Analyzing Politics

Rationality, Behavior, and Institutions

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Strategic Behavior: Sophistication, Misrepresentation, and Manipulation

In models of social choice and spatial decision making, voters vote their preferences. To some, this is the essence of rational behavior. To others, however, rationality is more subtle and nuanced. It entails doing the best one can with what one's got, and this sometimes requires making strategic maneuvers, investments, sacrifices, and retreats. It is embodied, for example, in the Protestant work ethic, which encourages deferred gratification in order to harvest later returns. Some might claim that Protestants, in some perverse sort of way, *like* deferred gratification, but the alternative view is that their ethic (an ethic common among Asians, Jews, and others, too) reflects the strategic decision to maximize over the long haul by resisting enslavement to short-term preference satisfaction. Models need to reflect this possibility, for a failure to take strategic capabilities into account may result in disaster (as Case 6.1 demonstrates). This chapter is devoted to elaborating on the multiplicity of ways strategy rears its head.

Case 6.1
"Need-Blind" College Admissions

A prestigious university (which shall remain unnamed), in a spirit of generosity and genuine concern, instituted a need-blind admissions policy for its graduate school. It sought to attract the finest graduate students, independent of their ability to pay the cost of graduate education. But universities, like any other organizations, are faced with a large number of possibilities and a limited number of resources with which to pursue them. Each academic department's entering class had to be limited in number and, to accomplish that, each department was given a fixed budget to spend on graduate students. As we shall see, financial scarcity and need-blindness in admissions compete at the margin, sometimes with perverse consequences.

The admissions procedure works as follows. First, each applicant gives financial data to the central office of the graduate school. Simultaneously, each applicant submits admissions materials (GRE scores, undergraduate grade transcripts, teacher recommendations, essays, and so on) to the academic department in which he or she is interested, but *not* the financial data (which was given to the graduate school). Thus, the department, in ignorance of candidate financial need, constructs a preliminary rank-order of the applicants, along with a cutoff line below which rejected applicants fall. This preliminary list is forwarded to the graduate school, which attaches next to each candidate a *minimum* financial stipend the department must offer. Departments, of course, can make larger offers; but they cannot admit a student and make a smaller offer—that is the rule. This minimum stipend is need-blindness in action—it indicates how much subsidy is required to bring a candidate up to a financial status that would permit him or her to

attend graduate school. These marching orders are transmitted back to the department, which now gets a *second crack*. Given its limited budget, and its desire to have as fine a class of entering students as its budget permits, it may have second thoughts about those it has admitted, now that it knows the minimum price it must pay from its scarce resources. For example, an especially needy student ranked 25 may require, by graduate school dictates, $20,000 of subsidy. Candidates 12 and 13 may be less needy, but, the department reasons, if we take the $20,000 from 25 (and therefore choose not to admit that person after all), and use it to "top up" the offers we've made to candidates 12 and 13, we may have a better chance at attracting *two, higher-ranked* students.

The need-blind admissions procedure inadvertently discriminates against financially needy students who are not highly ranked (though clearly above the cutoff line). A strategic department will have strong incentives to reallocate what would have to be spent on these students toward higher-ranked (possibly unneedy) candidates to enhance the prospects of the latter accepting an offer.

Need-blind admissions is a noble endeavor; so, too, is producing excellence in graduate education. In Case 6.1, university administrators should have devised a scheme to achieve need-blind admissions that took into account the possibility that others on whom they depend—namely, professors on departmental admissions committees—may not share their purposes to the same degree. The scheme described above clearly did *not* prevent strategic maneuvers that had the effect of undercutting noble purposes. Someone wasn't looking ahead; someone was failing to anticipate.

Rational Foresight

In politics it is essential to look ahead, to anticipate, to exercise prudence and foresight. The political world is full of purposes, some noble and some ignoble, some competing and some complementary. Rational actors, seeking to enhance the prospects of the purposes they pursue, must think strategically. And one of the fundamental principles for thinking strategically is looking before you leap.[1]

Thinking strategically is not always so easy. Consider a three-person legislature, each of whose members would like a pay raise.[2] But each legislator realizes that constituents will not be pleased with a representative voting to increase his or her own salary. So, the best of all possible worlds for legislator i is for the other two legislators to vote in favor of the pay raise, thereby causing it to pass, with legislator i voting against. In this case, he does not displease his constituents but receives the extra cash anyhow! The worst of all worlds, of course, would be for i to vote yea but for the motion to raise legislative pay to fail. The other two possibilities fall in between, and all three legislators have precisely the same feelings on this issue. That is, they rank-order the outcomes (pass and vote nay) P (pass and vote yea) P (fail and vote nay) P (fail and vote yea).

Now then, the roll is about to be called. Each legislator will be asked for a public declaration on the motion to raise pay. And, being a roll, it lists legislators in alphabetical order—i first, then j, then k. Suppose you are legislator i. How should you vote? Think about your answer, and write it down on a piece of scratch paper before proceeding.

[1] An outstanding book with exactly this title is Avinash Dixit and Barry Nalebuff, *Thinking Strategically* (New York: Norton, 1991). While I can devote only a few paragraphs to this topic in my book, the Dixit-Nalebuff volume is a superb extended discussion of strategic behavior.

[2] This example is drawn from Peter Ordeshook, *Game Theory and Political Theory* (New York: Cambridge University Press, 1986).

The author has tried this out on many student audiences. The typical response is that legislator i ought to vote yea. The following reasoning is offered:

> I don't know how j and k will subsequently vote. And since I don't know I figure it's equally likely that each votes one way or the other. This means there's a 50 percent chance that they will split their votes, making my vote the deciding one. So I'd better vote yea, securing my second-choice outcome, rather than voting nay and ending up with my third-best outcome.

This is not a well-thought-out position. The student whose reasoning we've reproduced has not thought ahead and has not taken into account that legislator i's actual behavior will *affect* what j and k do.[3]

The way to think about this is to put yourself at the end of the process first—in k's shoes—and work backward. There are really only three circumstances for k to consider (2 nay votes, 2 yea votes, or a split in the vote), and in each her preferences provide her with clear counsel on how to proceed. If two nays have preceded, then she will definitely vote nay. If two yeas have preceded, then she will again definitely vote nay. If there is a split vote, then her vote is deciding and she will definitely vote yea. In each contingency we know *definitely* how k will vote.

Specifically, legislator j (who chooses next to last) can forecast with certainty how k will vote (as long as k does what she should!). Suppose, when it comes time for him to vote, i has already voted yea. Then j knows that if he votes yea the bill will pass (and, from the above, k, whose vote will have no effect,

[3] What I mean to say here is that most students implicitly assume that j and k have already made up their own minds about how to vote. Students do not appreciate, in general, that the choices j and k will actually make are *reactions* to i's initial choice, so that i can, in fact, affect the thinking of j and k. The true strategist, in contrast, appreciates his or her power to influence the thinking of subsequent movers.

will vote nay and this will be the best outcome for her); on the other hand, if j votes nay, the bill will still pass because k will be forced to vote yea, and this will be best for j. What we have figured out so far, then, is that if i votes yea, then j can afford to vote nay, forcing k to vote yea; the bill will pass, i and k will get their second-preference outcome, while j gets his first choice.

But what if i decides to vote nay? He can think ahead, since he has deduced how the others will react. Legislator i knows that, following his nay vote, if j votes nay, the bill fails (no matter what k does). On the other hand, if j votes yea this will produce a split vote forcing k to vote yea, too. Legislator j is snookered here, since he will reluctantly vote yea to get his second choice rather than vote nay, killing the bill and getting his third choice. We now know what i should do. By voting nay, he *forces* both the other legislators to carry the burden of passing the pay-raise bill.

Case 6.2
Congressional Pay Raise Dilemmas

An examination of actual cases of legislative pay raises provides anecdotal evidence of a logic much like that described in this section. The basic idea is that legislators want to vote no if their vote is irrelevant to the outcome and yes only if they are critical to the outcome. In 1990, the U.S. Senate was debating a major piece of legislation to reform congressional pay. Senator Daniel Patrick Moynihan (D-N.Y.) introduced an amendment to the bill to increase pay. One report recounted the scene this way:

> As opponents nearly defeated the amendment on a 50-50 tie, Moynihan stood in the center aisle of the chamber, hands outstretched. "One more vote!" he pleaded. Laughing, Alaska Re-

publican Frank H. Murkowski switched his vote to support Moynihan, bringing the final tally to 51-49.*

Although we have no direct evidence, we suspect that in the early voting Senator Murkowski understood that voting no would force others to get the bill passed, and thus that he could have his cake and eat it, too. Only when his vote became essential did he switch.†

A similar situation took place in 1992 when the Senate was considering an amendment to transfer funding from military projects to breast cancer research. Senators were reluctant to break the "firewall" between defense and domestic spending, but they also feared being caught on the losing side of an issue like breast cancer, given the salience of women's issues in 1992. If the breast cancer amendment were going to pass anyway, or if it were certain to fail, a senator would want to be recorded as yes. Only if he or she were the decisive vote would an alternative behavior be considered. This created a "pay-raise dilemma." The scene on the Senator floor, as described by the *Washington Post*, demonstrates the argument:

> When votes for the project were safely in hand [that is, the amendment was certain to pass], senators began streaming onto the floor to change their 'no' votes to 'yes.' Minority Leader Robert J. Dole (R-Kan.) was overheard urging the Republican cloak room to alert absent senators to the stampede. An unofficial tally showed 28 senators, including . . . Dole, switching their votes. Several others waited until the last minute before casting votes in favor of the proposal.‡

* "Lawmakers' Pay Raised, Fees Curbed," *Congressional Quarterly Almanac* (1990): 74.

† Why he didn't stick to his guns and make some other no voter bear the cost of switching isn't answered here. The reader might wish to speculate. I will discuss such phenomena, known as the "free-rider problem," in Part III.

‡ Helen Dewar, "Senate's New Sensitivity," *Washington Post*, September 24, 1992, p. A1.

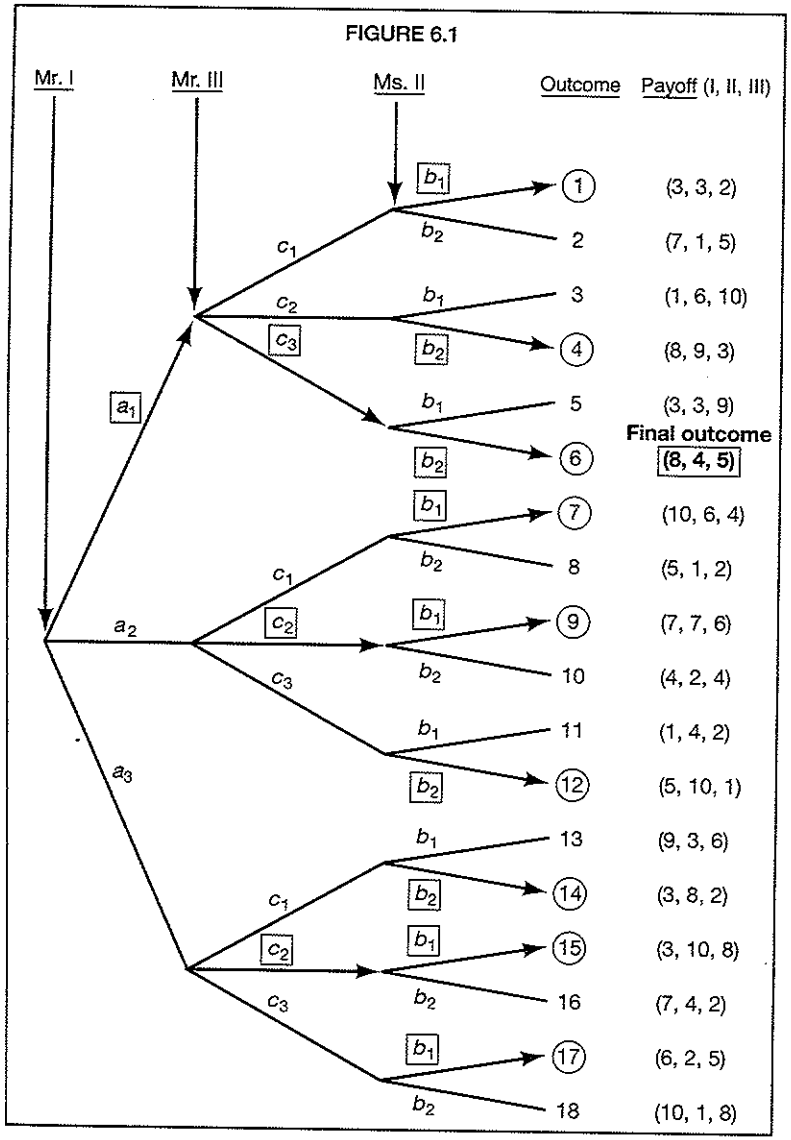
These two cases are by no means unique. Watch C-SPAN for other instances of last-minute vote switches as representatives fight to stay on the right side of an issue, giving new meaning to the term "politically correct."

Strategic thinking and rational foresight are general terms for the kind of calculations I've described. They entail a logic that takes advantage of the sequential structure to the decision making. They involve, oddly enough, thinking forward by reasoning *backward*. Indeed, the method is called *backward induction*, and works as follows. Take a generic sequential situation, like the one pictured in Figure 6.1. There are three individuals who must make a collective decision (not unlike the legislative pay-raise example above), each by revealing an individual choice in turn. To complicate things a bit, let's suppose that Mr. I and Mr. III each have three options available in their "action sets"—$\{a_1, a_2, a_3\}$ and $\{c_1, c_2, c_3\}$, respectively—whereas Ms. II has only two options in hers—$\{b_1, b_2\}$. In addition there is a *fictional* fourth player, an androgynous 0 known as Chance. In Figure 6.1 Chance moves first, his/her only responsibility to select the order in which the other players move. Of the six possible choices Mr./Ms. 0 could make, we suppose he/she chooses the order: I, III, II. The "game" now starts.[4]

An outcome of this social circumstance results from the three participants making choices from their action sets.

[4] In fact, we are describing what is known as an *extensive form game* in game theory. Game-theoretic ideas run all through this volume, though I don't always take the time to point this out. Political science models are increasingly game-theoretic in spirit if not in fact. A good place to encounter game theory in the context of politics is the Ordeshook volume cited in footnote 2 above. For an outstandingly clean and clear (and brief!) presentation of the essentials of game theory, nothing competes with David M. Kreps, *Game Theory and Economic Modelling* (Oxford, U.K.: Oxford University Press, 1990).

FIGURE 6.1



There are eighteen different possibilities (resulting from the product of the three possible choices of Mr. I, the two possible choices of Ms. II, and the three possible choices of Mr. III). The method of backward induction begins with the player who moves last—Ms. II in this case. When it actually comes her turn to choose, she will find herself at one of nine choice points. (These are the nine nodes in the game tree in Figure 6.1 that line up below Ms. II's name.) At each node she may decide between two final outcomes (which are determined once she chooses between the two options in her action set). There is nothing fancy for Ms. II to do: once she learns which of the nine nodes the process has arrived at (as determined by choices by the other players), she will choose the option that leads to the outcome she most prefers.[5] At the top node, for example, she will select b_1 or b_2 depending upon whether she likes outcome 1 or 2, respectively, best. The same holds for each of the other eight nodes at which she may have a choice to make. Without bothering to write down complete preference orderings for all three players, I've simply indicated the payoffs to the players in Figure 6.1. For example, if outcome 1 prevails, then Mr. I receives a payoff of 3, Ms. II a payoff of 3, and Mr. III a payoff of 2. We assume, and this is very important, that the three players know one another's payoffs.

For each combination of choices by I and III, Ms. II has a choice between two outcomes, depending upon whether she chooses b_1 or b_2. We have put a *box* around the maximizing choice she will, in fact, make, and *circled* the outcome in each pair that will, in fact, be realized.

Mr. III is the next-to-last chooser. He knows that he will be at one of three choice nodes, depending upon Mr. I's prior choice. Using his foresight—that is, his knowledge of how

[5] This is actually an important general principle that I will highlight later in this chapter—namely, that the person moving last behaves pretty much according to her preferences. There are no fancy stratagems at this ultimate stage of the game.

Ms. II *will* choose at each of her subsequent choice opportunities given her preferences over final outcomes—he can determine how he *should* choose, given his own preferences over final outcomes. In effect, he can now erase Ms. II from his mind, replacing her nominal discretion after he chooses with the choice he knows she actually will make (the ones I've already boxed). Mr. III treats the boxed choices of Ms. II as *strategic equivalents* for those nodes. So, at Mr. III's top node he knows the implication in terms of final outcomes of each of the three options available to him there. If he chooses c_1, then outcome 1 is sure to occur; if he chooses c_2, then it will be outcome 4; if he chooses c_3, outcome 6 will be realized. The same will be the case at each of the other two choice nodes for III. He has preferences in each of these instances and, without writing them down explicitly, I simply box his optimal choice at each of his three choice nodes. The reader can check that the boxed choice at each of III's possible decision nodes is optimal for him, *taking account of II's subsequent optimal choice.*

Finally, it comes time for Mr. I to choose. He is now able to suppress the discretion of both Mr. III and Ms. II. He knows exactly what they will do in each contingency in which they might find themselves. Consequently, he knows the effect of each of the three choices he could make. So for him it is simply a matter of deciding which of the three outcomes he likes best.[6]

Working up the game tree via the method of backward induction, we have determined precisely how strategic actors will behave. Each will take into account what has, in fact, preceded their choices, as well as what they forecast will happen after they have made their choices. The final outcome of this

[6] If he chooses a_1, he knows Mr. III will follow with c_3 and Ms. II with b_2. Thus a choice of a_1 yields outcome 6 with a payoff of 8 to Mr. I. If he chooses a_2, then the other players will choose c_2 and b_1, respectively, yielding Mr. I a payoff of 7 from outcome 9. Finally, if he chooses a_3, outcome 15 with a payoff of 3 for him results. Of these he prefers outcome 6 and thus chooses a_1.

entire exercise is called the *strategic* outcome or *sophisticated* outcome.[7]

This concept is explored in more detail in the remainder of this chapter. But before moving on, I should point out that we have already seen at least one instance of strategic behavior. In the last chapter, a committee chair operating under an open rule in a one-dimensional legislature "backward-inducted." He asked himself what would happen if he opened the gates and made a proposal, concluding that rational behavior on the floor would lead to amendments ultimately producing x_m. On the other hand, the final outcome would remain at x^0 if he kept the gates closed. His decision on opening the gates, then, depended on his preferences between x_m and x^0. Thus, his own agenda-setting choice was predicated on foresight. We have also seen a failure to exercise this sort of foresight. The graduate school designers of the need-blind admissions policy described in Case 6.1 *failed* to exercise foresight, blithely assuming straightforward compliance of departments with their objectives. They failed to appreciate that there are competing objectives pursued by strategic actors.

Case 6.3
Presidential Veto Stories

The ability of the president to veto legislation passed by Congress provides an excellent opportunity to examine strategic behavior and backward induction. Some political observers have taken the infrequency with which presidents have used the veto as an indicator of cooperation be-

[7] When the choice is from a fixed sequence of votes, like a legislative agenda, most authors refer to "sophisticated" voting. When the choice is made in a one-shot circumstance, like switching your vote in an election because you believe your favorite candidate is out of contention, it is called "strategic" voting. I will tend to use these terms interchangeably.

tween the legislative and executive branches. In this view, infrequent use of the veto corresponds to a high degree of harmony between the branches. Thus, in his 1994 State of the Union speech, President Bill Clinton proudly announced the end of gridlock and the beginning of a new period of interbranch harmony by pointing to the fact that not once had he vetoed a piece of congressional legislation during 1993. Our backward induction argument suggests that President Clinton did not have logic on the side of his argument. The reason is simple: Rational foresight tells us that Congress should often *change* its behavior in order to avoid stimulating a veto; to do so is a measure of congressional foresight, not an indication of harmony between the branches. For example, in 1992 the Senate was reported to have dropped family planning money from a foreign aid bill in order to avoid a veto from President Bush.

Why would we ever see a presidential veto, if Congress can anticipate this veto and trim its sails accordingly? One answer is procedural: There is the possibility of an override. Congress can nullify the presidential veto if each chamber, subsequent to a veto, re-approves the bill by more than a two-thirds majority. In these circumstances, Congress can push ahead, knowing it can subsequently overcome presidential obstacles if it needs to. But this just pushes the question back a stage, namely, Why didn't the president exercise rational foresight in anticipating the override and therefore desist in using the veto? A second possibility, then, is uncertainty. Congress may not know how the president will respond to the legislation; the president may not correctly guess that his veto will be overridden.

Despite the veto possibility and even without a likely override, it may still be rational for Congress to send a bill to the president. Symbolic or constituent politics is one reason. During the Bush administration public pressure led Congress to consider a series of campaign-finance reform bills. The optimal outcome for each congressperson was to

vote for the bills, thereby appeasing constituents, but somehow to avoid actually having to implement the reforms. A promised veto by President Bush gave the legislators what they wanted. According to the *Washington Post*, Congress was "secure in the knowledge that President Bush would veto [the bills] and the veto could not be overridden; the virtuous vote was free."* In this case, ironically enough, the presidential veto was a sign of *cooperation* between Congress and the White House, not *conflict*.

Party politics may also lead Congress to send a bill to the president knowing it will be vetoed. In 1992 Democratic Party desires to portray the Republican White House as the source of governmental gridlock led to a series of bills on a variety of subjects—cable TV regulation, family leave policy, most-favored-nation status for China—all of which President Bush, because of previous commitments, was forced to veto. Because these bills were popular with the general public, and because the vetoes displayed an executive at loggerheads with the legislature, the president's actions came at a considerable cost to him. In this case the presidential vetoes were a sign of conflict, not cooperation, with Congress.†

It should be apparent that very little can be inferred about the degree of conflict or cooperation in a situation just by observing an outcome. A presidential veto may reflect miscalculation (by Congress if the veto is not overridden, by the president if it is), interbranch harmony, efforts by one branch to embarrass the other, and many other things besides. Only by a careful analysis of the strategies, alternatives, payoffs, incentives, and circumstances can we form an accurate interpretation of the event.

* "Campaign Reform Anyone?" *Washington Post*, February 7, 1993, editorial page.
† Ann Devroy, "Congress Pitching, President Vetoing," *Washington Post*, September 24, 1992, p. A1.

In what follows, I take strategic behavior to consist of an extended sort of rationality. An individual does not merely assess options in front of her nose, choosing the one that seems best in terms of her preferences. Rather, she takes account of the fact that the choice before her is but one of a sequence of choices in an ongoing process. Strategic behavior requires that she look beyond her nose; the immediate choice before her, therefore, is not merely a one-shot, myopic decision, but instead one with longer-term effects. This leads, in each of the contexts we are about to explore, to the possibility of anomalies in which, at a specific choice opportunity, one ends up choosing what would appear to an outsider as a *less-preferred* option, if taken as a myopic choice. Strategic behavior, in short, taking the full horizon of a process into account, may require individuals to make seemingly less-than-ideal choices at some points in order to secure superior outcomes at the end of the trail. Below, we see this manifested in (1) sophisticated voting and agenda maneuverings in legislative settings, and (2) strategic voting and issue manipulation in electoral settings. First, however, I take up the general issue of strategic manipulation.

Manipulation

Before we go any further, it might be worth taking up an issue that a few doubters may be thinking about. To some, the idea of strategic behavior may be alien and, possibly, morally contemptible. Whether one admires brilliant strategic maneuvers or not, however, we need to know about them and where they are likely to be encountered. One thing we might want to know is whether there are decision-making procedures that encourage only honest, nonstrategic behavior—procedures that are basically *strategy-proof*. This is an abstract question that can be tackled at a fairly general level.

Suppose there are n group members, $G = \{1, 2, \ldots, n\}$, who must choose from a set of m alternatives, $A = \{a_1, a_2, \ldots, a_m\}$. I won't be very specific about the way in which the group makes its choice, except to say that the final choice will be one of the alternatives in A on the one hand, and that it will depend (somehow) on the preferences *expressed by* the group members on the other hand. That is, the social choice is written as $F(Q_1, Q_2, \ldots, Q_n, A) \in A$. In this expression, A is the set of alternatives defined above, Q_i is a preference ordering of the alternatives in A *expressed* by member i, and F is some decision process that transforms these expressed preferences into an outcome in A. Enter strategy.

I italicized the word "expressed" throughout the last paragraph for a reason. In most group choice situations we are not in possession of a fancy "preference meter" that reads people's minds. The group choice procedure, F, can only take the preferences that individuals *choose* to reveal. And where is it written that people are always *honest* in their preference revelation? We have already seen situations where people vote in a deceptive manner. More generally: Might an individual be able to secure a better outcome (according to her true preferences) by revealing untrue preferences—by behaving strategically?

Let's suppose that the *true* preference orderings of the members of G over the alternatives in A are $P_1, P_2, \ldots, P_n$, although no outside observer has any way of knowing or validating this. We say that Ms. i is *sincere* only if, in the group decision setting where she is asked to reveal her preferences, her revealed preference (Q_i) is identical to her true preference (P_i); if $Q_i \neq P_i$, then she is said to be *sophisticated*. So P_i reflects her true tastes, Q_i is what she chooses to reveal, and she is sincere only if the two are the same.[8] A sophisticated indi-

[8] I am being a little cagey here because it is quite possible that, sometimes, honesty is the best policy. Thus, $Q_i = P_i$ is a necessary but not a sufficient condition for someone to be said to be sincere. Confused? Don't worry about it. Interested? Then take a look at the piece by David Austen-Smith, "Sophisticated Sincerity: Voting over Endogenous Agendas," *American Political Science Review* 81 (1987): 1323–30.

vidual is someone who may misrepresent her true preferences and, when she does so, she is said to *manipulate F*, the social-choice procedure. Given all this, I now report the bad news:

> **Gibbard-Satterthwaite Theorem. Assume a group *G* of at least three individuals and a set *A* of at least three alternatives. Also assume that any member of *G* may have, as his or her true preferences, any preference ordering over *A* (universal domain). Then every nondictatorial social-choice procedure, *F*, is manipulable for some distribution of preferences.**

Allan Gibbard, a philosopher, and Mark Satterthwaite, an economist, simultaneously established this result about sophisticated behavior in the mid-1970s.[9] For any group (of at least three) and any decision setting (of at least three things to choose among), if the way in which decisions are made does not allow one member of the group to dictate the choice no matter how others feel (Arrow's Condition D), and if individuals are free to have whatever preferences they wish (Arrow's Condition U), then it is entirely possible for circumstances to arise in which at least one individual has an incentive to reveal his preferences strategically. No method of group choice is immune from manipulation.

Two brief examples will illustrate what is meant here and preview the rest of the chapter. In legislative politics, there is something known as a *killer amendment*. It is an amendment to a bill which, if successfully attached to the bill, will cause the bill to be defeated, even though the bill would have passed if it had not been amended. Discovering such amendments, and engineering them through the legislative thicket, thereby

[9] Allan Gibbard, "Manipulation of Voting Schemes: A General Result," *Econometrica* 41 (1973): 587–601; Mark A. Satterthwaite, "Strategy-proofness and Arrow's Conditions: Existence and Correspondence Theorems for Voting Procedures and Social Welfare Functions," *Journal of Economic Theory* 10 (1975): 187–217.

snatching defeat from the jaws of victory (often by someone purposely seeking to defeat the bill), is a political gift found in only the most talented politicians (some of whom are profiled in an entertaining little book by the late William Riker, *The Art of Political Manipulation*).[10] Such amendments often require sophisticated voting in which an enemy of the original bill votes for the killer amendment, even though she doesn't like the amendment per se. She does so because she appreciates that the now amended bill will be defeated, whereas the unamended bill would have passed. Thus, conventional legislative decision making is, as the Gibbard-Satterthwaite Theorem suggests, often vulnerable to manipulation.

So, too, is electoral politics. In the section after next, I examine the case of *strategic voting*, a brief example of which will have to suffice for now. It is well known that Anglo-American electoral arrangements, known as *plurality voting systems*, are fertile soil for two-party politics (a subject pursued in Chapter 7). In this electoral order, any number of parties may compete for a single office, with the candidate of the party winning the *most* votes (not necessarily a majority of the votes) declared the winner. The reason this arrangement nearly always reduces to two-party competition is that individual voters are loath to waste their votes, individual contributors are loath to waste their campaign resources, and individual political managers are loath to waste their electioneering skills on hopeless candidacies. They tend to desert such candidacies, *even if they would rather see that candidacy succeed because it is preferable in their view*. That is, people who want to make the most of their strategic endowments (votes, dollars, organizational skills) will prudently deploy them where they think they might make a difference (say, in helping to choose the lesser of evils), rather than deploying them where they serve only to express a preference but have no ef-

[10] (New Haven: Yale University Press, 1986).

fect on the final outcome. In the history of the United States, with some rare but important exceptions, third parties are victimized by strategic voting. Their final vote count *underestimates* their actual support in the electorate, reflecting misrevealed preferences—manipulation—by strategic actors (many of whom are ordinary voters).

Sophisticated Voting

Sophisticated voting takes the form of voting against one's true preferences at one stage of the legislative process in order to achieve an even better outcome (according to one's true preferences) at the end of the process. There is no law written anywhere that says that a legislator *must* vote his or her true preferences. Consider the history of the Powell Amendment (Case 6.4).

Case 6.4
Aid to Education and the Powell Amendment

Probably the most famous and most often reported case of sophisticated voting surrounds the efforts of the Democratic majority in the House of Representatives in the mid-1950s to pass legislation enabling the federal government to provide financial support to local public school districts.* The status quo (x^0) at that time provided for virtually no federal role in public education from kindergarten through the

* Fuller versions of this story may be found in William H. Riker, *Liberalism Against Populism* (San Francisco: Freeman, 1982); Riker, *The Art of Political Manipulation*; and Arthur Denzau, William Riker, and Kenneth Shepsle, "Farquharson and Fenno: Sophisticated Voting and Home Style," *American Political Science Review* 79 (1985): 1117–35.

twelfth grade. The Education and Labor Committee of the Democrat-dominated House of Representatives introduced a bill, *B*, to authorize the federal government to subsidize educational efforts by the states. Adam Clayton Powell (D-N.Y.), the second-ranking Democrat on this education committee and perhaps the most prominent black politician in the country at the time, moved an amendment (*A*), now known as the Powell Amendment. If amended, the bill would subsidize elementary and secondary educational efforts by the states, but would restrict any federal funds from flowing to a school district that practiced segregation of the races.

The rules of procedure in the House required that the original bill and the amendment be pitted against each other (*B* vs. *A*). The winner was then subjected to a vote on final passage (effectively, winner vs. x^0). The two votes are displayed in the accompanying table. Reading its last column, it may be seen that the Powell Amendment passed, 229 to 197. From the last row, however, it may be seen that the amended bill failed when pitted against the status quo, 199 to 227. What went wrong?

While I cannot give a complete account here, several things may be remarked upon. The 132 yea-yea voters in the upper left corner of the table are the quintessence of sincerity. They were mostly northern liberal Democrats who both abhorred racial segregation and supported federal aid to education. In the end, as we shall see, they were the ones whose naïveté (if that's what it was) was exploited. The 67 nay-yea voters in the lower left corner are an interesting mix. These are the sophisticated Democrats. They favored school aid, on the one hand, and they saw Powell's motion as a killer amendment, on the other hand. Some may have favored the substance of the amendment, but they voted against it nonetheless. They preferred half a loaf to none. The 97 upper right corner yea-nay voters were

crafty Republicans who opposed school aid. They were simply delighted to support Mr. Powell's effort to eradicate racial segregation in the South, not because they cared about that issue but because they saw that it would sink school aid (by peeling off southerners in the vote on final passage who would have supported an unamended school aid bill).

		Final Passage		
		Yea	**Nay**	**Total**
Powell	**Yea**	132	97	229
Amendment	**Nay**	67	130	197
	Total	199	227	426

In voting against their nominal preferences in the contest pitting *B* vs. *A*, the Republicans assured themselves of a more preferred final outcome; their sophistication paid off. Had the 132 legislators in favor of school aid been willing to settle for half a loaf (in which school aid would not have been denied to segregated districts), they could have voted sophisticatedly against Powell's amendment, even though they preferred it, thereby assuring that *B* would have passed. Why didn't they behave strategically here? Denzau, Riker, and Shepsle speculate that many northern liberals feared explaining to their black constituents that they voted against Powell for "strategic" reasons.

Strategic Voting

We have just seen that a voter with a sophisticated capacity exercises rational foresight by looking ahead—that is, "down" an agenda that is fixed in advance. He or she may choose, at some stage or other, to vote against his or her nominal preferences for strategic reasons. Sometimes, however, a decision maker exercises rational foresight, though not in quite this same manner (Case 6.5).

Case 6.5
Not Wasting One's Vote

The 1968 national election in the United States found Hubert Humphrey (D) pitted against Richard Nixon (R) for the presidency. There was a third candidate in the race, George Wallace, who ran on the ticket of a new third party, the American Independent Party. Throughout the campaign during the fall of 1968, Humphrey and Nixon ran neck and neck, with polls showing their support in the 40 percent range. Wallace trailed badly, though still acknowledged by nearly 20 percent of the electorate as their first preference. In the "only poll that counts," as politicians like to refer to the actual election, Nixon and Humphrey each captured 43.5 percent of the popular vote, with Wallace coming in third with 13 percent. It appeared that Wallace's strength flagged in the final weeks of the campaign; he apparently lost more than a quarter of his support.

Let's assume that all the Nixon supporters stuck with their man, as did all the Humphrey supporters. Moreover, let's assume that the Wallace supporters—indeed, the entire nation—felt the election was going to be very close, but that their man was out of the running. There are actually three different types of voters preferring Wallace: (1) those who ranked Humphrey second [W-H-N]; (2) those who ranked Nixon second [W-N-H]; and (3) those who were indifferent between the two [W - (N,H)]. (In the type (1) and (2) categories, respectively, we include those who had Wallace tied with Humphrey or Nixon, respectively.) The Wallace campaign tried to transform all Wallace supporters into type (3) voters. His *slogan* emphasized that there was "not a dime's worth of difference between the major party candidates." Undoubtedly, however, some of those in the first and second category, in the privacy of the voting booth,

decided not to waste their votes on a hopeless candidate, instead switching to their second preference. As a result, the actual vote totals of both Humphrey and Nixon grew relative to late poll data, whereas Wallace's shrank.

Fast-forward a quarter century to the 1992 presidential election. Once again a winning candidate, Bill Clinton, received only 43 percent of the popular vote. Once again there was a popular third-party candidate, H. Ross Perot. And once again, the third-party candidate's support hovered around the 20 percent mark during most of the campaign. But something was different this time. Perot's strength did *not* diminish at the end (he actually finished with 19 percent). Why did Perot preferrers not desert their candidate as Wallace preferrers had twenty-four years earlier?

Consider the three types of Perot suporters: (1) [P-C-B]; (2) [P-B-C]; and (3) [P-(C,B)]. The wasted-vote argument has clout only with voter types (1) and (2)—that is, with voters who have a decided preference between the major-party candidates, Clinton and Bush. Strategic voting has no allure for type (3) voters. If a higher proportion of Perot preferrers than Wallace preferrers were type (3), then there would be less possibility of falloff in Perot support. An interesting research project (I haven't done it, and don't know of any work in this area at this writing) would be to compare the different voter types for Perot and Wallace to determine whether a preference-distribution argument could account for the different falloff rates.

There is a second argument meriting investigation. In 1968, the election was seen as "too close to call." In 1992, in contrast, by the last week of the election, Clinton was perceived as pulling away from the incumbent president, George H. W. Bush (who ended up with less than 38 percent of the vote). A Perot supporter, even a type (1) or type (2) supporter, could hardly be accused of wasting her vote by casting it for Perot. Neither second-preference candidate would benefit from a Perot supporter's switch if the election weren't close—Clinton didn't need the help and it would be too little too late for Bush. An alternative explanation, then, is not that Perot supporters exercised less foresight than Wallace supporters, nor even that they were differentially distributed across preference types, but that, having exercised foresight, a Perot supporter concluded that a vote for Perot was apparently not a wasteful use of resources.

I have distinguished *sophisticated voting* from *strategic voting*, although each is an instance of rational foresight. Sophisticated voting is made possible by backward induction on a fixed agenda. In the three-person presidential contest, on the other hand, the issue is not one of voting contrary to preference at one node of a fixed agenda in order to achieve a more desirable outcome at a later point; it is one of deciding whether supporting your first choice is a hopeless undertaking. Put differently, *strategic voting* involves weighing two different lotteries. The first lottery (in which you vote for a Wallace or a Perot) gives, in comparison to the second lottery (vote for your second choice), a slightly higher chance of your first choice winning, along with a slightly higher chance of your last choice winning, too. The second lottery gives a higher chance of your middle alternative winning, reducing the chances of either your most-preferred or least-preferred outcome. A strategic voter, in effect, concedes that discretion is the better part of valor.

HERESTHETIC

I conclude the discussion of strategic behavior by claiming that the sort of strategizing just described is "strategizing in the small." For a clearly defined political situation, whether a sequence of votes in a legislature or a national election, manipulation takes the form of not voting for the alternative most highly ranked in terms of preferences. There's no doubt that this is an important form of strategic behavior, as the cases above suggest. But it is a restrictive view of strategic possibilities, because it takes the situation confronting group members as fixed and given. For instance, it does not ask where the agenda came from in the first place. Or, how did the election get shaped the way it did? Asking these questions opens up the possibility of "strategizing in the large," or what William Riker called *heresthetic.*

You will not find this term in a dictionary, for Riker coined it himself. He views heresthetic as the companion to *rhetoric.* The latter—the art of designing an argument—was a standard part of a young man's education in ancient times. Heresthetic—for Riker, the art of designing situations—is a word made up of parts of appropriate Greek words for "choosing" and "electing." Riker felt it should also have been part of that ancient education, for making arguments without attending to the larger strategic context is to strategize in the small, but not in the large.

We have already seen the heresthetician at work in the treatment of agenda-setting bodies, such as wily committee chairs in legislatures. Their jobs consist of structuring the content and sequence of voting—through proposing bills and amendments—so that the result turns out as the agenda setter would like.

Often, heresthetical maneuvers entail making something seem other than what it really is. This is not so much a deception as a "redefinition" of a situation. For example, Senator

Warren Magnuson (D-Wash.), for relatively obvious reasons, sought to get the U.S. Senate to block the Defense Department from transporting potentially lethal nerve gas canisters across his home state.[11] Fearing that his opposition to this national defense activity would be construed as reflecting merely parochial concerns—concerns that paled in significance to the urgency of removing these dangerous military assets from the post-Vietnam Pacific theater—he pursued a strategic tack that did not recount all the potential dangers to which his constituents might be exposed during transit. Indeed, his argument steered clear altogether of the substance in dispute. Instead, he suggested that the issue at hand was really about the constitutional powers of the Senate in foreign relations. He suggested that the decommissioning of the nerve gas, with its subsequent transit across the Northwest, was part of a larger matter in which the president had *failed to consult with the U.S. Senate as was his constitutional obligation.* What was at stake, suggested Magnuson, was the very authority of and respect for the U.S. Senate. This redefinition of the issue, as it happened, contributed to Magnuson's securing an outcome he preferred. The important point here is not so much that the senator won, but that he had the wit to see that reinterpretation was a viable strategic maneuver that promised the possibility of victory, where simply articulating an argument based on his concerns for the welfare of his Washington State constituents would surely have been discounted, even ignored.

The Magnuson maneuver bordered on the rhetorical, because it involved formulating an argument in order to persuade a small number of people on a well-defined issue. Another form of heresthetic involves redefinition on a grander stage. Riker writes extensively about the (strategic) develop-

[11] The entire episode is recounted in William H. Riker, *The Art of Political Manipulation,* Chapter 10.

ment of the slavery issue as an electoral heresthetic.[12] Briefly stated, for much of the first half of the nineteenth century, American national politics were dominated by the Jeffersonian-Jacksonian coalition. Certainly by 1820, after the Federalist Party had disappeared, this coalition was virtually unopposed. The coalition was united principally by the issue of agrarian expansionism and found its greatest strength in the middle Atlantic states, the South, and the states of the Northwest Territory. Opposition politicians, men like Henry Clay, who were ambitious for themselves and their causes, searched and searched for issues that might split this governing coalition. Their substantive opposition to the agrarian expansionism of the Jeffersonian-Jacksonians consisted in their desire for public policy to encourage commercial development. But this electoral contest between agrarian expansion and commercial development had already been fought out over the previous generation, with Jefferson (later Jackson) and his allies winning big. No, the opposition would not win by simply repeating the old arguments and fighting the old battles. It needed to find a new issue that would split the currently dominant governing coalition, one that would divide Mid-Atlantic from Rim South, Northwest from Deep South. And the slavery issue was the answer.

Riker makes the argument that slavery worked not because of its moral content (although large numbers of Americans in the mid-nineteenth century found slavery abhorrent), nor even because so many people were animated by abolitionist agitation. There are many morally significant issues floating around at any particular time, but they do not necessarily bring ruling coalitions down. Slavery worked as a strategic maneuver because it divided the members of an existing winning coalition, some of whom tolerated slavery and some of whom opposed it. Once the northern elements of the

[12] This is developed in Riker, *Liberalism against Populism*, Chapter 9.

Jeffersonian-Jacksonian coalition came to fear that support of slavery on which their southern coalition partners depended would be their own personal undoing, the coalition could no longer hold. Subsequent events about which the historians wrote—the Kansas-Nebraska Act of 1854, the Dred Scott decision in 1857, and ultimately civil war itself—put this coalition to an end. But it was the heresthetical maneuverings of losing politicians looking for ways to become winners that set all this in motion.[13]

Conclusion

This chapter has covered a number of subtleties of group behavior. It serves as something of an antidote, however, to earlier discussions of group choice, because here individuals are endowed with a capacity to consider the broader implications of their actions. Although I have referred to this as strategic behavior and have occasionally characterized it in emotionally

[13] The logic of heresthetic can be understood as the introduction of a new issue, or the redefinition of an old one, in order to destroy a currently winning coalition and replace it with some other. Students of politics should not think that heresthetic is either rare or purely of historical interest. Issues capable of splitting winning coalitions arise all the time. It only takes a master heresthetician (like Warren Magnuson or Henry Clay) to use the issue as a wedge to divide the opposition. Modern issues exhibiting heresthetical traces include the gun-control movement's proposal to ban "cop-killer" bullets and assault weapons in order to split the coalition between the law enforcement community and the National Rifle Association; Ronald Reagan's appeal to anticommunism and conservative social values to create "Reagan Democrats" out of a portion of his former opposition; the use of the abortion issue by Democrats to woo pro-choice Republican women; use of that same issue by pro-life activists to induce Christian fundamentalists to desert the Democratic Party; and finally, the exploitation by antismoking forces of conflict within the tobacco industry between farmers and manufacturers over the matter of tobacco imports. Heresthetical maneuvers do not always succeed. But they constitute the set of activities that those currently out of power employ in an effort to get back on top. See Kenneth A. Shepsle, "Losers in Politics (and How They Sometimes Become Winners): William Riker's Heresthetic," *Perspectives on Politics* 1 (2003): 307–15.

charged terms (misrepresentation, manipulation, and so on), all I have really done is to acknowledge the individual's capacity to look beyond his or her nose, the individual's proficiency in taking a longer-term view of things—in short, the individual's talent for behaving deliberatively and exercising foresight.

Foresight comes in many shapes, and I have covered some of them here. Sophisticated behavior, especially in the context of legislative settings, is the capacity to make voting decisions in a sequential process with an eye to final results. Sometimes this entails voting contrary to nominal preferences—for example, voting against an amendment you like because you know it will damage the chances for the whole bill to survive. For this reason, I have alluded to individuals *misrepresenting* their preferences. Really, though, they are just taking care of business in the most sensible fashion available to them. Likewise, in the electoral setting, voters who elect not to vote for their favorite candidate because he doesn't have much chance of winning are clearly behaving strategically; but here, too, citizens are simply engaging in a perfectly legitimate activity, namely, using the instruments at their disposal (their votes at the very least) to effect outcomes in a direction they prefer.

Sophisticated behavior is also associated with activities other than voting. The committee chair's judgment call on whether to open the gates or not is one manifestation of this kind of exercise in foresight. The opposition politician's injection of new issues into an electoral campaign is another. In each case politicians use the resources at their disposal (control of the legislative agenda and influence over public opinion, respectively) to accomplish goals—policy goals in the case of the legislative chair, electoral goals in the case of the opposition politician. Sophistication resides in their ability to use the assets at their disposal *instrumentally*.

To appreciate fully the strategic options available to individuals, then, it is clear that we must understand the context

in which they operate, for it is the context that provides them with opportunities to deploy their resources instrumentally. This is no more apparent than in the world of electoral politics, where different electoral arrangement effectively constitute altogether different contexts in which to deploy resources. This is precisely our agenda for the next chapter.

Experimental Corner

Agenda Setting and Group Choice

The strategic behavior put on display in the material in this chapter is multifaceted and many-splendored. Most of the instances covered here involve voters or legislators misrepresentating their "honest" preferences by casting strategic or sophisticated votes. Likewise, in Case 6.1, a university department misrepresents its honest evaluation of graduate admissions candidates in order to make the most of its limited resources. In all of these circumstances the actors take the alternatives on offer as given and, based on what's available, figure out how they can best accomplish their personal objectives. In this experimental corner I describe a different kind of strategic behavior—setting the agenda from which choices will ultimately be taken. This is the focus of a wonderful paper by Plott and Levine.[a]

The motivation for this experiment came from a situation of personal significance to Plott and Levine: "As a practical matter, we were involved in an important and complex committee decision. A large flying club in which we held membership was meeting to vote upon the size and compo-

[a] Charles R. Plott and Michael E. Levine, "A Model of Agenda Influence on Committee Decisions," *American Economic Review* 68 (1978): 146–60. Also see William H. Riker, *The Art of Political Manipulation* (New Haven: Yale University Press, 1986), Chapter 3.

sition of the aircraft fleet which would be available to the membership for flying. As members we had preferences about the fleet available to us and an opportunity to shape the agenda. Preliminary discussions and meetings had narrowed the range of possibilities greatly. . . . Over these remaining possibilities, however, there were conflicting and strongly held opinions. The group was to meet once and decide the issue by majority vote. . . . The meeting was held. The group used our agenda. The decision was the one we predicted" (p. 146).

Plott and Levine wondered whether their success in manipulating the group's choice by selecting an agenda that yielded the result they wanted was an accidental piece of good fortune or something more general. They set up an experiment to test their hunches. Their experiment involved partitioning alternatives into subsets and having subjects select a subset. The winning subset, in turn, is further partitioned and a subsequent choice is taken. This continues until a unique alternative remains. For example, suppose the issue were one of planning a dinner party in which two choices had to be made: cuisine (French or Mexican) and dress (formal or informal). The four possible outcomes are {French formal, French informal, Mexican formal, Mexican informal}. One *agenda* requires the choice of cuisine to be taken first and dress next. Consequently, subjects choose between two subsets: {French formal, French informal} and {Mexican formal, Mexican informal}. The winner—say, the first subset—then becomes the set of alternatives on offer when choosing dress. Another agenda would have dress chosen first, then cuisine: {French formal, Mexican formal} versus {French informal, Mexican informal}. Other agendas are possible, though they entail choices across these two categories, for example, {French formal, Mexican informal} versus {French informal, Mexican formal}. Thus, the agenda allows group members to cast votes, but *limits the*

items up for a vote and their order. The experimenter gets to select the agenda (with an eye to "manipulating" the group into choosing the final outcome he or she likes best).

Plott and Levine focus on three *voting strategies* that participants might adopt: (1) sincere voting—at each partition, vote for the subset that contains the participant's most-preferred alternative (from among those alternatives still alive); (2) avoid-the-worst—at each partition, vote for the subset that does *not* contain the least-preferred alternative among those still possible; and (3) average value—at each partition, treat the alternatives in a subset as a lottery with each having equal probability and vote for the subset with the highest expected utility. Plott and Levine do not know, for any experimental subject, the particular decision rule he or she is using.

Experimental subjects were students from Caltech, UCLA, and USC. They were gathered in a classroom, given a group decision to select a letter from a subset of the alphabet, and were provided with a payoff sheet indicating their particular monetary payoff depending upon which letter was chosen. Thus, each subject had induced preferences over the letters. Decisions were made by majority rule.

The induced preferences of the experimental subjects were such that, from the set {A,B,C,D,E} of alternatives, each of the first four alternatives was preferred to E; A was preferred by a majority to every other alternative; and B, C, and D were part of a majority rule cycle (B preferred to C, C preferred to D, and D preferred to B). Agendas were designed by the experimenters so that if the subjects were of a particular type—(1), (2), or (3) above—and behaved according to the theory, then a specific outcome would prevail. (Actually, Plott and Levine have a more complicated theory in which they assume probabilities for the different types and design an agenda in which the *expected* outcome can be derived from their theory.) For example, consider the parti-

tion {A,B,E} versus {C,D}. If everyone is type (1), a majority will select the first subset, since a majority prefers A to any of the other alternatives in the other subset. If the partition of this winner is {A} versus {B,E}, then A will prevail. If everyone is type (2), then a majority will select {C,D}, since E is worst for a majority, and then, from among these, C will prevail (since C is preferred by a majority to D). If everyone is type (3), then if their payoff for E is made especially bad, they will opt for {C,D} and then choose C; but if E is not sufficiently bad, then they might opt for {A,B,E} and then ultimately for A. More generally, the experimenters can develop expectations for which outcome they can induce by their strategic choice of agenda.[b]

Running this experiment across many groups of experimental subjects, the experimenters find that their expectations are extraordinarily accurate. Space precludes a detailed discussion of the results, so readers should consult the paper on their own. Plott and Levine conclude that, at least in the laboratory, "the agenda can indeed be used to influence the outcome of a committee decision" (p. 156). This provides some empirical support that agenda power is a manipulable strategic resource—something that legislative committee chairs, academic department heads, and those who lead meetings undoubtedly discover. Rank-and-file members, on the other hand, will want to avail themselves of parliamentary protection to reduce the degree to which they can be exploited by clever agenda setters.

[b] If, instead of hypothesizing that *all* group members are of a specific type, the experimenters assume some distribution of types across the group members, they can still deduce probabilistic expectations associated with particular agenda choices.

Problems and Discussion Questions

1. Suppose that strategy c_3 is unavailable to Mr. III in the game displayed in Figure 6.1. Use backward induction to solve this amended game. Now suppose that c_3 is again available to Mr. III, but Mr. I can no longer play a_1. What is the final outcome?

2. Why would supporters of a particular bill ever vote in *favor of* a killer amendment? Some things to consider might include how constituents evaluate their legislators and uncertainty about whether an amended bill will pass.

*3. For this question we return to the setup of Problem 1 in Chapter 5 to see what happens when individuals in an agenda setup vote sophisticatedly.

- It is the last round of a three-item agenda, v, so the society is voting over the option that won the first round and the final option on the agenda. Will any player wish to misrepresent her true preferences? Try out some specific head-to-head matchups (e.g., x vs. y, or y vs. z) to build up your intuition.
- With the agenda $v = (y,x,z)$, first determine what happens in the final round depending on whether y or x wins the first round. Based on this, can player 2 ever do better by supporting x in the first round, contrary to her nominal preferences? What about 3 voting against x? Knowing this, should 1 misrepresent his preferences by playing y in round 1?
- (Bonus) Identify the outcomes (and which player acts strategically) if the agenda is $v' = (z, x, y)$ and $v'' = (z, y, x)$. Compare these answers with the honest voting outcomes.

4. Why do some voters "waste" their vote by supporting third-party candidates who have no chance of winning office? Why do other voters, who may prefer a third-party candidate, nonetheless vote for someone else? Discuss the phenomenon of strategic voting in plurality elections and illustrate your arguments with reference to illustrious third-party candidates in the United States—for example, Ralph Nader (2000), Ross Perot (1992), and George Wallace (1968). Why have the experiences of third-party candidates (in terms of election day dropoffs in support) been so different?

5. In the study of legislatures, political scientists often rely on voting scores to measure the preferences of legislators on policy issues. For instance, the League of Conservation Voters compiles a list of key votes on environmental matters during a session of Congress and then ranks members of Congress based on how often they took the "pro-environment" side. Will we get meaningful results from these types of scores? Under what circumstances? In answering this question, consider the role of the closed rule (which allows committees to make take-it-or-leave-it offers), strategic voting, and sequential voting/minimum winning coalitions (discussed in Case 6.2).

6. Is an assumption of sincere voting ever suitable for analyzing politics? In a legislature? Among voters in an election? On a small decision-making committee?

7. Explain the meaning of the Gibbard-Satterthwaite Theorem in your own words, being careful to define terms like *strategy-proof*, *manipulable*, and *sophisticated voting*. What are the implications of the theorem for the normative arguments in favor of democracy? Of what significance is the theorem for social scientists trying to make predictions about political outcomes?

7

Voting Methods and Electoral Systems

In the last few chapters an implicit theme has emerged: It is nearly impossible to arrange for the making of fair and coherent group choices. Preference cycles, agenda manipulation, strategic misrepresentation of preferences, heresthetical maneuvers, and so on frustrate our best attempts. The coup de grâce, developed in this chapter, is that "popular sovereignty"—by which we mean any method for allowing individuals in a group to affect their own fates through voting—is not unambiguous either. There are lots of different ways to cast and count votes or "do" majority rule, for instance. If all these methods differed only in the details but not in the final result, then we could relegate the matter of details to politics junkies to chat about. Alas, the devil is in the details. In this chapter, therefore, I explore the procedural context of voting—the rules by which small committees and large electorates make choices.

The discussion is partitioned into two sections according to what it is the group is choosing. The first part of the discussion focuses on how relatively small groups—a set of friends, a club, a committee—choose some alternative from a set of available alternatives. I call these arrangements *voting methods*. The second part of the discussion emphasizes how relatively large groups (called electorates) choose a specific thing (called a legislature). I call these arrangements *electoral systems*. In each part of this discussion, I am not so much inter-