the governing coalition and final collective choice. It is apparent from Chapter 9 that the mapping that connects individuals’ preferences and final collective choices induced through a representative democratic system is subtle. Moreover, the analysis suggests that conclusions for collective choice drawn exclusively on the basis of an electoral or a legislative model are not obviously robust when compared to those drawn on the basis of a model that explicitly includes both stages.

Chapter 10 provides an overview, tying the formal analysis of the text to a recurrent theme of the book, that the indirect approach to preference aggregation is the complement of the direct approach. The direct approach links preferences to outcomes through maximization of a derived social pref-

erence relation; the indirect approach links preferences to outcomes through strategic agenda selection and voting. Both approaches concern mapping individuals' preferences into collective choice.

This book is not a survey. It is, rather, intended as a coherent, cumulative development of a more abstract concern with connecting preferences indirectly to collective choice through strategic behavior. Many aspects of political behavior are therefore ignored, to a large extent excluded as peripheral to this concern; there is, for instance, no consideration of international relations, interest groups, the influence of money in politics or the implications of incomplete information. Similarly, the noncooperative strategic approach we adopt throughout leaves aside important literatures that exploit a more cooperative game-theoretic perspective on a variety of topics as, for example, the cooperative game-theoretic models of coalition formation.

Finally it should be noted that, in common with *Positive Political Theory I*, "although most (but not all) of the results reported were originally derived by others, in the interests of continuity we have chosen to leave the relevant credits to a 'further reading' section at the end of each chapter. If we have missed anyone in this regard, we apologize. With very few exceptions, all of the results are proved explicitly in the text and we have tried to make the formal arguments as transparent and self-contained as possible. Consequently, some of the proofs are less succinct than they might otherwise be and some of the results are not proved in their most general form" [PPTI, p.194].