CHAPTER

2

Politics and science

WE have now described the general nature of contemporary political science by contrasting its interests with those of political philosophy. But the result, while basic to the arguments presented in this book, is nevertheless a skeleton in need of flesh. Some of the latter will be provided in this chapter, where a second, more analytical approach is taken to answer the question, "What is the scope of political science?"

We have already described the nature of analytic propositions and analytic political philosophy, so the use of the word *analytic* here should not generate any problems. We will *analyze* "political science"; that is, we will examine and explicate its component parts, "political" and "science." Another way of looking at this activity is to say that we are interested in two aspects of the discipline or field of political science; its content or *what* is studied, and its structure or *how* the content is studied. The first is politics or "the political", and the second is "science." In examining the meaning assigned to these concepts by political scientists, we will be describing the scope or boundaries of political science. "Science" refers to the *methods* of political science, the general topics of parts two and three. But the methodology that a political scientist adopts, the basic assumptions he makes, will to some extent influence his image of his discipline. Therefore, "scope" and

"method" cannot be completely divorced. Methodology can and should be studied in its own right (as it is in most of this book), but in addition, it ought to be considered as an important influence on the scope of political science, for the methodology adopted will, to some extent, determine what political science can and cannot do.

POLITICS

Most of us use the word *politics* without providing an explicit definition, yet we can understand others when politics is the subject being discussed. When a political issue is being discussed, the discussants seldom begin by working out an acceptable definition of "political." This probably indicates that there is a basic common-sense understanding of the term. At this point, however, some people, especially those interested in studying politics in a more rigorous fashion, point out that to really gain knowledge of politics one has to formulate a more explicit definition; that is, one can't simply rely on common sense.

In a later section, we will examine in detail the differences between scientific and common-sensical knowledge and see how the former, while to a large extent based on the latter, nevertheless goes beyond it in its ability to describe and explain the world. One might argue that perhaps the most important factor leading to the development of knowledge in a field of study is agreement among its members about the content of that field.[1] In other words, you can't expect knowledge of politics to develop and accumulate unless political scientists share a conception of what it is they are studying. In the context of our present discussion, this means a fairly clear-cut definition of politics.

One of the staunchest defenders of a clear definition of politics is E. E. Schattschneider. "There is something strange about the feeling of scholars that a definition is not necessary. Inevitably there is a lack of focus in the discipline because it is difficult to see things that are undefined. People who cannot define the object of their studies do not know what they are looking for, and if they do not know what they are looking for, how can they tell

[1] See David B. Truman, "Disillusion and Regeneration: The Quest for a Discipline," *American Political Science Review*, 59, no. 4 (December 1965), pp. 865–73.

when they have found it?[2] This leads Schattschneider to call political science "a mountain of data surrounding a vacuum."[3]

The next task, then, is to examine several definitions or types of definition of politics that have been given by political scientists. However, in doing so we should keep in mind an alternative position that answers Schattschneider by claiming that it is a waste of time to attempt an explicit definition of politics. It claims that it is more sensible to simply plunge in and study whatever the student of politics finds interesting and significant. This position holds that the definition of politics, or scope of political science, is contextually determined. The argument is that whatever political scientists say is politics, is politics, and one restricts the growth of political science if he prematurely advocates a definition. Thus, the outer limits of political science can be determined only by listing all the topics which interest political scientists at a given time.

This seems to be an important tradition within political science. In their analysis of the historical development of American political science, Albert Somit and Joseph Tannenhaus point out that the discipline has never had a clear conception of its content. This has often bewildered observers. For instance, the English historian Morse Stephens, after teching in the United States for two years, reported in 1896 that "he had not been able to find anyone who could tell him precisely what political science was."[4]

Despite this tradition of disinterest in the job of definition, many definitions of politics have been given by political philosophers and political scientists. As a matter of fact, their diversity is no doubt another reason for the bewilderment experienced by observers of political science. While there has been a wide range of definitions, most of them can be classified as one of two types. Some identify politics with government, legal government, or the state, while others revolve around the notions of power, authority, and/or conflict. After examining the advantages and disadvantages of each, we will consider a contemporary attempt to formulate a more useful definition that many people believe overcomes some of these disadvantages.

[2] E. E. Schattschneider, *Two Hundred Million Americans in Search of a Government* (New York: Holt, Rinehart & Winston, 1969), p. 8.

[3] Ibid.

[4] Quoted in Albert Somit and Joseph Tannenhaus, *The Development of American Political Science: From Burgess to Behavioralism* (Boston: Allyn & Bacon, 1967), p. 24.

Government

To the average citizen, politics and government are synonymous. It seems natural to identify politics with what occurs in Congress, the state legislature, or the mayor's office. Many political scientists take the same position but articulate it in a more sophisticated manner. Political scientist Alfred de Grazia says that politics, or the political, "includes the events that happen around the decision-making centers of government."[5] Charles Hyneman is more specific in claiming that most political scientists have assumed that *legal* government is the subject matter of their discipline. "The central point of attention in American political science . . . is that part of the affairs of the state which centers in government, and that kind or part of government which speaks through law."[6] There are two versions of this definition, a weaker and a stronger. The former speaks only about government; the latter adds the concept "legal." As we will see in a moment, they are the same. Thus, to most political scientists, legal government is internally redundant.

If a political scientist identifies politics with government or legal government, it is incumbent upon him to let us know what he means by government. Here we, as students of politics interested in the meaning of this widely used term, are faced with a problem that results in part from its wide usage. That is, because of the number of definitions, it is difficult to decide what is being referred to. However, if one is mainly interested, as we are, in discovering a basic or core meaning of government, it becomes clear that the problem is more apparent than real. After sorting through the definitions, one realizes that as it is used by most political scientists, government means something like "the legally based institutions of a society which make legally binding decisions." If this is an accurate statement, then Hyneman's definition is more specific than de Grazia's. Legal government is redundant because legality defines government; it is the characteristic that distinguishes government from other institutions in society. But whether we say government or legal government, the political scientist who adopts this type of definition is focusing his attention on formal institutions of a certain kind.

We conclude that the definition that equates politics with government has

[5] Alfred de Grazia, *Political Behavior* (New York: Free Press, 1965), p. 24.

[6] Charles Hyneman, *The Study of Politics* (Urbana: University of Illinois Press, 1956), p. 26.

a commonsensical basis. However, many political scientists would probably warn us to be wary of its commonsensical appeal, for they see in it serious limitations. Perhaps the most significant is its limited applicability. In emphasizing government, such critics argue, the political scientist must overlook much that should and that often does interest him. In other words, this definition is unrealistically restrictive. Take, for instance, a political scientist interested in studying the politics of an African nation. He no doubt spends much of this time examining tribal societies where no governmental institutions or at best minimal governmental institutions exist. Yet he discovers that the tribal chief and elders are making basic decisions for the community. Because the decisions are not made by identifiable legal institutions, such as a congress or a parliament, in other words by a government or the state, are they to be classified as nonpolitical and therefore beyond the scope of political scientists?

A large number of political scientiss would answer that it is a sign of narrow-mindedness, a dangerous trait for a researcher, to use a type of political institution as the basis for a definition of politics. Perhaps the heart of the difficulty, as perceived by these critics, is a failure to look behind governmental institutions for the element that makes them all political. The emphasis should be placed, not on institutions, but, in David Easton's words, on "a kind of activity that may express itself through a variety of institutions."[7]

Power, authority, and conflict

Political scientists who make such criticisms of the "governmental" definition of politics and develop them beyond the negative stage usually end on a positive note, formulating an alternative definition that equates politics with power, authority, or conflict. Any of these could be the activity mentioned by Easton. Let us quote William Bluhm, a political scientist who provides a rather elaborate definition: "Reduced to its universal elements, then, politics is a social process characterized by activity involving rivalry and cooperation in the exercise of power, and culminating in the making of

[7] David Easton, *The Political System* (New York: Alfred A. Knopf, 1960), p. 113.

decisions for a group."[8] The appeal of this definition flows out of its apparent flexibility or wide scope. Politics is found wherever power relationships or conflict situations exist, which means that the political scientist can legitimately (i.e., as a political scientist) study the politics of a labor union, corporation, or African tribe, as well as what goes on in a legislature or administrative agency.

The emphasis is placed upon a type of activity or behavior rather than a particular kind of institution. Implicit in this definition is a refusal to prematurely answer the question, "In what kinds of institutions is politics the most likely to occur?" Or the more basic question, "Does politics have to be institutionalized in the first place?"

Underlying our comparative analysis of definitions is the obvious fact that a definition of politics based on government is simply a version of one based on power in general. The political scientist who adopts the first type assumes that only one kind of power is political and therefore relevant to his discipline, namely, power exercised within and by governmental institutions. Thus, all definitions of politics are based upon notions of power and/or conflict. Consider, for instance, the definition of politics proposed by the German sociologist Max Weber. "Hence, 'politics' for us means striving to share power or striving to influence the distribution of power, either among states or among groups within a state." Power is crucial but apparently only when it is exercised by or around the state or government. This realization does not, however, make our categorization of definitions less significant. The purpose of the present chapter is not to formulate the *real* definition of politics (as we will see later, there is no such thing as a real definition), but rather to discover how political scientists use the term. And, as a matter of fact, those who limit politics to governmental power concentrate on the governmental rather than the power definition. Thus, as the concepts are used in political science, there is a practical difference between a definition based on government and one based on power. As Chapter 3 will demonstrate, this difference can influence the research orientations of political scientists. Just as we assumed that it was the responsibility of those using the first definition to define "government," it seems reasonable to expect that when the second is employed, the meaning of "power" will be specified.

[8] William Bluhm, *Theories of the Political System* (Englewood Cliffs, N.J.: Prentice-Hall, 1965), p. 5.

Once again the familiar problem of a diverse and ambiguous collection of definitions, seemingly defying analysis, faces us. Yet, once again, at the bottom of this agglomeration is a common-sense core that gives us a rough notion of what power means to those adopting this definition of politics. Running through all concepts of conflict and power is the idea of people or groups competing for scarce values, with some of them influencing the behavior of others and/or the outcomes of decisions. In the second and third parts of this book, power will be examined in much greater detail and it will be obvious that we have provided an oversimplified, but nevertheless accurate, definition of it.

Despite the growing appeal of this more liberal definition of politics, it has not gone without criticism. To some political scientists, especially those who feel the need for a discipline with clear-cut boundaries, it seems that the equating of politics and power destroys the possibility of specifying such boundaries. If the political scientist can legitimately study all forms of power and conflict (in the UAW, General Motors, or the local Kiwanis Club), then what is distinctive about political science? The sociologist does the same thing. Does this mean that there are no significant differences between sociology and political science? One answer is "yes"; another, "there is no reason to answer the question."

We will consider the nature and implications of these responses in a moment. But first, let us return to a consideration of the reply that claims that the content of political science is distinctive and that the discipline has boundaries that are more restrictive than those provided by "any power or conflict situation." As we have seen, one set of boundaries is equivalent to the institutions of legal government. However, some political scientists have formulated an alternative definition of politics, an in-between position that is neither as restrictive as the government type nor as broad as the power variety.

The authoritative allocation of values

Such in-between definitions are usually functional in nature. That is, they define politics in terms of the functions it supposedly performs for society. Over the centuries, political thinkers have identified numerous functions: maintaining order, resolving conflict, achieving justice, and providing the

good life. In each case, politics is viewed as an activity; it probably involves the exercise of power, but more importantly it is an activity that serves a purpose (or purposes). Thus, to Thomas Hobbes, politics' only function is to maintain order among naturally egoistic and competitive human beings. If the function is not adequately performed, it is back to the State of Nature, where there is no morality, no law, and no politics.

Perhaps the most widely known and used alternative of this sort has been provided by David Easton. His identification of the political system with "the authoritative allocation of values for a society"[9] has provided many political scientists with a useful guideline for delimiting the content of political science. We have already quoted Easton's plea for an emphasis on political *activity* rather than *institutions*. The "authoritative allocation of values" is, Easton argues, the kind of activity we should be interested in. The first assumption is that in every society values are desired; that is, people have different interests or objectives and these must be allocated or distributed by someone or something. In a sense, this is a power and conflict situation. But saying that every society allocates values authoritatively does ot prejudge the question, "How is this done?" In the United States, we would expect legal governmental institutions to make such decisions, while in an African tribe, the activity would probably take place much more informally, without the elaborate institutions. Thus, every society has a political system, defined as that which authoritatively allocates values; but this system takes different forms.

The first conclusion we can draw is that the political scientist adopting Easton's definition is not limited to the study of legal government. This is significant for two reasons. First, it means that the U.S. political scientist is able to study other political systems or cultures objectively, without preconceived notions about political structures and behavior. Secondly, when studying his own political system, the political scientist is not limited to the formal institutions of government, such as Congress, but can include interest groups, political parties, and other less-obvious influences on authoritative decisions.

On the other hand, Easton's definition is not of the "anything goes" variety. He is not saying that the political system includes (is coextensive with) all power or decision-making situations. Only those decisions that are

[9] Easton, *The Political System*, pp. 129ff.

authoritative for the society are relevant to the political scientist. According to Easton, "A policy is authorative when the people to whom it is intended to apply or who are affected by it consider that they must or ought to obey it."[10] In other words, it is considered binding. However, not every authoritative decision is made within the political system. What, for instance, of those decisions that members of a Kiwanis Club accept as binding? How do they differ from acts of Congress? The answer is, of course, found in the qualifier, "for society." From the class of all authoritative decisions, the political scientist, following Easton's definition, selects only those definitions that apply to *all* members of society (although only a few might be affected).

If one thinks about it, there isn't a great deal of difference between Eaton's definition and the one based on power. Both assume a political world of scarce values and insatiable appetites. The basic question of politics then becomes, "How are values distributed?" or, in Harold Lasswell's classic phraseology, "Who Gets What, When, How?" The difference is mainly one of emphasis. Power theorists, such as Lasswell, emphasize the role of power in the distribution process, while Easton examines the relationship between what goes into a system (demands) and what comes out (decisions). Thus, Easton focuses his attention on the entire political system: Lasswell focuses on those who have the greatest impact on the distribution process, namely those with power, the elite. From different perspectives, each political scientist has come to a similar conception of what politics is all about.

The argument for an Eastonian-type definition of politics is based on the desirability of a compromise position that is neither too restrictive nor overly broad. Such a definition, based on the function supposedly performed by politics, it is claimed, is more useful for political scientists. However, this kind of definition does not go without criticism; in fact, to many political scientists, its advantages are only apparent. Instead of one word *(politics)*, several words *(authoritative, allocation, values, and society)* have to be defined. Therefore, anything that may be gained from an explicit definition of politics is canceled out because of the addition of several complex concepts. For instance, what does it mean to make a decision for society, and how does this differ from one that is not made for society? To many political scientists, any elaborate attempt to answer this question is a waste of time.

[10] Ibid., p. 132.

Why define politics?

Earlier, an alternative approach was mentioned that questioned the usefulness of any attempt to define politics, on the grounds that since there is no final solution to a problem of definition (as we will see in Chapter 5), and since there are so many existing definitions of politics, the political scientist's time could be better spent in other activities. Although rarely articulated (by its very nature), this position has long been a significant one in U.S. political science. For instance, in 1904, a leading political scientist wrote that, "Such an attempt [to define politics] is not only dangerous but even if successfully made, it is not in my opinion sufficiently fruitful of practical results to justify the expenditure of thought and time necessary to secure the desired end."[11] Our point is that many, if not most, contemporary political scientists agree with this statement. Thus, rather than concern themselves with semantic questions, they "plunge in" and either do their research without worrying about the scope or boundaries of their discipline or allow the results of their work to set the boundaries.

There is another in-between approach to the problem of defining politics. It is based on the linguistic theories of philosopher Ludwig Wittgenstein.[12] The basic point is that it is perhaps a mistake to assume that words such as politics have a single definition. Instead, it is more useful to view politics as a *cluster* concept, a concept that is associated with many properties, with no one property essential to its definition.[13] This suggests that the particular definition that one selects will reflect one's values, beliefs, and perceptions.

Let us reiterate that the primary objective of this discussion is not to arrive at "the" or even "a" definition of politics. If the only conclusion drawn is that there is no such definition, then the discussion has been partially successful. But in addition, it is hoped that in becoming familiar with several of the more popular interpretations of politics or political science, the student will be able to better understand the literature of his discipline.

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[11] Frank J. Goodnow, "The Work of the American Political Science Association," *Proceedings*, I (1904), p. 35; quoted in Somit and Tannenhaus, *Development of American Political Science*, p. 65.

[12] Ludwig Wittgenstein, *Philosophical Investigations* (New York: Macmillan, 1953).

[13] William Connolly, *The Terms of Political Discourse* (Lexington, Mass.: D. C. Heath, 1974).

Perhaps we can be more specific. Making it clear once again that no best definition of politics is being advocated, there nevertheless seems to be a recognizable common-sensical core meaning of the political scientist's subject matter. It is simply that politics has something to do with the use of power to reconcile conflicts over the distribution of goods and values. Typically, this is done through the institutions of government. Thus, the several definitions we have considered are not in opposition to each other. Rather, they emphasize different aspects of the same basic process, and so it follows that most political scientists are playing the same game. We have already seen that there are legitimate objections to any proposed definition of politics; someone will always be dissatisfied. In addition, as the next chapter will demonstrate, many political scientists reject as unrealistic and overly restrictive the notion of boundaries between the social sciences. If the political scientist and sociologist often seem to be studying the same thing, it is because of the nature of the work. Perhaps it would be wise to work out an efficient division of labor, but there is nothing sinister about the overlap. No discipline is being imperialistic. This attitude can result in the familiar conclusion that it is wrong to prematurely *define* the scope of political science. Political scientists common-sensically understand the label that has been assigned them. Unification of the discipline must come as a natural development from within, that is, through the discovery of facts that have relevance for all those who call themselves political scientists, rather than from the imposition of an elaborate definition that arbitrarily classifies some things as political and others as nonpolitical.

SCIENCE

What does the "science" in "political science" mean? A survey of the discipline's literature uncovers several answers. However, a close examination indicates that these answers are different in degree rather than in kind. Each interpretation is really a simplified version of a set of scientific principles that ultimately provides the basis for all scientific study. This is the model of science that will be the most closely analyzed here, for it is also the foundation that a science of politics must rest upon.

Preliminary considerations

The most primitive and least fruitful interpretation uses science in an honorific sense. Just as a nation in the contemporary world is judged good if it is democratic, a political scientist's status rises if he is scientific. Therefore, nations call themselves democratic, and political scientists call their work scientific, with public relations in mind. Science becomes a label to be used but not defined. If this were all that science involved, then there would be no point in continuing. However, there is more. We will survey in ascending order of sophistication several acceptable interpretations of the word *science* in the term *political science*.

The first of these interpretations simply equates science with *serious study*. Almost by definition, then, all those who study politics professionally become scientists, for at the very heart of their profession lies a commitment to study political phenomena more seriously than, for instance, the man on the street or even a journalist. While this is a step forward, it doesn't tell us what we really want to know: namely, "What distinguishes scientific from unscientific study?"

A familiar reply is that to be scientific is to be systematic or rigorous. Even when these adjectives are left undefined, as they often are, one at least senses what science is all about. Some rough operational guideline is provided to tell us in any given instance where the scientific ends and the unscientific begins. However, this kind of guideline is not going to take us far unless it is given more substance through explicit definitions of "rigorous" and "systematic." As we just noted, this is rarely done. When it is done, the result is usually an explication of "scientific," for as they are commonly used, rigorous and systematic are synonyms of our key word. Science has not been defined, it has simply been given a new name. Thus, while we know a little more now, we are still treading water rather than making headway. A political scientist who believes his discipline is scientific because it studies political phenomena systematically is right. But he hasn't said enough. What does it mean to be systematic or scientific? What are the distinguishing characteristics of a systematic or scientific discipline?

The answer most often given or assumed is that a scientific discipline is empirical. An empirical proposition, let us recall, is one that refers to and is based upon the world of experience and observation. Since the political scientist, as a scientist, is interested in one aspect of the world around him,

he must make sure his descriptions of politics are empirical. Thus, according to this interpretation of science, the political scientist lives up to his appellation if he deals only with the *facts*. *Naive empiricism* is the appropriate label for this. We are all probably familiar with its consequences—the piling of fact upon fact, exhaustive descriptions of a single governmental institution, or detailed narratives of a particular political decision. The facts speak for themselves and usually there is only a limited attempt to organize and/or explain them. The naiveté of this position should not be exaggerated, however, for it seems clear, no matter how sophisticated one's conception of science, that science begins with empiricism. One must look at the world if he is to explain the world.

Let us summarize this section's main points. One significant interpretation equates the term *scientific* with systematic or rigorous. Another recognizes the empirical basis of science. These two positions are not mutually exclusive. In fact, the political scientist who adopts one probably assumes the other, so that the composite picture of science which emerges is a kind of ordered study that stays close to the facts (observation). Charles Hyneman has described political science in these terms: "the political scientist is pursuing scientific method if he makes a conscientious, careful, systematic effort to find out what actually exists and goes on."[14] We might characterize this orientation, which links systematic and empirical, as a liberal version of the set of scientific principles that have already been identified as fundamental to any science. A description of these principles provides a more sophisticated notion of science.

However, some political scientists accepting the more liberal interpretation would probably argue that they are principles of only the more highly developed physical sciences such as physics and chemistry and are not realistically applicable to political science or any social science. Therefore, the political scientist can be empirical and systematic only at a general level. This point of view raises a host of issues that will be handled at appropriate times throughout this book. In the present context, only one reply is necessary. If all notions of science are derived from this set of basic principles, there is no opposition between it and the liberal interpretation of science. Only a fool could fail to see the more highly developed nature of the natural sciences relative to the social sciences. However, this superiority is not

[14] Hyneman, *The Study of Politics*, p. 78.

derived from the acceptance of a different set of scientific principles. It has been achieved because of a clearer understanding of and more effective building upon these principles. The implications are that every science, natural or social, is based upon a common set of assumptions and this set is a more complete version of what has been called here the liberal interpretation of the "science" in "political science."

The assumptions of science

Let's run through these assumptions and principles, realizing that a more thorough discussion will have to wait until Part 2. At this point, we are mainly interested in a reasonably accurate sketch of an existing or potential science of politics based on the conception of science held by most practitioners and philosophers of science (this includes a growing number of political scientists).[15] There are two ways to approach science. On the one hand, it can be viewed as " a body of knowledge"; on the other, as "a method of obtaining it." According to the first approach, science or what is scientific includes the laws, facts, and so on of physics, biology, economics, and so forth. According to the second method, science is a particular set of principles that tells us to obtain these facts. We will take the second approach, for what interests us are the methodological foundations of political science.

Remember that science is being viewed as the second aspect of political science—*how* political scientists study political phenomena. Thus, a discipline can be judged scientific if it makes certain assumptions and follows certain principles, even though the knowledge it has produced is not impressive. It should be clear that there is no opposition between the two approaches. The adjective *scientific* can be applied both to the principles *(scientific method)* and the facts obtained *(scientific knowledge)*. We emphasize the first here because it is logically prior—scientific knowledge is obtained only by following scientific method.

A further distinction can be made between two ways of looking at scientific method. One is exemplified in the work of political theorist Arnold Brecht. He lists 11 "scientific actions" or "steps of scientific procedure," beginning with observation, which together make up scientific method.[16] The other approach is to sort out the basic assumptions and principles, rather than operations or procedures, which scientists make and follow. This becomes a more fundamental analysis. But let us make it clear that these are simply two ways of looking at the same thing.

"Nothing in the universe just happens" is a simple way of stating the scientist's basic assumption. It is usually labeled "determinism" or the "principle of universal causation."[17] Most of us believe that there are reasons for everyday events or situations. This is the commonsensical basis of the scientist's assumption of determinism or causality. The scientist says, if we want knowledge of the world, we have to assume that the world is coherent, that there are certain recurring relationships which can be expressed in such propositions as "If *A* occurs, *B* occurs." This is a causal relationship, and it is what the scientist is searching for. If scientific knowledge is knowledge of such relationships, then the principle of determinism, or something like it, is a necessary starting point. However, it must be emphasized that the principle is not itself a scientific law that has been or can be substantiated but instead is an assumption which directs the scientist's work. As one philosopher has said, "It expresses a resolve, 'Let us find uniformities in the world.' "[18] This is why he calls it a "leading principle." It can be said then, that a science of politics begins with the assumption that no political phenomenon just happens. This enables the political scientist to carry out his main task, namely, to account for the phenomena which interest him—to show why they happen or exist.

The second characteristic of science is one we have already discussed. If the world is what we are interested in, then it is the world we must examine. Describing and explaining politics implies speaking about and basing our explanations on what has been observed (directly or indirectly) about politics. This means that every scientific statement is based upon an observation. The proposition, "There are 30 desks in this classroom," can be verified by counting the desks. Of course, matters are much more complicated in

[15] Among recent books on philosophy of science by political scientists are George Graham, *Methodological Foundations for Political Analysis* (Waltham, Mass.: Xerox College Publishing, 1971); and James L. Payne, *Foundations of Empirical Political Analysis* (Chicago: Markham Publishing Co., 1973).

[16] Arnold Brecht, *Political Theory: The Foundations of Twentieth-Century Political Thought* (Princeton, N.J.: Princeton University Press, 1959), pp. 28–29.

[17] For a clear discussion of the principle, see John Hospers, *An Introduction to Philosophical Analysis* (Englewood Cliffs, N.J.: Prentice-Hall, 1953), chapter 4.

[18] Ibid., p. 261.

scientific research, but the principle is the same. In studying voting behavior, for instance, we have to do much more than count a few votes. But observing voters' attitudes (responses to questions) and measuring social status (income and occupation), to name only some of the factors that might interest us, are empirical for the same reason that counting desks is.

It is often said that to be scientific is to be *objective*, as opposed to *subjective*. The scientist keeps separate his professional and personal judgments. In the latter he is subjective, which means that values or normative considerations often influence his decisions. But when he is scientific, such influences must be excluded; the scientist "tells it as it is." Perhaps *objective* is, in many ways, a synonym of *empirical*. To base your judgments on observation is to be empirical, and if your judgments are empirical in this sense, you are being objective. Another way of saying this is to call science "value-free." Recalling the discussion of the first chapter, science deals with *is*, not *ought* questions; with empirical, not normative questions. Thus, we see the relationship between *scientific* and *objective*.

Many students of scientific method, however, prefer an alternate term to *objective* when they describe science. *Intersubjective* seems more descriptive of how scientists actually operate, for it is not so demanding as *objective*, and it doesn't conjure up the images of ultimate reality and the completely unbiased scientist that *objective* seems to. Most scientists view perfect objectivity as unrealizable in the real world. Every scientist is human with all the human characteristics—emotions, biases, and value commitments. A professional scientist will be able to shake himself free from many, hopefully most, but probably not all, of these influences. Because he is a scientist, he is committed to being as objective as possible, but as a human being he will be human. The point of intersubjectivity is that no scientist has to be perfectly objective. Biases can be identified and weeded out.

As Arnold Brecht has pointed out, to be intersubjective, knowledge has to be transmissible. By this he means, "A type of knowledge that can be transmitted from any person who has such knowledge to any other person who does not have it but who can grasp the meaning of the symbols (words, signs) used in communication and perform the operations, if any, described in these communications."[19] Thus, if one scientist performs an experiment, a second scientist can repeat the experiment and compare the two sets of

[19] Brecht, *Political Theory*, p. 114.

findings. If the procedures are correct, then we would expect the results to be similar; although because of changing conditions and new factors, they might differ. This is scientifically acceptable. What is important is that one scientist can understand and evaluate the methods of others and can carry out similar observations to test the validity of scientific facts. This is the significance of intersubjectivity. The requirement is simply that all proposed scientific facts be open to inspection and the procedures used to arrive at these facts be clearly enough described so as to be repeatable. Thus, scientific knowledge is "transmissible" because science is a social activity in that it takes several scientists, analyzing and criticizing each other, to produce more reliable knowledge. When we contrast a scientific proposition such as, "Most businessmen vote Republican," with a metaphysical one, "Spirits motivate businessmen," the significance of the former's intersubjective nature is evident.

There is more to science than observation. We all look at the world and draw conclusions, yet this does not make us scientists. While science begins with common sense (everyone who looks sees the same chairs or analyzes the same attitude questionnaires), scientific knowledge is not the same as commonsensical knowledge. It is here that the systematic nature of science becomes relevant. The scientist takes his observations and attempts to classify and analyze them. His first objective is to formulate useful *empirical concepts* that organize the phenomena that interest him. Then, starting with the assumption of determinism, he attempts to find relationships between these concepts. If successful, he discovers a scientific *law* or *generalization*. Further systematization of empirical knowledge is achieved by the construction of *theories*, which are collections of logically related generalizations. Finally, the scientist uses his laws and theories to *explain* events and situations that have occurred or exist and to *predict* future happenings. It can thus be said that the scientist's attempts to systematize are all leading to this ultimate objective, to explain and predict—to show *why* things were, are, or will be. A glance at this book's table of contents will indicate that its second part has just been outlined. We have, in general terms, mentioned the basic elements of science and, therefore, of a science of politics—concepts, laws, theories, explanation, and prediction. How these elements are developed and used gives science its particular character. In organizing, in looking for relationships, in trying to explain and predict, the scientist moves beyond the commonsensical kind of knowledge that most of us accept as sound.

Finally, a characteristic that science does not have should be mentioned. We have already implied it several times. While science deals with the world of observation, it does not produce *necessary* truth. As stated in Chapter 1, only analytic propositions can be necessarily true. Empirical propositions are by their very nature contingent. This is why we said that many scientists shy away from the concept "truth"; it seems to imply necessity. It may seem strange and a bit disconcerting in this uncertain world to say that not even scientific laws are absolutely true. Once one stops and thinks about it, it should not seem strange for, to be considered scientific, a statement must be testable; if it is testable, it has to be potentially false. To be empirical, and therefore scientific, a proposition has to be disprovable. If there is no way to show that it is false, if no amount of observational evidence can put its claim to question, then it cannot be called scientific. Thus, if a scientific proposition is always open to disconfirmation, it cannot be necessarily true.

CONCLUSION: SCIENCE AND POLITICAL SCIENCE

This is an outline of science as it is viewed by scientists and philosophers. It is the set of principles that more and more political scientists are accepting as the basis of their own work. Our analysis, of course, assumes that the "science" in "political science" is based upon these principles. The other, more liberal, interpretations of science are acceptable, for they are simply less-complete versions.

However, it would not be fair to leave the impression that all political scientists accept this interpretation of political *science*. Some reject the notion that politics can ever be studied *scientifically*. Thus, while they probably accept the previously discussed model of science (or one of its derivatives), they deny that political science can ever meet its requirements. Instead, the political scientist must rely on nonscientific methods to study politics since no reliable knowledge of the sort found in physics will ever be produced in political science. The result is usually a political science more closely related to literature and philosophy than the social sciences. In Chapter 4, we will consider some of the specific arguments these political scientists present in their attempts to prove that political science can never be scientific. We will attempt to refute these arguments and indirectly demonstrate the possibility of a science of politics.