The Process of Policy Analysis

Policy analysis is a problem-solving discipline that draws on methodologies and substantive findings of the social sciences, social professions, and political philosophy. There are several ways to define policy analysis. The definition used here is as follows: Policy analysis is a process of multidisciplinary inquiry designed to create, critically assess, and communicate information that is useful in understanding and improving policies.

THE PROCESS OF POLICY INQUIRY

The methodology of policy analysis is a process of inquiry leading to the discovery of solutions to practical problems. The word inquiry refers to a process of probing, investigating, or searching for solutions; it does not refer to solutions that have been "proven" by means of purely objective, infallible, value-free analysis that is independent of the values, interests, and beliefs of analysts and those who reward them. Although policy analysis is based on scientific methods, it also rests on processes of art, craft, and persuasion. Another way of saying this is that policy analysis is based on a combination of ordinary, commonsense knowing and specialized forms of inquiry practiced by the social sciences and social professions, including public administration and planning. Because policy analysis involves the operations of the human understanding in solving practical problems, it is problem oriented. It is this problem orientation, more than any other feature, that distinguishes policy analysis from disciplines that prize knowledge for its own sake.

Knowledge from multiple disciplines and professions is usually more effective in responding to real-world problems than is knowledge from single disciplines and professions. Real-world problems come in complex bundles that are political, social, economic, administrative, legal, ethical, and more. They do not arrive in separate packages addressed to public scientists, economists, or public administrators—to name but three policy-relevant disciplines and professions. Multidisciplinary policy analysis appears to provide the best fit with the complex and many-faceted world of public policy making.

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4 On trade-offs between scientific and professional knowledge, on one hand, and ordinary, experiential knowledge on the other, see Charles E. Lindblom and David R. Cohen,uable Knowledge: Social Science and Social Problem Solving (New Haven, CT: Yale University Press, 1979).


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The Process of Policy Analysis

MULTIDISCIPLINARY POLICY ANALYSIS

Policy analysis is partly descriptive because it relies on the social sciences to make and justify claims about the causes and consequences of policies. But it is also normative. In order to evaluate claims about the expected utility and moral worth of policies, it draws on economics and decision analysis, as well as ethics and other branches of social and political philosophy. This normative aspect of policy analysis is necessary because it involves the choice of desired consequences (ends) and preferred courses of action (means), a process that is based on ethical reasoning. The choice of ends and means requires continuing trade-offs among competing values as equity, efficiency, security, liberty, and democracy. The importance of ethical reasoning in policy analysis is well stated by a former undersecretary in the Department of Housing and Urban Development: "Our problem is not to do what is right. Our problem is to know what is right."7

Policy-Relevant Information

Policy analysis addresses five types of questions:

- What is the problem for which a solution is sought?
- What course of action should be chosen to solve the problem?
- What are the outcomes of choosing that course of action?
- Does achieving these outcomes help solve the problem?
- What future outcomes can be expected if other courses of action are chosen?

Answers to these questions require five types of policy-relevant information, or what we may call policy-informational components. These components represent information about policy problems, policy performance, expected policy outcomes, preferred policies, and observed policy outcomes. These five types of information are shown as shaded rectangles in Figure 1.1.8

A policy problem is an unrealized value or opportunity for improvement attainable through public action.9 Knowledge of what problem to solve requires information about a problem’s antecedent conditions (e.g., school dropout as an antecedent condition of unemployment), as well as information about valued ends (e.g., safe schools or a living wage) whose achievement may lead to the problem’s

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8 Robert C. Wood, "Foreword" to The Study of Policy Formation, p. v. Wood is quoting President Lyndon Johnson.

9 The framework was suggested by Walter Wallace, The Logic of Science in Sociology (Chicago: Aldine Books, 1971). The framework has undergone several transformations since the first edition of this book.

A preferred policy is a potential solution to a problem. To select a preferred policy, it is necessary to have information about expected policy outcomes. Information about a preferred policy also depends on judgments about the value or utility of expected outcomes. Another way to say this is that policy recommendations are based on factual as well as value premises. Facts alone—for example, the presumed fact that one policy is more efficient than another—do not justify the selection of a preferred policy.

An observed policy outcome is a past or present consequence of implementing a preferred policy. It is sometimes unclear whether an outcome is actually an effect of a policy; because some effects are not policy outcomes, many outcomes are the result of other, extra-policy factors. It is important to recognize that the consequences of action cannot be fully stated or known in advance, and many consequences are unanticipated as well as unintended. Fortunately, information about such consequences is not only produced ex ante (before policies are implemented); it is also produced ex post (after policies are implemented).

Policy performance is the degree to which an observed policy outcome contributes to the attainment of the unrealized values or opportunities for improvement that define a problem. In practice, policy performance is always incomplete, because problems are rarely “solved” they are most often resolved, reformulated, or even “unsolved.” To know whether a problem has been solved, resolved, reformulated, or unsolved requires information about observed policy outcomes, as well as information about the extent to which these outcomes contribute to the attainment of the unrealized values or opportunities for improvement that originally gave rise to a problem. In turn, information about policy performance provides a basis for forecasting expected policy outcomes, as can be seen in Figure 1.1.

### Policy-Informational Transformations

The five types of policy-relevant information are interdependent. The arrows connecting each pair of components represent changes of one type of information into another so that the creation of information at any point depends on information produced in an adjacent phase. Information about policy performance, for example, depends on the transformation of prior information about observed policy outcomes. The reason for this dependence is that any assessment of how well a policy achieves its objectives assumes that we already have reliable information about the outcomes of that policy. The other types of policy-relevant information are dependent in the same way.

Information about policy problems is a special case because it affects and is affected by the remaining four informational components. The reason for this interdependency is that information about policy problems already contains information about one or more of the other components. Accordingly, problems contain

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information about one or more of the following: preferred policies, observed and expected outcomes, and the values of these outcomes. Problems usually include some problem elements and exclude others; and what is included or excluded affects which policies are preferable, which outcomes should and should not be investigated, which values are appropriate and inappropriate as criteria of policy performance, and which potentially predictable outcomes warrant or do not warrant attention. A major and often fatal error of policy analysis is a Type III error-solving the wrong problem.  

Policy-Analytic Methods

The five types of information are produced and transformed by using methods of policy analysis. These methods include description, prediction, appraisal, prescription, and definition. All methods involve judgments of different kinds: judgments to accept or reject an explanation, to affirm or dispute the rightness of an action, to select or not select a policy, to accept or reject a prediction, to define a problem in one way rather than another. In policy analysis, these procedures have been given special names: monitoring, forecasting, evaluation, recommendation, and problem structuring.  

- Monitoring (description) produces information about observed policy outcomes.
- Forecasting (prediction) produces information about expected policy outcomes.
- Evaluation (appraisal) produces information about the value of observed and expected policy outcomes.
- Recommendation (prescription) produces information about preferred policies.
- Problem structuring (definition) produces information about what problem to solve.

The last method, problem structuring, is about the other methods. For this reason, it is a metatheatem ("method of methods"). In the course of structuring a problem, analysts usually experience a “troubled, perplexed, trying situation, where the difficulty is, as it were, spread throughout the entire situation, infecting it as a whole.” These problem situations are not problems; problems are representations of problem situations. Problems are not “out there” in the world, but stem from thought interacting with external environments. The same problem situation can be and often is structured in different ways. For example, imagine a graph showing national defense expenditures as an increasing percentage of Gross Domestic Product over time. Analysts with different perspectives will see the graph differently, one as evidence of increasing national security (more of the budget is allocated to defense), another as an indication of declining social welfare (less of the budget is allocated to social services). Problem structuring, it should be stressed, governs the production, interpretation, and representation of information produced by the other methods. It is the “central guidance system” of policy analysis.

Policy-analytic methods are interdependent. It is not possible to use one method without first having used others. Thus, although it is possible to monitor past policies without forecasting their future consequences, it is not possible to forecast policies without first monitoring them. Similarly, analysts can monitor policy outcomes without evaluating them, but it is not possible to evaluate an outcome without first establishing that it is an outcome in the first place. Finally, to select a preferred policy requires that analysts have already monitored, evaluated, and forecasted outcomes. This is yet another way of recognizing that policy choices are based on factual as well as value premises.

The full set of policy-informational components (rectangles), policy-informational transformations (arrows), and policy-analytic methods (ovals) is displayed in Figure 1.1. The figure supplies a framework for integrating methods from different policy-relevant disciplines and professions. The five general methods, as already noted, are used across disciplines and professions of political science, sociology, economics, management science, operations research, public administration, program evaluation, and ethics. Attached to each general procedure are more specific techniques used solely or primarily in some disciplines and professions, and not others. Political science and program evaluation, for example, employ monitoring to investigate whether a policy is causally relevant to an observed policy outcome. Although program evaluation has made extensive use of interrupted time-series analysis, regression discontinuity analysis, causal modeling, and other techniques associated with the design and analysis of field experiments, implementation research within political science has not. Instead,

15 Because the explanation of a policy is not a necessary condition for predicting its future consequences, explanation and prediction are asymmetrical. Strictly speaking, a prediction is a causal inference, whereas a projection, extrapolation, or “rational forecast” is not. However, it is not necessary to understand the causal factors underlying variations in expenditure patterns to obtain a reliable projection of their future value.


implementation researchers have relied mainly on techniques of case study analysis.\textsuperscript{19} Another example comes from forecasting. Although forecasting is central to both economics and systems analysis, economics has drawn almost exclusively on econometric techniques. Systems analysis has made greater use of qualitative forecasting techniques for synthesizing expert judgment, for example, qualitative techniques of policy Delphi.\textsuperscript{20}

**THREE CASES OF POLICY ANALYSIS**

Three cases illustrate similarities and differences in processes of policy analysis.

**Case 1.1 Impact of Military Spending on Employment and Human Services.** A multidisciplinary team of faculty and graduate students is asked by the mayor of a large eastern city to prepare a report on the effects of military spending on employment and human services. The team investigates investments in the local economy by analyzing data from the Defense Procurement Data Center on the dollar value of procurement contracts awarded to businesses and universities. By using an input-output model from the U.S. Department of Labor, the team estimated the number of new jobs created, directly and indirectly, through the contracts. At the same time, personal and corporate taxes paid to the federal government exceed the dollars brought in through procurement dollars. Some of the tax dollars might have gone to support underfunded human service programs. A thirty-page report with technical appendices is presented to the mayor, who is required to make an annual report to the City Council. Although the report generated considerable public debate, and drew attention to the problem, it had no effect on military procurement, federal tax policy, or local human services.

In **Case 1.2 Alleviating Municipal Fiscal Distress**, most of the analysis was based on newspaper reports describing the scope and severity of municipal fiscal distress in the state. In contrast to the complex modeling requirements in Case 1.1 (Impact of Military Spending), newspaper reports involving no significant quantification were virtually the only source of information (the reports included revenue and expenditure data provided by municipalities). Despite the simplicity of this essentially qualitative analysis, the conclusions and recommendations were used to change existing policy. In the Municipal Fiscal Distress case (1.2), a long policy issue paper was made available as a "backup document." The analyst's conclusions and recommendations were communicated in an one-hour oral briefing and in a two-page policy memorandum. The short policy memo stands in contrast to the thirty-page report with technical appendices prepared in the Impact of Military Spending case (1.1). The oral briefing and the two-page memo led directly to the formulation of a new policy on distressed municipalities. But the policy was rarely used; it generated little public debate and fell into disuse because better economic times and increased municipal revenues made the policy unnecessary. What was originally a severe problem became a nonproblem with the passage of time and changed economic conditions.

**Case 1.3 Benefits and Costs of the 55 mph Speed Limit** is similar to Case 1.1 (Impact of Military Spending) in that both cases employed complex quantitative methods—input-output analysis, benefit-cost analysis, and time-series econometrics. However, only the military spending case required the collection of archival data prior to the analysis. In contrast to the military spending case, the speed limit case involved conclusions and recommendations that were purposefully limited to an eight-page policy memorandum, rather than a long issue paper with technical appendices. The policy memo is similar in its brevity to the even shorter two-page memo of Case 1.2 (Municipal Fiscal Distress). Another similarity between the municipal fiscal distress and the 55 mph speed limit cases is that both resulted more or less directly in a policy decision; the military spending case did not. Note that the 55 mph case is fundamentally different from both the other two cases. It was based heavily on moral argumentation, rather than economic or causal modeling.

**Case 1.3 Benefits and Costs of the 55 mph Speed Limit.** The governor of a large eastern state asks his staff to investigate the effectiveness of the 55 mph speed limit in saving lives and reducing injuries in his state. The governor needs the analysis in order to decide whether to file a request with the federal government that would permit his state to abandon the 55 mph speed limit during a "test period." The staff analysis, based primarily on a report by the National


\textsuperscript{20} Quade, *Analysis for Public Decisions.*
Academy of Sciences (55: A Decade of Experience, Washington, DC: National Academy of Sciences, 1984), was presented in an eight-page policy issue paper. The issue paper recommended that the 55 mph speed limit be retained because it saves several hundred lives annually in the state, and several thousand nationally. The governor accepts the recommendation, joining nine other northeastern states that decide to retain the speed limit. Later, more detailed studies show that the costs of time lost by driving at the lower speed limit of 55 mph far exceed the economic benefits in lives saved, injuries averted, and fuel conserved. Other economic analyses suggest that the number of lives saved has been seriously overestimated and that most of the decline in traffic fatalities is probably the result of recessions, unemployment, and their effect on lowering the number of miles traveled (and hence the risk of fatal accidents). The governor rejects the benefit–cost and econometric analyses, defending the existing speed limit on moral rather than economic grounds.

FORMS OF POLICY ANALYSIS

Relationships among policy-informational components, policy-analytic methods, and policy-informational transformations provide a basis for contrasting different forms of policy analysis (Figure 1.2).

Retrospective and Prospective Analysis

Prospective policy analysis involves the production and transformation of information before policy actions are taken. This form of **ex ante** analysis, shown as the right half of Figure 1.2, typifies the operating styles of economists, systems analysts, operations researchers, and decision analysts. The prospective form of analysis is what Williams means by policy **analysis**. It is “a means of synthesizing information to draw from it policy alternatives and preferences stated in comparable, predicted quantitative and qualitative terms as a basis or guide for policy decisions conceptually it does not include the gathering of information.” Policy **research**, by contrast, refers to “all studies using scientific methodologies to describe phenomena and/or determine relationships among them.” Prospective analysis often creates wide gaps between preferred solutions and actual efforts to implement them. Allison estimates that no more than 10 percent of the work actually required to achieve a desired set of policy outcomes is carried out before policies are implemented. “It is not that we have too many good analytic solutions to problems. It is, rather, that we have more good solutions than we have appropriate actions.”

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Figure 1.2  Forms of policy analysis.

Prospective (Ex Ante): What will happen and what should be done?

Retrospective (Ex Post): What happened and what difference does it make?

Problem Finding: What problem should be solved?

Problem Solving: What is the solution?

Retrospective policy analysis is displayed as the left half of Figure 1.2. This form of **ex post** analysis involves the production and transformation of information after policies have been implemented. Retrospective analysis characterizes the operating styles of three groups of analysts:

- **Discipline-oriented analysts.** This group, comprised mainly of political scientists and sociologists, seeks to develop and test discipline-based theories that describe the causes and consequences of policies. This group is not concerned with the identification of specific policy goals or with distinctions between “policy” variables that are subject to policy manipulation and those that are not. For example, the analysis of the effects of party competition on...
government expenditures provides no information about specific policy goals; nor is party competition a variable that policy makers can manipulate to change public expenditures.

- **Problem-oriented analysis.** This group, again composed mainly of political scientists and sociologists, seeks to describe the causes and consequences of policies. Problem-oriented analysts, however, are less concerned with the development and testing of theories believed to be important in social science disciplines than with identifying variables that may explain a problem. Problem-oriented analysis are not overly concerned with specific goals and objectives, primarily because the practical problems they analyze are usually general in nature. For example, the analysis of aggregate data on the effects of gender, ethnicity, and social inequality on national achievement test scores provides information that helps explain a problem (e.g., inadequate test performance) but does not provide information about policy variables that can be manipulated.

- **Applications-oriented analysis.** A third group includes groups of applied sociologists, applied psychologists, and applied anthropologists, as well as analysts from professions such as public administration, social work, and evaluation research. This group also seeks to describe the causes and consequences of public policies and programs and is not concerned with the development and testing of discipline-based theories, unless those theories provide a guide to action. This group is concerned not only with policy variables but also with the identification of specific policy goals and objectives. Information about specific goals and objectives provides a basis for monitoring and evaluating outcomes and impacts of policies. For example, applications-oriented analysis may provide a rich account of variables that can be manipulated in order to achieve higher scores on reading tests.

The operating styles of the three groups reflect their characteristic strengths and limitations. Discipline-oriented as well as problem-oriented analysts seldom produce information that is directly useful to policy makers. Even when problem-oriented analysts investigate important problems such as educational opportunity, energy conservation, or crime control, the resultant information is often macronegative. Macronegative information describes the basis (or “root”) causes and consequences of policies, usually by employing aggregate data to show why policies do not work. By contrast, micropositive information shows what policies and programs do work under specified conditions. It is of little practical value to policy makers to know that the crime rate is higher in urban than rural areas, but it is practically important to know that a specific form of gun control reduces the commission of serious crimes or that intensive police patrolling is a deterrent.

24 Williams, Social Policy: Research and Analysis, p. 8.


28 Value consensus is assumed. The task is to explain “value-neutral” dependent variables.
policies by identifying patterns of causality. The principal function of approaches to monitoring such as field experimentation and quasi-experimentation is to establish the approximate validity of causal inferences relating policies to their presumed outcomes. In Figure 1.2, the descriptive form of policy analysis can be visualized as an axis moving from the lower left (monitoring) to upper right (forecasting). Normative policy analysis parallels normative decision theory, which refers to a set of logically consistent propositions that evaluate or prescribe action. In Figure 1.2, the normative form of policy analysis can be visualized as an axis running from the lower right (recommendation) to upper left (evaluation). Different kinds of information are required to test normative and descriptive decision theories. Methods of evaluation and recommendation provide information about policy performance and preferred policies, for example, policies that have been or will be optimally efficient because benefits outweigh costs; optimally equitable because those most in need are made better off; or optimally responsive to citizen preferences. One of the most important features of normative policy analysis is that its propositions rest on disagreements about passionately held values, including efficiency, equity, responsiveness, liberty, and security.

Problem Finding and Problem Solving

The upper and lower halves of Figure 1.2 provide another important distinction. The upper half points to methods that are designed for purposes of finding problems, whereas the lower designates methods for solving problems. Problem finding has to do with the discovery of elements that go into the definition of problems, and not to their solution. How well do we understand the problem? Who are the most important stakeholders who affect and are affected by the problem? Have the appropriate objectives been identified? Which alternatives are available to achieve objectives? Which uncertain events should be taken into account? Are we solving the “right” problem rather than the “wrong” one?

Problem-solving methods, located in the lower half of Figure 1.2, are designed to provide solutions to problems. Problem solving is primarily technical in nature, in contrast to problem finding, which is more conceptual. Problem-solving techniques, including benefit–cost analysis, decision analysis, and implementation analysis, are useful in answering questions about policy causation, statistical estimation, and optimization. How much of the variance in a policy outcome is explained by one or more independent variables? What is the probability of obtaining a correlation coefficient as large as that obtained? What are the net benefits of different policies? What is their expected utility or payoff?

29 Thomas D. Cook and Donald T. Campbell, Quasi-Experimentation: Design and Analysis Issues for Field Settings (Boston, MA: Houghton Mifflin, 1979); Shuhah, Cook, and Campbell, Experimental and Quasi-Experimental Designs for Generalized Causal Inference.

30 Bower, pp. 104-65.

Segmented and Integrated Analysis

Integrated policy analysis links the several segments of Figure 1.2. Retrospective and prospective forms of analysis are joined in one continuous process. Descriptive and normative forms of analysis are linked, as are methods designed to find as well as solve problems. Practically speaking, this means that policy analysts bridge the several major pillars of multidisciplinary policy analysis, especially economics and political science. Today, this need is not being met by departments of economics and political science, which specialize in segmented policy analysis by producing, critiquing, and passing on intellectual knowledge. The effort to bridge these and other segmented disciplines, and convert intellectual knowledge into practical knowledge, is carried out by professions, including public administration, management, planning, policy analysis, and social work. The American Society for Public Administration, the National Association of Schools of Public Affairs and Administration, the American Planning Association, the International Association of Schools and Institutes of Administration, and the Association for Public Policy and Management represent these professions. So far, these professional associations have been more open to the discipline of economics than that discipline has been open to political and organizational analysis, notwithstanding a consensus among policy scholars and practitioners that political and organizational analysis is an essential for effective economic policy making.

The framework for integrated policy analysis presented in the first part of this chapter (Figure 1.1) helps to examine the assumptions, uses, and limitations of methods employed in segmented and largely overspecialized disciplines and professions. The framework identifies and relates major elements of policy analysis—policy-informational components, policy-analytic methods, and policy-informational transformations—enabling us to see the special functions performed by methods of problem structuring, monitoring, evaluation, forecasting, and recommendation. The second framework (Figure 1.2) points to different forms of policy analysis practiced today: prospective (ex ante) and retrospective (ex post), descriptive and normative, and problem finding and problem solving. Integrated policy analysis is a vehicle for understanding, assessing, and improving a methodology that has the ambitious mission of bridging selected aspects of the social sciences, social professions, and political philosophy.

THE PRACTICE OF POLICY ANALYSIS

Reconstructed Logic versus Logic-in-Use

The process of policy analysis illustrated in Figures 1.1 and 1.2 is a logical reconstruction (reconstructed logic). The actual process of doing policy analysis may or may not conform to this or other logical reconstructions, including the so-called "scientific method," because all logical reconstructions are abstract representations
of a great many observed practices. The logic-in-use of practicing analysts, as distinguished from the logical reconstruction of their actions, always varies to one degree or another because of differences in personal characteristics of analysts, their professional socialization, and the institutional settings in which they work.

- **Cognitive styles.** The personal cognitive styles of analysts predispose them toward different modes of acquiring, interpreting, and using information.
- **Analytic roles.** Policy analysts perform roles as "entrepreneurs," "politicians," and "technicians." 35
- **Institutional incentive systems.** Policy "think tanks" encourage different orientations toward analysis, including the "humanistic-value-critical" and the "scientific." 35 Institutional rewards and punishments affect the validity of conclusions and recommendations.
- **Institutional time constraints.** Government analysts subject to tight institutional time constraints (three to seven days is typical) work with much greater speed, and perhaps greater efficiency, than university researchers with fewer time constraints. Understandably, the former rarely collect original data; nor do they employ complex and time-consuming techniques.
- **Professional socialization.** The different disciplines and professions that make up policy analysis socialize their members into different norms and values. Analyses of published papers suggest that analysts employ formal-quantitative as well as informal-narrative approaches, although sound policy recommendations sometimes require formal-quantitative procedures. 36
- **Multidisciplinary teamwork.** Much of the analysis conducted in public agencies is carried out by multidisciplinary teams. Some members have primary responsibility for particular forms of policy analysis (Figure 1.2). For example, team members trained in economics and decision analysis are typically more qualified to perform prospective (ex ante) analysis, whereas members trained in applied sociology, applied psychology, and program evaluation are usually better at retrospective (ex post) analysis. The effectiveness of teams depends on everyone acquiring an operational understanding of analytic methods employed throughout the process of integrated policy analysis (Figure 1.1).

### Methodological Opportunity Costs

Integrated policy analysis has opportunity costs. Given limited time and resources, it is difficult to conduct thorough economic, political, and organizational analyses at the same time. On one hand, it is tempting to adopt multiple triangulation, 36 or what some have called critical multiplicity, 39 as an umbrella for multidisciplinary analysis. Critical multiplicity responds to some of the inadequacies of logical positivism. 40 Logical positivism refers to the philosophical doctrine that true statements about the world must be logically valid and empirically confirmed against an objective reality and that objective reality, rather than any subjective interpretation of it, should dictate these true statements. As a philosophy, logical positivism has almost no relation to discussions of it by social scientists, most of whom lack a rudimentary understanding of philosophy of science and epistemology. To the extent to which logical positivism refers to methods claiming to produce entirely "objective" results that do not depend on the observations and interpretations of multiple observers, "logical positivism" appears to be the dominant methodology of policy analysis and program evaluation carried out during the era of President Lyndon Johnson's War on Poverty. The advantage of multiplicity over this vulgarized form of logical positivism is that it provides a better approximation of what is true by employing procedures that triangulate from a variety of perspectives on what is worth knowing and what is known about policies and their effectiveness.

The disadvantages of multiplicity lie in its costs. The costs of analysis vary with the number and types of methods employed.Although triangulation among several disciplinary perspectives, or the use of multiple measures, may be and often is feasible, the adoption of any method presented in this book involves

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31 On reconstituted logic and logic-in-use, see Kaplan, Conduct of Inquiry, pp. 5–11.
32 Studies using the Myers-Briggs type indicator (MBTI personality type) suggest distinct cognitive styles among scientists, managers, and analysts. See Iain J. Mitroff and Ralph H. Kilmann, Methodological Approaches to Social Science (San Francisco: Jossey-Bass, 1970). Corporations, nonprofit organizations, and public agencies such as the U.S. Department of Corrections and the National Science Foundation use the Myers-Briggs test as a training and personnel selection diagnostic.
37 The methodological triangulation is analogous to practices employed in geodetic surveys, cartography, navigation, and, more recently, satellite tracking. The position or location of an object is found by means of bearings from two or more fixed spatial points or electronic signals from known distances apart.
trade-offs and opportunity costs (Figure 1.3). When single methods such as econometric modeling are employed to achieve measurement precision, generalized policy causation, and objectivity (in the sense that observations are partly independent of the persons making them), analysts forgo the deeper understanding of multiple stakeholder perspectives that is possible through ethnographic interviews and other qualitative methods. The latter include Q-methodology, case study analysis, and Delphi technique. On the other hand, econometric modeling and other related techniques (e.g., time-series analysis and benefit-cost analysis) involve low costs of information acquisition, because secondary data are usually available. By contrast, ethnographic interviews involve high information costs because they require substantial primary data, although they lack precision and a capacity for generalizing policy causation.

Similar trade-offs and opportunity costs apply to methods of research synthesis, or metanalysis, which purchase measurement precision and generalized policy causation at the expense of a deeper understanding of the complexity of real-life contexts of policy making. The latter can be obtained by means of field studies and field experiments, but these are expensive, especially when they are employed in conjunction with qualitative methods. To be sure, triangulation among convergent (and divergent) perspectives, methods, and measures enhances the validity of policy analysis and other applied social sciences. But the time and financial constraints surrounding the practice of policy analysis make trade-offs inevitable.

**CRITICAL THINKING AND PUBLIC POLICY**

The world of the practicing policy analyst is complex. Analysts must sift through and evaluate a large volume of available quantitative and qualitative data, make difficult choices among methods and techniques, and meet rapid turnaround times. This practical predicament places a premium on critical thinking—that is, the careful analysis and evaluation of the reasons and evidence used to argue about public policies. One method available for this purpose is the analysis of policy arguments. Policy argumentation, which refers to the process whereby two or more stakeholders debate the merits of policies by probing the assumptions underlying policy claims, permits a critical synthesis of policy-relevant information and its role in policy analysis. The product of critical thinking is evidence-based policy analysis.

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43 The case for triangulation in its many forms is Donald T. Campbell, Methodology and Epistemology for Social Science: Selected Papers, ed. E. Samuel Overson (Chicago: University of Chicago Press, 1980).
The Structure of Policy Arguments

Policy arguments are the main vehicle for conducting debates about public policies. Social scientists too often forget, cautions Majone, that "public policy is made of language. Whether in written or oral form, argument is central to all stages of the policy process." The process and structure of policy argumentation can be represented as six interrelated elements (Figure 1.4).

- **Policy-relevant information.** Policy-relevant information, I, is the starting point of policy arguments. Policy-relevant information, as we have seen, is divided into five informational components. Figure 1.4 describes how policy-relevant information is used to make claims about public policies. An example of policy-relevant information is the following statement: "A leading expert concludes that Social Security reform is unlikely to permit employees to invest their contributions in the stock market." Not all information is relevant to a given policy issue.

- **Policy claim.** A policy claim, C, is the conclusion of a policy argument. The movement from policy-relevant information to claim implies "therefore." Policy claims are of different types. Some are normative: "Congress should pass the amendments to the Fair Employment Practices Act." Some are descriptive: "The use of the Internet will double in the next ten years." Normative claims typically require ethical or valuative justifications. Descriptive claims involve causal inferences that do not state what should be done; they require no ethical justification.

- **Warrant.** The warrant, W, of a claim answers the question Why? with a reason, assumption, or argument beginning with since. By providing one or more reasons, assumptions, or arguments, W attempts to justify the movement from I to C. Different types of warrants are appropriate for arguments typically made in different disciplines and professions. For example, law frequently uses case comparisons, along with other warrants, as does public administration: "Because the two countries are so much alike, the successful decriminalization of drugs in Switzerland is likely to work here." Policy makers frequently employ causal warrants such as "Ethnic cleansing will be deterred by air strikes that establish NATO’s credibility in the region." The warrant W supplies a justification for accepting claims on the basis of the information supplied.

- **Backing.** The backing, B, of a warrant also answers the Why? with a more general reason, assumption, or argument that begins with because. Just as warrants W justify the move from information I to claim C, backings B justify the warrant W, when its plausibility is in question. Characteristically different kinds of backings are employed by members of different disciplines and professions and by other policy stakeholders. Backings take various forms,
including scientific laws, appeals to the authority of experts, or ethical and moral principles. For example, consider the warrant illustrated above: "Ethnic cleansing will be deterred by air strikes that establish NATO's credibility in the region." Often the backing for this warrant, and similar ones involving the use of coercive force, is an informal statement of the law of diminishing utility: "The greater the cost of an alternative, the less likely it will be pursued."

**Dynamics of Argumentation, Public Discourse, and Debate**

The analysis of information, claims, warrants, and backings yields an essentially static analysis. The consideration of two additional elements makes the framework dynamic:

- **Rebuttal.** The rebuttal R is a reason, assumption, or argument put forth by another stakeholder to challenge the information I, warrant W, or backing B of the original argument. The rebuttal responds to unless referring to special conditions, exceptions, or qualifications that diminish the plausibility of the original claim. Using the NATO air strike example again: "The NATO air strikes are unlikely to deter ethnic cleansing, because the adversary's military is composed of many competing partisan interests that make a troop withdrawal virtually impossible." All policy arguments have rebuttals, because policy making involves bargaining, negotiation, and competition among opponents and proponents of policies. Analysts who pay attention to rebuttals are more likely to take a critical perspective toward policy issues, identifying weak or hidden assumptions, anticipating unintended consequences, and questioning anticipated objections, which serves as a systematic means for criticizing their own assumptions and arguments.

- **Qualifier:** The qualifier Q expresses the force of the argument by stating the circumstances in which the claim C is true or plausible. Although social scientists may state qualifiers in the language of formal probability (p = 0.01 or t = 2.74), ordinary language is the normal mode of discourse ("probably," "usually," "barring unforeseen circumstances"). Policy claims by elected officials are typically presented as if they were unconditionally true: "The welfare reform will remove from the welfare rolls persons who do not deserve it, and maintain or increase support to those who do." It is primarily through processes of policy argumentation and debate that policy makers and other stakeholders, including policy analysts, adjust and even abandon previously unqualified or weakly qualified arguments. This process of change, when it occurs, is motivated by the consideration of rebuttals offered by those who have a real personal, professional, and moral stake in policies.

The process of argumentation (Figure 1.4) is dynamic, not only because the initial arguments and their qualifiers can and do change in response to rebuttals by other stakeholders, but also because the conclusions of one argument can serve as information in succeeding arguments, creating argument "chains" or "trees."

**CHAPTER SUMMARY**

In this chapter, we have defined and illustrated policy analysis, described its role in creating and transforming policy-relevant information, and distinguished its forms. No single method of policy analysis is appropriate for all or even most occasions, which means that analysts must approach the choice of methods as an optimization problem involving informational trade-offs.

The actual work of policy analysts—as distinguished from logical reconstructions of the way analysts ought to work—includes difficult methodological choices among informational sources and methods. For this and other reasons, critical thinking is a valuable aspect of policy analysis. One method of critical thinking is the model of argumentation, which helps evaluate and synthesize information presented in many forms by means of many methods.

**LEARNING OBJECTIVES**

- define and illustrate policy analysis
- describe and illustrate elements of integrated policy analysis
- distinguish alternative forms of policy analysis
- discuss criteria for making optimal methodological choices
- contrast reconstructed logic and logic-in-use

**KEY TERMS AND CONCEPTS**

- Critical analysis (17)
- Critical thinking (19)
- Decision tree (32)
- Descriptive decision theory (13)
- Evaluation (6)
- Forecasting (6)
- Influence diagram (31)
- Logic-in-use (15)
- Logical positivism (17)
- Metamethod (6)
- Monitoring (6)
- Normative decision theory (14)
- Policy analysis (1)
REVIEW QUESTIONS

1. What does it mean to define policy analysis as a process of inquiry, as distinguished from a method of problem solving?
2. Distinguish and illustrate policy-informational components, policy-analytic methods, and policy-informational transformations.
3. What is integrated policy analysis? Give examples.
4. What is normative decision theory, and how is it different from descriptive decision theory?
5. List some of the key differences between problem solving and problem finding.
6. Contrast retrospective and prospective analysis. Is the difference important?
7. Discuss and illustrate methods triangulation. Why is methods triangulation important?
8. Describe and illustrate an "optimal methodological choice" in policy analysis.
9. Discuss characteristics of the "logic-in-use" of policy analysts.
10. Contrast "reconstructed logic" and "logic-in-use." Provide illustrations.
11. How can the study of policy argumentation assist analysts to become critical thinkers?
12. Discuss the usefulness of the following visual displays: spreadsheets, scorecards, influence diagrams, decision trees, and argumentation diagrams.

DEMONSTRATION EXERCISES

1. After studying Case 1: Saving Lives and Wasting Time (see below), consider evidence that:
   a. the number of fatalities in 1974 was about 500, after taking into account that about 50 percent of fatalities occurred on roads not subject to the 55 mph speed limit.

<table>
<thead>
<tr>
<th>Policy Outcomes</th>
<th>Policy Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual fatalities</td>
<td>54.1</td>
</tr>
<tr>
<td>Annual gasoline consumed (billion gallons)</td>
<td>46.9</td>
</tr>
<tr>
<td>Annual hours driving (billions)</td>
<td>20.2</td>
</tr>
<tr>
<td>Annual vehicle miles traveled (billions)</td>
<td>1,333</td>
</tr>
</tbody>
</table>

2. Only 30 percent of traffic fatalities are known to be caused by speeding rather than other factors (e.g., human error, road conditions, miles driven); and c. unemployment and recession resulted in a sharp decrease in the number of miles driven in 1974.

On the basis of this new evidence, revise Tables 1.1 and 1.2 and Figures 1.5 and 1.6. In Figure 1.5 (Analysis of Argument to Return to 55 mph Speed Limit), what is your new claim? How strong is the new claim? Write your answers at the bottom of your revised Figure 1.5.

3. What quantitative evidence can you find in Tables 1.1 and 1.2 and Figures 1.5 and 1.6 to support the argument in the title of Case 1. Namely, that saving lives wastes time? Write your answer on no more than one page.

REFERENCES


The Process of Policy Analysis

(a) Influence Diagram

- Traffic Fatalities
  - Maximum Speed Limit
  - Aggregate Satisfaction
    - Gasoline Consumed
    - Time Expended

(b) Decision Tree

- Maximum Speed Limit
  - Retain 65 mph
    - 12.96 (TF) + 24.8 (GC) + 102.0 (TE) = 139.8
  - Return to 55 mph
    - 10.85 (TF) + 22.95 (GC) + 110.6 (TE) = 144.4

Figure 1.6 Benefits and costs of the 55 mph speed limit displayed as an influence diagram and decision tree.
Case 1. Saving Lives and Wasting Time: Thinking Critically about Speeding and Traffic Fatalities

The structural model of argument provides a visual display or picture of how arguments move from evidence to conclusions, and how arguments change when confronted by the challenges of critics. The structural model therefore encourages what has come to be called "evidence-based" policy analysis, as well as "critical thinking" about such analysis. One use of evidence-based analysis and critical thinking is the careful examination of information, reasons, and claims presented in arguments embedded, usually implicitly, in scorescards, spreadsheets, influence diagrams, and decision trees. For example, consider the "Goeller scorecard" (Table 1.1) used to display effects of the National Maximum Speed Limit of 1974. The 1974 policy, which imposed a maximum speed limit of 55 mph on interstate highways in the United States, was abandoned on an experimental basis by forty states in 1987 and 1988. In 1995, Congress granted states the right to set their own speed limits, an action that was strongly opposed by the Clinton administration. Consider the following statement by President Clinton's Secretary of Transportation, Federico Pena: 49

Today, in response to President Clinton's directive to me to develop an action plan to help states ensure highway safety, I call on the governors and the state legislators to adjust and refashion their highway safety strategies and to work in partnership with the Department of Transportation to make our highways the safest in the world.

For two decades the laws have worked. Today, our traffic fatality rate is at a record low level. In 1972, more than 55,000 Americans died on our highways. Last year, about 40,000 Americans were killed. Over the last decade, drunk driving fatalities have declined more than 17 percent and seat belt usage is now at 67 percent, up from 15 percent. I am proud of our progress on highway safety. But much more remains to be done because the fatalities have leveled off for the past two years, further emphasizing the need for us to redouble our safety efforts. We, as a nation, cannot and should not accept 40,000 fatalities and 3 million injured a year caused by highway accidents. When a plane crashes and kills people, every news show in the country reports it. People are concerned, and that is appropriate. Last year, we lost 264 lives through seven major airline crashes. Yet on our highways, we lost 40,000 lives, and it doesn't make page one. That is the equivalent of 110 people killed in an airplane crash every day, for an entire year: 365 days of the year.

47 Example based on MacRae (pp. 291-318) and Dunn (pp. 254-30) in Fischer and Forester, The Argumentative Turn in Policy Analysis and Planning (see note 44 above).
48 The initial evaluation of effects is reported in National Highway Transportation Safety Administration, The Effects of the 65 mph Speed Limit through 1988 (Washington, DC 1989).

If we framed the tragedy that we see on our highways in this context, I believe most Americans and their state elected officials would be outraged at the senseless slaughter of our fellow citizens on our highways.

They are fatalities that we accept too easily. As we drive past a terrible highway crash, we seem numb to the tragedy, believing that it could not happen to us. We forget the leading cause of death for people ages 5 to 34 is transportation accidents. It does not come from crime, or domestic abuse, or disease. It comes from car crashes. And while one cannot put a price on losing a loved one or suffering an injury, motor vehicle accidents cost the public more than $137 billion a year. These costs include $45.7 billion in property losses, $39.8 billion in market productivity, $13.9 billion in medical costs, $10.8 billion in household productivity, $10 billion in insurance administration, $8.9 billion in legal and court costs and $8.4 billion in other costs. There is a possibility states may end up with the full responsibility for addressing Medicaid costs. This means that citizens in every state would be charged to curtail the costs of Medicaid resulting from highway deaths and injuries, because these costs would be borne by taxpayers in every state.

This year, in a fundamental shift of authority from the federal government to the states, the Congress has granted the states the right to set virtually their own highway safety laws. The shift in authority brings with it much responsibility because we all pay the bill from traffic accidents.

I accept this change in legislation as an opportunity to engage in a national debate, not only with the state elected leaders, but with the American people as well, about what our true commitment is to reducing the loss of 40,000 lives.

From my travels across America, I know firsthand that governors share some of the commitment the President and I have to ensuring and promoting highway safety. I hope and expect to continue to work closely with the states to save lives and prevent injuries on all our highways.

So, I am taking the following eight actions:

- Immediately urge the governors of the states where the speed limits automatically increase upon repeal of the National Maximum Speed Limit to work with their state legislatures to have public hearings to carefully consider the costs and benefits, especially in health care and Medicare costs of increasing speed limits. There were no public hearings here in Washington on the speed limit repeal in the Congress.
- Begin a public education campaign to communicate with citizens, governors and legislative leaders, about the burdens that motor vehicle crashes currently place on their states, to provide estimates of potential cost increases due to lessening highway safety in each state.
- Immediately establish a nationwide safety team to educate state policy makers of the consequences of weakening highway safety laws. The members will include those who bear the costs, such as citizen representatives, businesses, insurance and health care providers and those who develop and implement the policies.
- Assist all states in identifying and using current data to track their state-specific costs due to motor vehicle crashes and to identify the ultimate payer of these costs. This will assist the states in fulfilling the requirements for a report on the consequences of raising the speed limits. With this data,
most states, for the first time, will have the costs imposed on a state due to various accident factors. Working with the Department of Health and Human Services, the Department of Transportation will provide data to states on Medicaid costs due to highway accidents.

- Aggressively support the "zero tolerance" provision in the legislation, urging the states without such laws to promptly adopt them.
- Promote and support safety management systems. The Department will showcase "best practices" as well as provide training to ensure all states take advantage of the safety management systems. The Department is already working with 16 states on a true performance-based safety management system where the state has the lead.
- Carefully exercise discretion in the implementation of the pilot program to reduce regulations for medium-sized trucks in order to maintain safety levels.
- Carefully monitor the results of numerous statutory exemptions granted for hours-of-service requirements for different truck types.

Finally, the National Highway System represents strategic investment in not only our transportation system, but also our economy. I am pleased at its passage and would like to acknowledge the work of all the Department of Transportation employees who contributed to its fruition, particularly the men and women in the Federal Highway Administration.

The scorecard displayed in Table 1.1 has two major alternatives: the maximum speed limits of 55 mph and 65 mph. The most important outcomes of the two alternatives are gasoline consumed, time spent driving, vehicle miles traveled, and traffic fatalities. The figures are for the years 1973 (before the 55 mph speed limit) and 1974 (after the 55 mph speed limit).

In support of Secretary Pena's statement, the scorecard suggests that returning to the 55 mph speed limit may be preferable to the present 65 mph speed limit. Between 1973 and 1974, the lower speed limit produced a decline of 8,900 fatalities and reduced gasoline consumption by 3.5 billion gallons. Although the lower speed limit also had a negative side, with an additional 1.7 billion hours of travel time at the lower speed limit, it appears to be a small price to pay for saving thousands of lives and billions of gallons of gasoline. A secondary consequence of the lower speed limit was the reduction of air pollution.

The scorecard does not reveal contending arguments bearing on a possible return to the 55 mph speed limit. Although these arguments might be uncovered in other ways (e.g., through discussions with other analysts), a critical analysis of the process of argumentation surrounding the 55 mph speed limit helps identify and challenge assumptions underlying the scorecard analysis (Figure 1.5).

One of the rebuttals points to the incompleteness of the analysis, which does not take into account the economic benefits and costs of the lower speed limit. The spreadsheet (Table 1.2) is a response to these rebuttals. It is a spreadsheet, and not a scorecard, because it goes beyond a listing of outcomes. The spreadsheet places an explicit monetary value on outcomes, which are now titled objectives, because they are explicitly valued.

The spreadsheet suggests that the 65 mph speed limit should be retained, because the net benefits (benefits minus costs) are negative. On the plus side, some 8,900 fatalities were averted under the 55 mph speed limit. Multiplying this number by $240,000, which is the average value of a human life in 1974 dollars, gives $2.13 billion in benefits. To this we add 3.5 billion gallons of gasoline saved by driving at the lower speed limit. At the average cost of a gallon of gasoline in 1974 ($0.90), the additional benefits are $1.85 billion. Total benefits ($2.13 + $1.85) are $3.98 billion.

The costs of the 55 mph speed limit are primarily in time lost by driving at the lower speed limit. The loss, shown in the spreadsheet, is 1.7 billion hours. By using the average hourly wage in 1974 ($5.05) to calculate the value of each hour lost, the total costs (ignoring negligible costs of enforcement and promotion) are $8.59 billion. Subtracting costs of $8.59 from benefits of $3.98, the net loss is $4.61 billion.

Clearly, the benefit-cost calculations should be subjected to further analysis, because they conceal important assumptions that may be rebutted. Is a human life really worth $240,000? Why place a monetary value on lives, when there is no "market" for them? The cost of time provides that each hour lost is worth the average hourly wage in 1974, which was about $5.05. Are drivers willing to pay this much for an hour gained? Or is the value of an hour lost less (or more) than this? Even more important, the previous argumentation analysis (Figure 1.5) suggests that the number of fatalities reduced by the speed limit may be grossly overestimated. It seems that a more comprehensive and balanced analysis may be achieved by supplementing the scorecard and the spreadsheet with argumentation analysis.

The analysis of policy argumentation can be of equal or greater benefit when we examine influence diagrams and decision trees such as those of Figures 1.6 (a) and 1.6 (b). Both the diagram and decision tree were created with software called DPL, which stands for Decision Programming Language.30

The influence diagram (Figure 1.6(a)) displays the policy choice as a rectangle. A rectangle always refers to a policy choice, also known as a decision node, which in this case refers to the choice between the maximum national speed limits of 55 mph and 65 mph. To the immediate right of the decision node are three rectangles with shaved corners, which are connected to the decision node with arrows showing that the policy choice influences them. Rectangles with shaved corners always represent valued policy outcomes, or objectives. Here there are three valued outcomes: traffic fatalities, gasoline consumption, and time driving. The objectives to avert traffic fatalities, reduce gasoline consumption, and expand minimum hours driving. To the right of the three objectives is another one, again represented as a shaved rectangle. This valued outcome refers to the aggregate (total) satisfaction attained by reaching all the objectives. Note that the slightly larger shaved

30 The Decision Programming Language (DPL) is available in DPL 4.0: Professional Decision Analysis Software; Academic Version (Pacific Grove, CA: Duxbury Press, 1999).
rectangle to the far right is connected by arrows showing that achieving the previous three objectives affects aggregate satisfaction.

The decision tree (Figure 1.6(b)) is another representation of the influence diagram. Whereas the influence diagram is limited to showing how a decision affects valued outcomes, the decision tree displays the monetary value of these outcomes. In this simple decision tree, there are two branches that represent two alternatives: return to the 55 mph speed limit and retain the 65 mph speed limit. The tree assumes that there is no uncertainty about achieving objectives. Such a tree and the analysis it summarizes are “deterministic” rather than “probabilistic.” (If we wanted to convert this into a probabilistic analysis, we might add one or more ovals to represent uncertain events, for example, the price of petroleum on the world market and its influence on gasoline prices.)

Readers should note that the decision tree compares the dollar value of all fatalities, gasoline consumed, and time expended, rather than the difference among them. The top branch (retain 65 mph) shows that the total cost of all fatalities (TF) under this option is $12.98 billion. The costs of all gasoline consumed (GC) and all time expended (TE) are $24.8 billion and $102 billion, respectively. The grand total, which places a monetary value on aggregate satisfaction, is shown at the end of the top branch: $12.98 (TF) + $24.8 (GC) + $102 (TE) = $139.8 billion. The grand total for the bottom branch (return to 55 mph) is $144.4 billion. The difference between returning to the 55 mph speed limit and retaining the 65 mph speed limit is $139.8 − $144.4 = −$4.6 billion, which is the net loss of returning to the 55 mph speed limit. Note that this is the same value obtained in the spreadsheet (Table 1.2).

The evidence assumptions, qualifications, and implicit conclusion of the influence diagram and decision tree have already been displayed as a policy argument in Figure 1.5, which states in everyday language that “it is not clear that there should be a return to the former policy of 55 mph.” Of course, the plausibility of this claim rests on the soundness of the warrants, backings, and rebuttals displayed in the argumentation diagram (Figure 1.5).

2 Policy Analysis in the Policy-Making Process

Some Historical Background
The Policy-Making Process
Models of Policy Change
Policy Analysis in the Policy Process
Chapter Summary
Review Questions
Demonstration Exercises
References
Case 2. Are Policy Analysts Technocrats?

As a process of multidisciplinary inquiry, policy analysis seeks to create, transform, and communicate knowledge of and in the policy-making process. Because the effectiveness of policy making depends in part on the availability of policy-relevant information, the communication and use of policy analysis are essential.

1 Harold D. Laswell, A Pre-view of Policy Sciences (New York: American Elsevier Publishing, 1971), pp. 1–2. Information refers to “systematic, empirical studies of how policies are made and put into effect,” while knowledge in refers to understanding that “the realism of a decision depends in part on access to the stock of available information.”

Policy Analysis in the Policy-Making Process

- **Scope of information used.** The scope of information used by policy makers ranges from the specific to the general. The use of "ideas in good currency" is general in scope (general use), while the use of a particular recommendation is specific (specific use).

In practice, these three dimensions of information use overlap. As we shall see in Chapter 9, the intersection among them provides a basis for assessing and improving the uses of policy analysis.

**CHAPTER SUMMARY**

This chapter has presented an overview of the functions of policy analysis in policy making. Historically, the aim of policy analysis has been to provide policy makers with information that can be used to solve practical problems. Policy analysis is an intellectual activity embedded in a social process known as policy making, or the policy-making process. Although policy making can be seen as a set of phases ordered in time, the organization of these phases often resembles a garbage can or organized anarchy. Numerous models are available to describe how and why policy change occurs. All of them capture an important feature of the complex process of policy making. The role of policy analysis in policy making has two aspects. On one hand, methods of analysis are designed to produce policy-relevant information that is potentially useful in all phases of policy making. On the other, the uses of policy analysis in practice are indirect, delayed, general, and ethically controversial. This is to be expected, considering that there are many patterns of information use based on the intersection of its composition, scope, and expected effects.

**LEARNING OBJECTIVES**

- understand policy analysis as an intellectual activity embedded in a social process
- explain the historical development of policy analysis as a response to practical problems and crises
- contrast policy analysis, as defined in this book, with evidence-based policy making
- describe policy making as a complex, cyclical process of agenda setting, policy formulation, policy adoption, policy implementation, policy evaluation, policy adaptation, policy success, policy change
- compare, contrast, and assess different models of policy change
- contrast potential and actual uses of policy analysis
- distinguish the composition, scope, and expected effects of information use
- analyze a case study on the use of policy research and analysis by policy makers

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CHAPTER SUMMARY

This chapter has provided an overview of the nature of policy problems, described the process of structuring these problems, examined relationships among policy models, and described specific methods of problem structuring. One of the most important challenges facing policy analysts is reducing the likelihood of a type III error: formulating the wrong problem.

LEARNING OBJECTIVES

• distinguish problem structuring from problem solving
• understand the subjective, systemic, and interdependent nature of policy problems
• contrast problem situations from problems
• compare and contrast relatively well-structured, moderately structured, and ill-structured problems

• distinguish different types of policy models
• discuss the strengths and limitations of different methods of problem structuring
• analyze three cases of problem structuring in policy analysis

KEY TERMS AND CONCEPTS

Argumentation mapping (114)
Assumptional analysis (111)
Blaming the victim (84)
Boundary analysis (95)
Brainstorming (107)
Classificational analysis (99)
Descriptive model (87)
Hierarchy analysis (102)
Ill-structured problem (80)
Moderately structured problem (80)
Multiple perspective analysis (109)
Normative model (87)
Perspective model (91)
Problem (72)
Problem situation (74)
Procedural model (80)
Stakeholder analysis (120)
Symbolic model (88)
Syntactics (105)
Surrogate model (91)
Teleological system (76)
Type III error (84)
Verbal model (88)
Well-structured problem (79)

REVIEW QUESTIONS

1. “Our problem is not to do what is right,” stated Lyndon Johnson during his years in the White House. “Our problem is to know what is right.” Considering this statement, what major characteristics and types of policy problems discussed in this chapter, to what extent can we know in advance which policy is the right one?

2. A commonly accepted viewpoint among many policy analysts in government and in universities is that policy analysis can be objective, neutral, and impartial. Given the characteristics of ill-structured problems, consider the extent to which this viewpoint is plausible.

3. Provide two or three examples from your own experience of ways that worldviews, ideologies, and popular myths shape the formulation of policy problems.

4. There are several broad types of organizational structures in which policy formation occurs. One type is the “bureaucratic” structure, whose characteristics include centralization, hierarchical chain of command, specialization of tasks, and complete information. The bureaucratic form of organization requires consensus on preferred policy outcomes, as well as certainty that alternative courses of action will result in certain preferred outcomes (J. D. Thompson, Organizations in Action [New York: McGraw-Hill, 1967], pp. 134–35). If many of our most important policy problems are ill-structured ones, what does this say about the appropriateness of the bureaucratic form of organization for formulating and resolving such problems?

5. If many of our most important problems are ill-structured ones, to what extent is it possible to hold individual policy makers, policy analysts, and planners politically and morally responsible for their actions? (For a provocative discussion of this point, see M. M. Webber and H. W. J. Rittel, “Dilemmas in a General Theory of Planning,” Policy Sciences 4, no. 2 [1973]: 155–69.)

6. The ill-structured problems described below are taken from illustrations published in the journal Policy Analysis (now the Journal of Policy Analysis and Management) under the title “Department of Unintended Consequences.”

For several thousand years, Egyptian agriculture depended on the fertilizing sediment deposited by the flood of the Nile. No longer, however. Due to expensive modern technology intended to improve the age-old lot of the peasant, Egypt’s fields must be artificially fertilized. John Gall, writing in the New York Times Magazine (December 26, 1976), reports that the Nile sediment is now deposited in the Aswan Dam’s Lake Nasser. Much of the dam’s electrical output is used to supply enormous amounts of electricity to new fertilizer plants made necessary by the construction of the dam.

University of Illinois ecologists can explain how certain harmful field mice spread from their native regions into areas where they had never before been found. They are using the new, limited-access, cross-country highways, which turn out to be easy escape routes with few barriers. Older highways and roads, as well as railroad right-of-way, run into towns and villages every few miles and effectively deter mice migration. The Illinois group found that before interstate highways ran through central Illinois, one type of mouse was limited to a single county. But in six years of superhighways the four-inch-long creatures have spread sixty miles south through the center of the state. The ecologists are concerned lest the mice, a species that loves to chew on trees, become a threat in central and southern counties where apple orchards abound (Wall Street Journal, December 1, 1977).

Edward J. Moody ... argues persuasively that worship of Satan has the effect of normalizing abnormal people. Thus, to “keep secret” from ordinary people their satanic power and existence, such persons are urged to behave as straight as possible. The effect, of course, is more effective social relations—the goal for which Satan’s name has been invoked in the first place? (P. E. Hammond, “Review of Religious Movements in Contemporary America,” Science, May 2, 1975, p. 442).

Residents of San Francisco’s North Beach areas must now pay $10 for the privilege of parking in their own neighborhood. A residential parking plan was recently implemented to prevent commuters from using the area as a daytime parking lot. But according to a story in the San Francisco Bay Guardian (March 14, 1978), the plan has in no way improved the residential...
In concluding this chapter, it is important to stress that different approaches to forecasting are complementary. The strength of one approach or technique is often the weakness or limitation of another, and vice versa. All of this is to say that the logical foundations of each approach are interdependent. Improvements in forecasting are therefore likely to result from the creative combination of different approaches and techniques, that is, from multimethod forecasting. Multimethod forecasting combines multiple forms of logical reasoning (inductive, deductive, and retroductive), multiple bases (extrapolation, theory, judgment, and multiple objects (the content and consequences of new and existing policies and the behavior of policy stakeholders). Multimethod forecasting recognizes that neither precision nor creativity is an end in itself. What appears to be a creative or insightful conjecture may lack plausibility and turn out to be pure speculation or quackery, while highly precise projections or predictions may simply answer the wrong question. The ultimate justification for a forecast is whether it provides plausibly true results. In the words of an accomplished policy analyst and former assistant secretary in the Department of Defense, "It is better to be roughly right than exactly wrong."61

CHAPTER SUMMARY

This chapter has provided an overview of the process of forecasting, highlighting the nature, types, and uses of forecasting in policy analysis. After comparing approaches based on inductive, deductive, and retroductive reasoning, the chapter presents specific methods and techniques. These include methods and techniques of extrapolative, theoretical, and judgmental forecasting. The ultimate justification for a forecast is whether it yields plausibly true beliefs about the future, not whether it is based on a particular type of method, quantitative or qualitative. In this and other respects, it is better to be approximately right than exactly wrong.

LEARNING OBJECTIVES

- distinguish projections, predictions, and conjectures
- understand the effects of temporal, historical, and institutional contexts on forecast accuracy
- contrast potential, plausible, and normative futures
- describe objects, bases, methods, and products of forecasts
- contrast and evaluate extrapolative, theoretical, and judgmental forecasting methods and techniques
- use statistical software to make point and interval estimates of future policy outcomes
- analyze a case in policy forecasting involving issues of environmental justice


KEY TERMS AND CONCEPTS

catastrophe (158)
chaos theory (161)
conjecture (130)
cross-impact matrix (167)
deductive reasoning (139)
extrapolative forecasting (141)
goal (134)
inductive reasoning (138)
judgmental forecasting (179)
linearity (156)
nonlinearity (150)
normative futures (153)
optimistic (134)
plausible futures (153)
political feasibility (152)
potential futures (153)
prediction (130)
projection (130)
retroductive reasoning (139)
thoretical forecasting (161)

REVIEW QUESTIONS

1. What are the three forms of forecasting and how are they related to bases of forecasts?
2. In addition to promoting greater understanding of the future, what other aims can be achieved through forecasting?
3. To what extent are econometric methods more accurate than methods of extrapolative and judgmental forecasting? Explain.
4. How do the institutional, temporal, and historical contexts of forecasts affect their accuracy?
5. Distinguish potential, plausible, and normative futures.
6. List the main differences between goals and objectives. Provide examples.
7. Contrast inductive, deductive, and retroductive reasoning. Do the same for theoretical and judgmental forecasting.
8. List and describe techniques used in the three main types of forecasts. Provide examples.
9. Whether they are linear or nonlinear, most forecasts are based on assumptions of persistence and regularity. To what extent are these assumptions plausible?
10. Many forecasts employ linear regression analysis, also known as the classical linear regression (CLR) model. What are the main assumptions of the CLR model when used to make forecasts?
11. What corrective actions can be taken when assumptions of the CLR model are violated?
12. Is it better to be approximately right, rather than exactly wrong? How does your answer affect the choice of a forecasting method?

DEMONSTRATION EXERCISE

1. After reading Case 4, use SPSS or a similar statistical program (e.g., Excel) to perform a forecast in which you estimate the value of the Metropolitan Atlanta Rapid Transit Authority (MARTA) receipts in the years 1997–2001. Assume you are conducting the analysis in January 1997, as a consultant to MARTA. The client has hired you because MARTA needs an accurate estimate of future receipts. The estimate will be used to
disproportionately high cost in terms of lives lost is younger drivers. The median age of traffic fatalities is approximately twenty-nine years, which means that half of traffic deaths are relatively young persons. The Rawlsian conception of justice of fairness—that is, those worst off should benefit—may be used to challenge policies designed to reduce fatalities through speed laws rather than through educational and driver training programs that specialty target young drivers.\(^56\)

- *Inappropriateness.* Recommendations based on estimates of the value of human lives sometimes employ discounted lifetime earnings as a measure of value. Efforts to establish the cost (discounted or undiscounted) of a human life may be challenged on grounds that it is inappropriate to calculate a price for human lives, which are not commodities on an open market.\(^57\)

- *Misformulation.* A standing challenge to recommendations based on cost-benefit analysis is that the problem has been misformulated. In the case of the 55 mph speed limit, saving fuel during the oil crisis of 1970–73 was the original problem for which the National Maximum Speed Law was a recommended solution. The definition of the problem shifted to averting fatalities after the oil crisis passed. The existing formulation of the problem (averting traffic fatalities) may be challenged on grounds that the problem should be formulated as one of saving a nonrenewable resource, mitigating the emission of pollutants, and averting fatalities by a significant increase in taxes on gasoline, which in constant dollars cost less per gallon in 1990 than in 1974.

These threats to the plausibility of policy recommendations do not apply solely to cost-benefit and cost-effectiveness analyses. As all policy recommendations are based on causal as well as ethical premises, these threats to plausibility are relevant to almost any policy that seeks to achieve reforms through the regulation, allocation, or reallocation of resources.\(^58\)

In concluding this chapter, it is important to emphasize that the policy-analytic method of recommendation involves many uncertainties. The most important of these has to do with the role of values and ethics in policy analysis. The purpose of a policy recommendation is not simply to forecast or predict some future outcome but to advocate a course of action whose consequences are also valuable to members of a community. Yet, as we have seen, there are many difficulties in using economic theory and the tools of cost-benefit analysis to justify claims about what is best for society as a whole. For this reason, uncertainties about values are best treated as a matter for reasoned ethical argument and debate and not as technical economic questions.

A second source of uncertainty stems from incomplete knowledge about the effects of policies on valued outcomes. Even if there were total consensus on all important social values, we would still not know with certainty which policies and programs work best under different conditions. Some of this uncertainty is a result of the poor quality of data available to measure costs and benefits. Many cost-benefit analyses, for example, are based on incomplete information about the range of costs and benefits that must be considered in a reasonably thorough analysis. An even more important source of uncertainty stems from the inaccuracy of measurement procedures and the consequent need to exercise judgment in matters involving the estimation of shadow prices or the selection of an appropriate discount rate.

### CHAPTER SUMMARY

In this chapter, we have provided an overview of the nature and role of recommendation in policy analysis, compared and contrasted two major approaches to recommendation, and described specific techniques used in conjunction with these approaches. As we have seen, policy recommendations answer the question: What should be done? For this reason, policy recommendations require an approach that is normative, and not one that is merely empirical or merely evaluative. All policy recommendations involve claims about action, rather than claims that are simply descriptive (as in forecasting) or simply evaluative (as in evaluation).

Two major approaches to recommendation in policy analysis are cost-benefit analysis and cost-effectiveness analysis. While both approaches seek to measure all costs and benefits to society, only cost-benefit analysis measures costs as well as benefits in dollars as a common unit of value. Costs and benefits are of several types: inside versus outside; tangible versus intangible; primary versus secondary; and real versus pecuniary. In conducting a cost-benefit analysis, it is necessary to complete a series of interrelated tasks: specification of objectives; identification of alternatives; collection, analysis, and interpretation of information; specification of target groups; identification of types of costs and benefits; specification of criteria for recommendation; and recommendation itself. The criteria of adequacy most frequently employed in traditional cost-benefit analysis are net benefits and benefit-cost ratios. In contemporary cost-benefit analysis, these criteria are supplemented by redistribution criteria.

### LEARNING OBJECTIVES

- distinguish policy recommendation from other policy-analytic methods
- list and describe criteria employed to make reasoned choices among two or more alternatives
- contrast the Pareto criterion, the Kaldor–Hicks criterion, and the Rawls criterion
- compare and contrast comprehensive rationality and disinterested incrementalism as models of choice
- describe six types of rationality
- list and describe the steps in conducting benefit–cost and cost-effectiveness analyses
- discuss the main sources of uncertainty in making recommendations
- list and describe threats to the plausibility of policy recommendations
- use a case study to perform a critical analysis of assumptions and procedures of benefit–cost analysis
CHAPTER SUMMARY

This chapter has provided an overview of the various methods and approaches used in monitoring and evaluating the effectiveness of policy interventions. It has highlighted the importance of evaluation in ensuring that policies are implemented as intended and are achieving their intended outcomes.

LEARNING OBJECTIVES

- Distinguish between policy analysis and evaluation.
- Identify the main functions of monitoring and evaluation.
- Describe the role of monitoring in policy analysis.
- Explain the differences between formative and summative evaluation.
- Discuss the importance of stakeholder involvement in evaluation.

Figure 6.3: Graph showing the relationship between monitoring and evaluation.

KEY TERMS AND CONCEPTS

- Formative evaluation
- Summative evaluation
- Stakeholder involvement
- Policy analysis

REVIEW QUESTIONS

1. How is monitoring related to evaluation? Explain.
2. What is the relationship between monitoring and evaluation in policy analysis? Explain.
3. What is the purpose of monitoring? Explain.
4. What is the purpose of evaluation? Explain.
5. Explain the role of stakeholders in monitoring and evaluation.

6. The following table shows the number of criminal offenses committed by the police in the city of London over the past 10 years. Use appropriate graphs to illustrate the trends.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Offenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1200</td>
</tr>
<tr>
<td>2011</td>
<td>1300</td>
</tr>
<tr>
<td>2012</td>
<td>1250</td>
</tr>
<tr>
<td>2013</td>
<td>1200</td>
</tr>
<tr>
<td>2014</td>
<td>1350</td>
</tr>
<tr>
<td>2015</td>
<td>1400</td>
</tr>
<tr>
<td>2016</td>
<td>1350</td>
</tr>
<tr>
<td>2017</td>
<td>1200</td>
</tr>
<tr>
<td>2018</td>
<td>1150</td>
</tr>
<tr>
<td>2019</td>
<td>1200</td>
</tr>
</tbody>
</table>

7. Describe the role of stakeholders in the policy-making process. Explain.

8. Explain the concept of policy implementation. What are the factors that influence policy implementation?
Table 7.5 Techniques for Evaluation by Three Approaches

<table>
<thead>
<tr>
<th>Approach</th>
<th>Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudo-evaluation</td>
<td>Graphic displays</td>
</tr>
<tr>
<td></td>
<td>Tabular displays</td>
</tr>
<tr>
<td></td>
<td>Index numbers</td>
</tr>
<tr>
<td></td>
<td>Interrupted time-series analysis</td>
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<tr>
<td></td>
<td>Control-series analysis</td>
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<tr>
<td></td>
<td>Regression-discontinuity analysis</td>
</tr>
<tr>
<td>Formal evaluation</td>
<td>Objectives mapping</td>
</tr>
<tr>
<td></td>
<td>Value clarification</td>
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<tr>
<td></td>
<td>Value critique</td>
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<tr>
<td></td>
<td>Constraint mapping</td>
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<tr>
<td></td>
<td>Cross-impact analysis</td>
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<tr>
<td></td>
<td>Discounting</td>
</tr>
<tr>
<td>Decision-theoretic evaluation</td>
<td>Brainstorming</td>
</tr>
<tr>
<td></td>
<td>Argumentation analysis</td>
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<tr>
<td></td>
<td>Policy Delphi</td>
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<tr>
<td></td>
<td>User-survey analysis</td>
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</tbody>
</table>

Table 7.6 Interview Protocol for User-Survey Analysis

<table>
<thead>
<tr>
<th>Step in Evaluability Assessment</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy-program specification</td>
<td>1. What are the objectives of the policy or program?</td>
</tr>
<tr>
<td></td>
<td>2. What would be acceptable evidence of the achievement of policy-program</td>
</tr>
<tr>
<td>objectives (1)</td>
<td>objectives?</td>
</tr>
<tr>
<td>Policy-program modeling</td>
<td>3. What policy actions (for example, resources, guidelines, staff activities) are available to achieve objectives (2)?</td>
</tr>
<tr>
<td></td>
<td>4. Why will action A lead to objective C (2)?</td>
</tr>
<tr>
<td>Policy-program evaluation</td>
<td>5. What do various stakeholders (for example, Congress, OMB, state auditor</td>
</tr>
<tr>
<td>assessment</td>
<td>general, mayor’s office) expect of the program in terms of performance? Are these expectations consistent?</td>
</tr>
<tr>
<td>Feedback of evaluability</td>
<td>6. What is the most serious obstacle to achieving objectives?</td>
</tr>
<tr>
<td>assessment to users</td>
<td>7. What performance information do you need on the job? Why?</td>
</tr>
<tr>
<td></td>
<td>9. What is the most important source of performance information you will need in the next year?</td>
</tr>
<tr>
<td></td>
<td>10. What key issues should any evaluation address?</td>
</tr>
<tr>
<td>Notes:</td>
<td>(1) Answers to these questions yield operational measures of objectives.</td>
</tr>
<tr>
<td></td>
<td>(2) Answers to these questions yield operational measures of objectives.</td>
</tr>
</tbody>
</table>

Chapter 7

Evaluating Policy Performance

CHAPTER SUMMARY

This chapter has provided an overview of the process of evaluation, contrasted three approaches to evaluation, and presented specific methods and techniques used in conjunction with these approaches. The process of valuation is then distinguished from evaluation, and alternative ethical and metaethical theories are examined. Normative ethics and metaethics provide rationales for selecting criteria to evaluate policy performance.

LEARNING OBJECTIVES

- compare and contrast processes of monitoring and evaluation
- list characteristics that distinguish evaluation from other methods of analysis
- describe and illustrate criteria for evaluating policy performance
- contrast decision-theoretic evaluation and metaevaluation
- distinguish values, ethics, and metaethics
- describe and illustrate descriptive, normative, and metaethical theories
- analyze a case in “living wage” policies that involves issues of economic inequality

KEY TERMS AND CONCEPTS

- decision-theoretic evaluation (359)
- multiattribute utility analysis (361)
- evaluability assessment (360)
- user survey analysis (365)
- values (342)
- norms (344)
- teleological (utilitarian) theory (351)
- deontological theory (351)
- metaethics (345)
- normative ethics (345)
- practical ethics (350)

REVIEW QUESTIONS

1. Compare and contrast evaluation and recommendation in terms of time and the types of claims produced by each policy-analytic method.
2. Many policy-program evaluations fail to recognize the latent purposes of evaluation, including a desire (a) to make programs look good by focusing on their surface characteristics (“eyewash”); (b) to cover up program failures (“white-wash”); (c) to destroy a program (“submarine”); (d) to engage in evaluation merely as a ritual that must be practiced to receive funding (“posture”); and (e) to postpone attempts to resolve problems (“postponement”). See Edward A. Suchman, “Action for What? A Critique of Evaluative Research,” in Evaluating Action Programs, ed. Carol H. Weiss (Boston: Allyn and Bacon, 1972), p. 81. What problems does this raise for defining the objectives against which performance is to be evaluated?
Procedural Guide 8.3 Guidelines for Interpreting Arguments

- Policy argumentation has three major functions: to generate debate that improves the validity, soundness, and efficacy of policies (dialectical function); to present optimally valid and empirically sound conclusions (logical-empirical function); to persuade others to accept policy arguments (rhetorical function), apart from the validity, soundness, or usefulness of the arguments.
- Look for concealed meanings in words, sentences, and entire arguments. A word or sentence may not mean what it says on the surface. Example: "He is a good Liberal" does not mean that the person described performs well as a Liberal; it rather means that the person's identity as a Liberal is associated with some kind of weakness or limitation.
- Distinguish between the surface meaning of a word, sentence, or argument and its meaning in the context of the arguer. Try to identify any differences in your understanding from that of the arguer. Example: "The mayor should not have publicly acquiesced in the demonstrators' demands." Several potential misinterpretations are possible: someone except the mayor should have acquiesced; the mayor should not have acquiesced in public; the mayor should not have acquiesced at all.
- Observe the principle of hermeneutic charity, which requires that discrepancies in meaning be resolved by accepting, or trying to understand, what the arguer is trying to say. Example: Critics of arguments presented in quantitative language often label such arguments (and the arguers) as "logical positivists," notwithstanding the fact that quantification, per se, has nothing to do with logical positivism. A charitable effort to understand what the arguer actually believes can solve this problem.
- Look for terms that are used pejoratively to discredit a person or policy. On the surface, these terms can be neutral; but in context, they are often used pejoratively. Examples: "This is just another example of a new bureaucratic," "These are the arguments of typical 'tree-huggers.'" "The report, written by a bunch of logical-positivists, is unacceptable."

- Consensus. Elements of an argument should be internally consistent and compatible. For example, ethical arguments concerning the justice or fairness of a policy are plausible to the degree that they incorporate a system of internally and externally consistent ethical hypotheses.56
- Coherence: Elements of an argument should be operationally connected. For example, the plausibility of an ethical argument depends on whether responses to several levels of descriptive and evaluative questions—levels ranging from verification and validation to vindication—are operationally linked.57

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57 Fischer, Politics, Values, and Public Policy, Table 10, pp. 207-8.

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CHAPTER SUMMARY

This chapter has provided an understanding of the structure and process of policy argumentation, focusing on contrasts among types of claims, the identification and arrangement of elements of policy arguments, and the effects of rebuttals on the dynamics of argumentation. The chapter proceeds to contrast different modes of policy reasoning and offer guidelines for the identification and assessment of common fallacies that weaken or seriously flaw policy arguments. Formal as well as informal fallacies are arguments that can appear to be plausible, although they involve unreliable or irrelevant information and unsound or unwarranted assumptions. Policy argumentation is central to policy analysis and the policy-making process.

LEARNING OBJECTIVES

- compare and contrast three types of policy claims
- identify and describe functions of the six elements of a policy argument
- explain how rebuttals affect the process of argumentation by changing the strength of qualifiers and (usually) diminishing the plausibility of policy claims

- distinguish modes of policy reasoning based on different kinds of warrants and backings
- evaluate the plausibility of elements of arguments and arguments as a whole
- apply guidelines for identifying formal and informal fallacies
- analyze and evaluate a complex policy argument

58 Bacca, Induction, p. 11.
The interactive nature of policy analysis makes questions of information use complex. Analysts rarely produce information that is or can be used merely for "problem solving," in the narrow sense of discovering through analysis the most appropriate means to ends that are well defined and about which there is substantial consensus. Many of the most important policy problems, as we have seen in this book, are sufficiently ill structured that the "problem-solving" model of policy analysis is inappropriate or inapplicable. For this reason, policy analysis has been described throughout this book as an integrated process of inquiry where multiple methods—problem structuring, forecasting, recommendation, monitoring, evaluation—are used continuously to create and transform information about policy problems, policy futures, policy actions, policy outcomes, and policy performance. Although the process of policy analysis is quintessentially methodological, it is also a process of communicative interaction. Policy analysis, because it aims at the creation, critical assessment, and communication of policy-relevant information, is vital to policy argumentation and public debate.

**CHAPTER SUMMARY**

This concluding chapter has provided an overview of the process of policy communication and its importance to the use of analysis by policy makers. Policy analysis is the beginning, not the end, of efforts to improve policy making. Knowledge and skills in conducting policy analysis are different from knowledge and skills in developing policy documents and giving oral briefings. To be effective, analysts need to master and apply a broad range of communications skills, thereby narrowing the great divide between intellectual and social dimensions of policy making.

**LEARNING OBJECTIVES**

- describe stages in the process of policy communication
- contrast policy analysis, materials development, interactive communication, and knowledge (information) use
- explain how the process of policy analysis is related to the process of policy making
- describe the main elements of policy issue papers and policy memos
- discuss factors that factors explain the use, abuse, and misuse of policy analysis
- plan, present, and evaluate oral briefings that involve the communication of the same information to different audiences

**KEY TERMS AND CONCEPTS**

- contingent communication (427)
- executive summary (431)
- interactive communication (422)
- knowledge (information) use (435)
- letter of transmittal (432)
- materials development (422)
- policy issue paper (427)
- policy memo (430)

**REVIEW QUESTIONS**

1. Why are the communication and use of information central to the aims of policy analysis?
2. If policy analysis is an intellectual activity carried out within a social process, what are the implications for the use of analysis by policy makers?
3. Policy analysis is the beginning, not the end, of efforts to improve the policy-making process. Comment.
4. Before intended beneficiaries can use policy-relevant information, it must be converted into policy-relevant documents and communicated in presentations of different kinds. Does this guarantee that intended beneficiaries will use information?
5. Describe stages of the process of policy communication.
6. Why are skills needed to develop policy documents and give oral presentations different from skills needed to conduct policy analysis?
7. Discuss factors that affect the use of policy analysis by policy makers and other stakeholders.
8. Why is the production of policy analysis described as a poorly managed lumber mill?

**DEMONSTRATION EXERCISE**

The purpose of this exercise is to sharpen knowledge and skills in planning and conducting effective oral briefings. This is a group exercise, although different individuals could also complete it. Divide the class into four groups. Each group should perform the following tasks:

1. Respond to one of the following requests (I, II, III, or IV) to give an oral briefing on the reduction of harmful levels of lead in gasoline. Assume that you are the authors of the analysis included as Case 9. It is an analysis prepared by David Weimer and Aidan Vining, two highly experienced policy analysts. Your group has been asked to make one of the four briefings below.
2. Each group will have fifteen minutes to give its briefing and respond to ten minutes of questioning. The main policy question you must answer is, should the government regulate lead additives in gasoline?
3. Other class members, who will be using the attached rating scale, will evaluate presentations. The evaluations will be used as a basis for a critique and discussion of the briefings.

- **Group I.** Prepare an oral briefing for a community environmental group composed of sixty citizens who have little or no knowledge of statistical methods and biomaterial research on lead. The audience does not appear to your group, which is composed of "outsiders" from Washington. Among members of the group is a potentially disruptive person who likes to get attention by engaging in a "knowledge contest." This person is running for public office in the next election. The environmental group wants to see new legislation on the public agenda. Your answer to the policy question stated above is supposed to help them.