CHAPTER 1

The analysis of politics

Politics is not an exact science.
(Otto von Bismarck, Speech
to the Herrenhaus, 1863)

Politics may be the most complex of all social phenomena and the most difficult to theorize about. There is no lack of theory, of course. Instead, there are many theories, with competing claims, to explain or guide political choices. To make things even harder, theories about politics range from the *normative* (what should be) to the *positive* (what is). Since politics is complex and political theories have both positive and normative elements, newcomers can't tell where to begin or what to believe.

The political theory in this book is "analytical," from the Greek *analysis:* dissolving, or loosening, a complex whole into parts. Analysis helps us understand relations of the parts, as well as the nature of the whole. Without an analytical approach, "politics" is very hard to comprehend, especially if we want to know more than "What will happen tomorrow?" It may be easy to forecast an election from opinion data taken a day before the election, but forecasting issues or elections six months off is difficult. A year before an election, anything could happen.

One might say that theories of politics are not very good if their predictions are so uncertain. One might be right! Still, it is more fair to focus on the distinct nature of the problem: Political phenomena are demandingly, delightfully complex. The *analysis* of politics "loosens" this complexity into more manageable (but still very interesting) components. Analysis helps us understand politics by applying "models" to these components to see how they work. *Models* are internally consistent bodies of theory that describe human behavior or physical phenomena. This process of abstraction helps simulate a reality simpler than (or much different from) the real world of politics.

Why use models at all?

Mathematical models are primarily focused on logical consistency, or the internal validity of arguments. Given a set of premises, we can characterize a conclusion in one of three ways:

- *Conclusion is true.*
- *Conclusion is false.*
- *Conclusion is conditionally true,* depending on other variables not accounted for in the model.

The advantage of formal analytic reasoning in clearly distinguishing true, false, and conditionally true arguments may not be obvious. A common reproach is that the simplifying assumptions in formal models are too abstract or unrealistic.

But *simplifying assumptions* makes analysis manageable and helps us focus on the key components of a phenomenon. The reason mathematical models are criticized for their assumptions is simple: *The reader can tell exactly what the assumptions are!* The discipline imposed by this approach means that mathematical models can be falsified, refined, and corrected.

Theories *must be* abstractions, or simplifications from an unmanageably complex reality, whether those theories are stated mathematically, verbally, or in terms of statistical measurements. The basis of any theory is a logical construction, following from premises or assumptions, that can be used to forecast events in the future. These forecasts are based on those data that the theory highlights as important. To put it more simply, theory gives us a way of asking "what if?" in our minds and then deducing implications.

The particular "what if" implications derived from abstract theory may have little to do with the world of directly observable phenomena. The applicability of the argument is irrelevant to the truth or falsity of the propositions *within the logic of the model.* Mathematical statements are either true, false, or conditionally true. A trained person can definitively recognize a set of statements as belonging to one or more of these three categories, without reference to any information outside the model itself. To put it another way, the epistemological basis of mathematical models is pure *deduction.*

Do not be confused: The use of arcane symbols and formidable jargon is different from "science." Using mathematics for discovering simple unifying principles that explain and predict observable phenomena is hard. Good theory is hard even in simple settings such as the behavior of a body moving in a vacuum. Social scientists study human beings, who deal with each other in complicated ways. If symbols make these relations even harder to understand, formal theories would be worse than useless.

We claimed above that a strength of mathematical models is the clarity of the statement of the assumptions. Yet clarity is only a strength if the assumptions themselves are *plausible.* One cannot tell if an argument works outside its own stylized context by looking only at the argument itself. Consequently, the external application, or "testing," of formal theory is by *analogy:* The theory is tested by measuring relationships among observable phenomena, in hopes that the observable phenomena are "like" the relationships the model focuses on.

Without careful empirical tests, models would just be amusing mathematical exercises. Analytical political theory has been subjected to extensive and rigorous empirical testing. Partly because some portions of the theory (such as the classical spatial model of mass voting) *failed* empirical tests, the theory itself has evolved and been improved.

We will review some assumptions and logical forms of several mathematical models in later chapters. In particular, we will consider the "spatial" model at some length. First, though, we ask why politics and governance are important from a *normative* perspective. The brief reason is that these models are more than positive claims about the way the world works. Analytical politics evaluates different ways of choosing and compares ways things *should* be done.

Spatial competition is a simple and intuitively plausible model of political choice. The basic spatial model was originally adapted from economics, but the modern spatial theory of voting is an analytical model of politics. The primary assumption is that policy positions of candidates or parties can be usefully conceived as points in a "space." Policy space can encompass one issue or several. Each issue is associated with a dimension in the space, where "dimension" is an ordered set of alternatives.

We will use spatial models heavily in this text, and it is important

for the reader to understand how spatial models represent political phenomena. The spatial model breaks up the analysis of politics into three separate components:

- *Voter choice:* Each voter chooses the candidate or policy "closest" to the voter's ideal conception of what the government should do. In so doing, voters maximize their utility or satisfaction.
- *Party platform selection:* Political parties know how voters choose and make proposals (or choose candidates) that attract the most votes.
- *Quality of outcomes:* In some circumstances, the parties (in a two-party system) or the governing coalitions (in a multiparty or parliamentary system) converge toward the center of the distribution of voters. If the "center" corresponds with ethically defensible notions of democracy and the good society, this outcome is desirable. Alternatively, bias away from the center toward one of the extremes may be observed. In either case, spatial theory presents a detailed set of causal connections for effecting reforms.

Spatial theory has been criticized for the particular conception of voters, platforms, and outcomes it uses. Many of these criticisms are important, as we shall see. For now, let's emphasize why people find spatial models useful: Spatial theory is the only theory that provides an integrated model of voter choice, party platforms, and the quality of outcomes. For a complete model, formal spatial theory is the only game in town.

How should a group choose how to choose?

How should a group of people choose the right action to take? Does the choice of how to choose affect the quality of the choice itself? These are hard questions, but they are important questions in political theory. To make the questions more concrete, consider the Hun–Gats, a tribe of hunter–gatherers living on a long north–south peninsula. The Hun–Gats have to make a collective choice among three mutually exclusive alternatives:

- Stay in their thatched huts beside Muddy River, where they have hunted (and gathered) most of the available food.

- Go north, where there is more food and water, but where the fierce Raouli tribe kills trespassers on sight.
- Go south, where the land is arid and barren, and little is known about the presence of other tribes, game, or water.

If everyone wants to go north or go south, they all go. If all want to stay, they stay. But what if different people want different things? Disagreement tests collective choice mechanisms; conflict strains the ties that gather a group of individuals into a society. What is the best way to tackle this problem of choosing one course of action from several possibilities if people disagree?

At best, the answer to the "What if there is disagreement?" question depends on many factors. These include the nature of the disagreement, how peoples' desires or judgments are aggregated, and the complexity of the set of alternatives over which the group of people is trying to choose. Almost any answer to the "What if there is disagreement?" question is only conditionally true. That means that the assumptions on which an argument rests must be clearly stated. Otherwise, the Hun–Gats can't decide how to decide with any confidence. Worse, their confidence that one form of decision is the "best" way to decide might be misplaced. They may not recognize that (for example) majority rule is "best" only under particular conditions. To illustrate the problem of recognizing conditionally true statements in normative theory, consider the following passage from Rousseau:

> As long as several men in assembly regard themselves as a single body, they have only a single will which is concerned with their common preservation and general well-being. . . .
>
> A State so governed needs very few laws; and, as it becomes necessary to issue new ones, the necessity is universally seen. The first man to propose them merely says what all have already felt. . . .
>
> There is but one law which, from its nature, needs unanimous consent. This is the social compact. . . . Apart from this primitive contract, the vote of the majority always binds all the rest. This follows from the contract itself. But it is asked how a man can be both free and forced to conform to wills that are not his own.
>
> I retort the question is wrongly put. . . . When in the popular assembly a law is proposed, what the people is asked is not exactly whether it approves or rejects the proposal, but whether it is in conformity with the general will, which is their will. Each man, in giving his vote, states his opinion on that point; and the general will is found by counting votes. When therefore the opinion that is contrary to my own prevails, this proves neither more nor less than that I was

mistaken, and that what I thought to be the general will was not so. (Rousseau, 1973, §§ 315–29)

As Grofman and Feld (1988, p. 568) note, "This passage in Rousseau is often misunderstood." The reason is that in other parts of the *Social Contract,* Rousseau offers a number of qualifications and disclaimers: Even Rousseau thought that the majority will and the general will might sometimes differ. But these qualifications seem like asides and are not identified as what they are: assumptions.

Suppose the Hun–Gats were to read Rousseau. Should they conclude that a majority in favor of either option "binds" all the rest to follow? If they read Rousseau *carefully,* they would end up arguing over what was meant in different (apparently contradictory) text passages. For example, Rousseau notes that "[the argument for the majority] presupposes, indeed, that all the qualities of the general will still reside in the majority: when they cease to do so, whatever side a man may take, liberty is no longer possible" (Rousseau, 1973, IV 2).

Our hunter–gatherers, sitting in cold failing sunlight around a dying fire and reading aloud from tattered old books, are frustrated. They want to know whether they should use a majority vote on whether they should stay or go. But they have no way to find out if Rousseau's claims for the value of majorities in discovering the "general will" are true, false, or conditionally true. They can't tell what his assumptions, or premises for argument, really are. To make matters worse, suppose some Hun–Gat now come across the following text, in another old book: "The tree of liberty must be refreshed from time to time with the blood of patriots and tyrants. It is its natural manure" (Thomas Jefferson, letter to William Stevens Smith, November 13, 1787).

The Hun–Gats face hard questions. Should they accept the will of the majority as just and general, as Rousseau argued? Or should they follow Jefferson in believing that revolution by a minority can be just? Since neither of these extreme positions is *always* true, on what assumptions or premises is the "truth" conditional?

To put it differently, does the "general will" (the just course for a society) always exist, sometimes exist, or never exist? If there is no general will, can we still call majorities "sacred," or are minorities morally justified in rising against the tyranny of the majority to give the tree of liberty the benefits of their blood? No less important, even if the general will does exist in this case, how can the Hun–Gats discover it?

To learn the answers, we must use a form of argument that identifies premises, or assumptions. This approach abstracts from reality, to be sure, but it allows us to focus on the conditional nature of many important truths about politics. The basis of this approach is the spatial model of politics.

The basis of the spatial model of politics

The spatial model is not just an "as if" form of reasoning about politics. People really think this way and routinely use the words "left," "right," and "center" as if those words mean something. This belief that the listener will attach a predictable meaning to a candidate's spatial position is very important. People use the metaphor of spatial position because it helps them understand politics. Communication requires that some part of the meaning of these terms be shared. We will begin with the simplest possible set of assumptions about information and behavior, in Chapters 2 and 3, before moving to more realistic but more complicated models in later chapters.

The first clear use of the left–center–right spatial metaphor was just after the French Revolution of 1789. It is remarkable, given the extensive treatment historians have accorded this period, that so little attention has been paid to the contribution of the Revolution to our everyday language of politics. The extreme differences in the French political system and the novelty of democracy itself evoked important conceptual changes. One of the most durable linguistic innovations was the use of the spatial metaphor as a shorthand for both physical position and political and ideological beliefs.

"Left" and "right" were first used simply to describe the physical positions of political groups in the National Assemblies, and later in the National Convention. Groups that disliked each other sat as far apart as they could. Radical allies of Robespierre sat in the "Mountain," the high benches against the top wall. From the perspective of someone entering the hall, these radical deputies were on the far left. The independent deputies (the "Marsh," or the "Plain") occupied the debating floor in the lower center of the hall. The Girondin deputies held most of the ministries that ran the government, and consequently controlled most of the practical power in the Assembly. They gathered in the far "right" corner of the hall.[1] Over time, it became clear that

those on the left (Jacobins) wanted radical change. Those on the right (Girondins) defended the status quo because they ran the government.

These meanings have changed only slightly in being transformed into the modern language of politics: "Left" still generally means those who want change, with the extreme left seeking revolutionary change. The right is conservative, defending either the current policies or the ideas the current policies replaced.

The constancy of meaning of left and right may seem surprising, but it is no accident. The spatial metaphor is not just useful; it is *fundamental* to the way we all decipher democracy. Consider the way disagreements were described before the twin revolutions in the United States and France. Factions in European politics were conceived as struggles among "classes." In France, for example, there were three castes, or "estates." The clergy made up the First Estate; the nobility, the Second. Senior clergy came from noble families, so the first two estates were mutually supporting, protecting institutions and prerogatives that ensured their privileged status. The vast Third Estate, ostensibly representing the rest of France, was in practical terms limited to skilled artisans, lawyers, bankers, and professionals.

The implicit assumption was that the hierarchy in society was natural and just. This hierarchy found its highest realization in the figure of the monarch, who was above all estates (Beik, 1985, pp. 6–31).[2] This conception of politics was descriptively accurate: Social class and political division were identical in prerevolutionary French society. The reason for this is that each person's station in the feudal world was static and categorical. "Position" was defined by birth and political property rights, rather than merit or stands on political issues.

The two dimensions of conflict, social class and politics, were separated by the Revolution. Social class is inherently a set of *vertical* divisions. Politics in a democracy is a *horizontal* division of opinions among putative equals. It is hardly surprising, then, that both Tocqueville and Guizot (1974) use the same word – "leveling" – to describe the major effect of the Revolution. Both men believed that democracies must conceive of citizens abstractly and separate from their stations in life. There are obvious antecedents for such a conception in the religious view of every individual as a soul to be saved. The Revolution, in this conception,

did not aim merely at defining the rights of the French citizen, but sought also to determine the rights and duties of men in general towards each other and as members of a body politic. . . . The Revolution set out to replace [political institutions] with a new social and political order, at once simple and more uniform, based on the concept of the equality of all men. (Tocqueville, 1969, pp. 12, 20–1)

With the passing of the old, static caste system, people needed some way of organizing their political world. What was required was a mental construction based on *politics* (horizontal disagreement among equals, over principles), not *class* (immutable vertical distinctions of privilege). The replacing of the old vertical understanding of social hierarchy with the left–right metaphor of political disputes may have been inevitable. Spatial imagery is a consequence of the new way people understood citizenship, and the new alternatives open to them in a democracy.

The "left–center–right" image has led social scientists to develop models that capture spatial political competition. In the next three sections we will consider spatial models that formal theorists use to analyze democracy. These three sections each describe one component of the general model outlined above: voter choices, platform choices, and the quality of outcomes.

Voter choice

The starting point for voter choice in politics is obvious: The candidate or alternative a voter likes best receives that citizen's vote. To say anything useful about the "likes" part of this statement, we need to answer two sets of questions:

(1) What characteristics of a candidate or platform does a voter consider in making comparisons?
(2) If a platform has several characteristics ("dimensions") how does a voter balance these different considerations?

Spatial theory simplifies political choice by beginning with an abstract model of a representative voter's decision on what to support. This mythical voter does not "represent" anyone in the political sense; rather, the voter is a mathematical construct that helps answer the two questions posed above. Specifically: (1) The voter perceives each platform as a bundle of individual issues. The voter then evaluates each

platform by comparing it with his or her own ideal set of positions on these issues. (2) The importance of each issue in the voter's mind is represented by a set of weights. A large weight means the voter thinks that issue is more important than issues with smaller weights. If the voter doesn't care at all about some issue, that issue has zero weight.

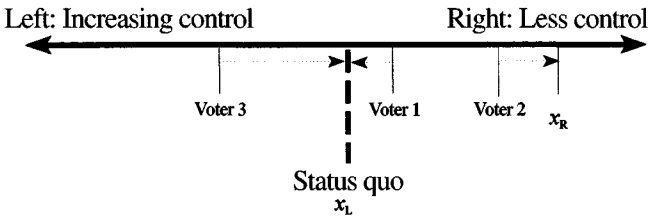
It is useful to distinguish at the outset two contexts for choices by voters: *committee voting* and *mass elections.*

- *Committee voting* is a decision context where there are few voters, participants can propose new alternatives, the individual implications of the decision may be very large, and participants are well informed about the alternatives. School budget votes by a county commission or voting on a budget bill in a legislative committee are examples of committee voting.
- *Mass elections* are situations where many voters choose among a few candidates. Voters may have only very limited information, and each vote has only a tiny effect on the election. U.S. Presidential elections are one example of mass elections.

Example 1 (Committee voting). Imagine there are three people on a committee charged with choosing an entertainment budget for their club. Suppose we believe that each person would prefer budgets closer to his or her idea of the best budget. Let demure A think the club should spend $50, let regular guy B favor $75, and let party reptile C demand to spend $250. We will call this "idea of the best" the voter's "ideal point." So A, who wants a budget of $50 if it were up to him, likes $54 more than $60, likes $69 more than $81, and so on. Suppose also that we know majority rule is the decision process the committee will use.

Then we can use the spatial model to make a prediction about what the committee *as a group* will decide. As we will see in the next chapter, the prediction is this: If the committee decides by majority rule, the outcome will be a budget of $75, the position taken by the middle person. This example shows one strength of spatial theory: We can make predictions about *aggregate outcomes,* given no more information than (1) *individual goals* and (2) the *decision process.*

Example 2 (Mass elections). Suppose we have survey information on three voters out of a population of millions of people. Figure 1.1 is an



- Voter 1 chooses L, the party now in power
- Voter 2 chooses R, the challengers
- Voter 3 chooses L, but isn't happy!

Figure 1.1. Extent of government control over means of production, with two parties, L and R.

example of how political alternatives and the ideal points of individual voters may be arrayed along a dimension, using left and right as the ideas that organize the space. This is sometimes called the "classical left–right" dimension in spatial theory. Here, *left* means advocacy of increased control of the means of production by government. *Right* implies opposition to intrusions by government against rights to property. Voters have ideal positions along the same dimension. The prediction of the spatial model is that each voter will choose the candidate who is closest to his or her ideal alternative.

If we are to consider an issue (as in a committee vote) or a choice along a classical left–right dimension (an election for president or governor), the spatial model claims that voters will choose the candidate "closest" to their own ideal point on the dimension. In a majority rule election, the party closest to the most voters will win. We will make these statements more precise in Chapter 2 (for one dimension), Chapter 3 (multiple dimensions), and Chapter 4 (alternative voting rules).

In Figure 1.1, it is easy to see that voters, whom we can represent as points along a line segment, will choose between the status quo and support for alternatives. The choice, as was pointed out earlier, is made by comparing which is closer to the way the voter thinks society should be organized. In particular, voter 1 will prefer the status quo; voter 2 will support the party proposing platform "R." Voter 3 will prefer "L" to "R," but finds herself quite far from either of the alternatives. She

may not vote at all, but if she does she will choose "L." Consequently, "L" wins the election 2 votes to 1.

Of course, it is important to understand how voters see candidates, or what they think they see. Some clear drawbacks in the model outlined in Chapters 2 through 4 are the restrictive assumptions on voters' information about candidates. In Chapter 5 we extend the model to account for voter uncertainty about candidate positions and for ambiguity in the positions that candidates and parties actually take. Chapter 6 addresses turnout: Under what circumstances will citizens choose not to vote at all? After all, voter 3 in Figure 1.1 may abstain, because the election has little to do with her. This changes everything, because the election is now decided only by those who choose to vote, rather than the entire affected population.

Where do proposals come from?

In the preceding section, we asked how voters choose, *given* the alternatives. Now, we want to know where the alternatives come from. As we saw in Figure 1.1, the distribution of voters determines which platform wins. Consequently, if the party wants to win, it will take the distribution of voter preferences into account. If most voters prefer a platform other than the status quo, then a party proposing such a platform will win the election.

Of course, the "status quo" party can also adjust its position. As long as such movements are possible, the parties will try to outmaneuver each other in a quest for more votes. In a two-party system, according to the classical model, the parties will converge toward the center of the distribution of voters.

What all this means is that platforms are generated *endogenously,* or chosen by the committee members themselves. Committee members make proposals or amend other members' proposals. Then everyone votes on the proposals. How might this work? Consider these extensions of the examples from the preceding section.

Example 1 (Committee voting). In committee voting, with free proposal power, members have an obvious strategy: Propose your own ideal point. That is, A would propose \$50, B \$75, and C (that wild man) would suggest \$250. Suppose the status quo budget is \$0 and that pro-

posals and amendments are voted in some fixed sequence. Then a new status quo budget would be established each time a majority voted for the change. How long could this go on? We could impose a time restriction, but then whichever budget happened to win *last* would be adopted. A time restriction seems arbitrary as a basis for choosing the best outcome, but how else can we ensure that a group of people come to a decision?

Interestingly, there is a predictable, stable end to the progression of new status quo budgets (at least, in this example). The final budget is the middle, or median, of the three members' ideal budgets: $75. If this budget is proposed, it beats any alternative, because two people will always prefer $75. A and B vote for $75 versus any *larger* budget. B and C vote for $75 versus any *smaller* budget. We expect to *move toward* $75 as a status quo budget, since B is free to make proposals. Once there, the decision process will exhibit no tendency to change. Consequently, $75 is the "position" adopted by the committee, as a group. We will discuss the process of selection of platforms in detail in Chapters 2–4.

Example 2 (Mass elections). "Proposals" evolve, often chaotically, in response to both ideas and threats. The positions of parties in mass elections may be more vague than the well-defined positions or proposals in committee votes. Nonetheless, parties are associated with positions. Consider again the French National Convention, convened in September 1790.

A majority of the members were "independent," with no formal commitments to any faction. These centrist deputies in the Plain were both numerous and uncommitted, so they determined the results of votes in the Convention. But the deputies in the Plain had no organization and relied on the (relatively) organized left and right parties to provide an agenda or sequence of alternatives to consider.

The Girondins, or party on the right, held to generally laissez-faire economic policies and served as spokesmen for provincial and business interests against the more radical and Paris-oriented Jacobins, the party on the left. The Jacobins became more radically populist in the two years after the Assembly was formed, and their main program was opposing the Girondins. The Girondins ran the government until the spring of 1793, when military defeats and popular unrest led to the purging of most of the Girondin leaders from the Convention.

In the wake of the Revolution of 1789, the first organized support for "issues" led to a focus on reforms of business practices and an opening of markets. The power of the Girondins came from their early organization around the elimination of feudal restraints on trade among cities and within districts of Paris. The Girondins became identified with a "federal" view of France, with much of their support coming from the provinces.

The Jacobins organized against Girondin control of the ministries and offices of government. The populist tendencies of the Jacobins helped them take advantage of general unrest, though they also seized on specific Girondin errors. Most important from our perspective, the Jacobins could *position* themselves so that the Girondins lost support with the independent deputies of the Plain. Consider this description, from Rudé:

> [The] economic situation was working to the advantage of the Mountain [Jacobins] and to the detriment of their adversaries. [The government's bond note] had fallen to only half its nominal value in February, and the price of food, after remaining comparatively stable in the preceding summer and autumn, had taken another sharp upward turn in the spring. . . . The riots that followed were, correspondingly, more intense and widespread than those of the year before. . . . But, though none of the Assembly's spokesmen was prepared to condone such activities, it was once more the Girondins, as the governing party and that most thoroughly committed to upholding the freedom of the market, that reaped all the disadvantages, while their opponents correspondingly benefited. (1964, p. 136)

As this excerpt makes clear, parties take positions in complex ways, and the metaphor of spatial position and movement is a simplification. Nonetheless, the metaphor is useful: People associate "left" and "right" with positions on real policies. The differences mattered for the way people expected to live their lives. The Girondins' laissez-faire economics became a terrible disadvantage because as the ruling party they were blamed for the poor performance of the economy. The Jacobins were free to take a position of opposition (in this case, at the center-left). As more voters and independent deputies rejected the Girondins, the Jacobins became ascendant.

Parties may have trouble "moving" in mass elections, once voters associate the name of a party with a set of positions on policies. This is particularly true if the party must govern in times of unrest. We might ask why party "L" and party "R" occupy the positions they do in Fig-

ure 1.1. The answer, however, is more likely to focus on history than on strategy.

The quality of outcomes

Models, for the sake of simplifying an unmanageably complex reality, often depict static situations. Consequently, describing change is a great challenge. Nonetheless, models describe situations where *some kind* of change is likely. Therefore, the outcome (not the many intermediate amendments) is the most important notion of "solutions" to problems of political choice.

We wouldn't have much of value, though, unless we can compare outcomes based on their *qualities* as solutions. After all, an outcome is only a solution in the sense that it answers the question "What do we do?" Some things to do are better than others, because the outcomes themselves seem more fair or result in higher welfare for more citizens.

Recall our still undecided Hun–Gats. They care about more than just deciding for the sake of deciding. If they make the wrong choice, they will die parched or be bludgeoned by fierce Raouli. Spatial theory is largely a positive theory, meaning that it considers questions of fact: *Certain patterns of preferences by voters, filtered through certain institutions for aggregating those preferences, result in predictions of particular outcomes.* But the theory must also help us analyze how good the outcomes are if the enterprise of analytical politics is to be of lasting value.

Charles Plott summarized some positive contributions of formal theory this way:

$$\text{Preferences} \times \text{Institutions} \Rightarrow \text{Outcomes}$$

We might think of "preferences" as what individual voters want. "Institutions" are the rules and practices (such as majority rule or a legislative committee system) through which collective decisions are made. Plott's (1991a) equation, sometimes called the *fundamental equation of politics,* illustrates two of the most important principles of formal political theory:

- If *preferences change,* outcomes can change, even if *institutions remain constant.*
- If *institutions change,* outcomes can change, even if *preferences remain constant.*

One might argue, of course, that preferences and institutions are often both changing. Well, yes. But keeping the two types, or sources, of change distinct analytically is fundamental to an understanding of politics. Further, as Plott's equation shows, changes of one type interact with changes of the other type. Relatively small changes in preferences, if multiplied by a change in the way those preferences are counted, may change policy outcomes dramatically.

Almost all political activity falls into one or both categories. A grassroots "get out the vote" campaign tries to change the set of preferences expressed. A constitutional amendment eliminating the Electoral College for electing U.S. presidents represents a change in the institutions of choice. The French Revolution saw the creation of several new governments and new constitutions (i.e., changes in institutions). These were followed by periods of "education" (attempts to change preferences). Groups unhappy with the status quo focus on modifying institutions and preferences as the mechanism for effecting change.

Political theory provides many of the basic criteria for evaluating outcomes in terms of their ethical qualities. Likewise, social choice theorists have pointed out that *democratic means* (widespread participation and shared power) and *democratic ends* (the existence of a coherent "will of the people") may be inconsistent.

Spatial theory has nothing directly to say about either of these questions, but spatial models do provide a forum where students of politics can confront the implications of their ideas. Stripped of rhetorical trappings, it becomes possible to evaluate claims about political theories at their most abstract level, where it is easier to tell if claims are true, false, or conditionally true.

Making judgments and expressing preferences

Before continuing, we should note that the Hun–Gats' problem is different from many problems we will analyze. To put it more generally, there are two forms that fundamental disagreements within societies can take.

(1) *Disagreement over values, or expressions of preference:* If different people have different goals, it is likely they will favor different means. The three people in our social club example earlier in this chapter had different ideas about the "best" budget for parties for

the group. The reason is probably that the three people disagreed about how to weigh parties as a component in all the club's activities. None of the members is confused about how much fun the parties will be, they just differ in the value they attach to the activity. This form of disagreement is not amenable to discussion or persuasion. As we shall see, the collective choice problems that this form of disagreement presents are very difficult.

(2) *Disagreements over judgments, or means:* Disagreement is also possible if all members of a group have the same goal, but are not perfectly informed about the consequences of particular choices. This is the position of the Hun–Gats: They all agree that what they want is a place to live where they can find water, hunt and gather food, and be safe from attack. If they were certain that going south means they will die of thirst, they wouldn't go. If going north means they will be clubbed by Raouli, for sure no one would advocate going north. But they don't know! Consequently, their problem is to discover the *collective wisdom* of the group, not merely add up their *preferences.*[3]

Our discussion of the political theory of Rousseau earlier in this chapter should be viewed from the perspective of making judgments. Rousseau's "general will" is the collective wisdom of the society. He had faith in the ability of voting mechanisms to discover and help carry out this collective wisdom in some circumstances. Throughout most of the rest of this book, we will treat preference aggregations and collective judgments as if they were the same.

The reason is that the politics of choice have a common structure, given either preferences or judgments. In closing this chapter, it is worth repeating that the goal of the analysis of politics is to answer three fundamental questions: (1) How do voters pick candidates to vote for? (2) How are policies or platforms chosen by governments? (3) How good are the results?

Formal theory, or theories that use mathematical models to represent politics, provide a mechanism for *analyzing* real politics by following up the implications of different "what if?" assumptions. Formal theory incorporating the spatial model of political competition provides an integrated framework within which to examine and test claims made by social scientists. Because the three fundamental questions can

be integrated, analytical political theory can be used to evaluate the truth of such claims. No less important, we can examine the value of potential reforms or alternative voting systems as policy prescriptions.

The reader may recall that our poor Hun–Gats still don't know what to do. They don't even know how to decide. In later chapters, we will give the best answers that are now available, but most of the basic truths we can offer are conditional, and there may be no single right answer as a matter of definition. Politics is not for the squeamish, and no one said this was going to be easy!

EXERCISES

1.1 The language of everyday politics is full of spatial allusions, including "left," "center," and "right." Look through a few days' worth of newspaper stories or several news magazines. See if you can find three or more examples of explicitly spatial language. Then summarize the differences between left and right that the articles seem to imply, using your own words. Are the terms used consistently in the examples you found?

1.2 "Normative" arguments are disputes over what *ought* to be. "Positive" arguments are claims over what *is.* Yet this distinction often means less than it seems to, because both kinds of arguments are often being made simultaneously. In the following text, identify *at least* two normative and two positive arguments:

> Justice is the first virtue of social institutions, as truth is of systems of thought. A theory however elegant and economical must be rejected or revised if it is untrue; likewise, laws and institutions no matter how efficient and well-arranged must be reformed or abolished if they are unjust. Each person possesses an inviolability founded on justice that even the welfare of society as a whole cannot override. For this reason justice denies that the loss of freedom for some is made right by a greater good shared by others. It does not allow that the sacrifices imposed on a few are outweighed by the larger sum of advantages enjoyed by many. Therefore in a just society the liberties of equal citizenship are taken as settled; the rights secured by justice are not subject to political bargaining or to the calculus of social interests. The only thing that permits us to acquiesce in an erroneous theory is the lack of a better one; analogously, an injustice is tolerable only when it is necessary to avoid an even greater injustice. Being first virtues of human activities, truth and justice are uncompromising. (Rawls, 1971, pp. 3–4)