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RESEARCH REPORT

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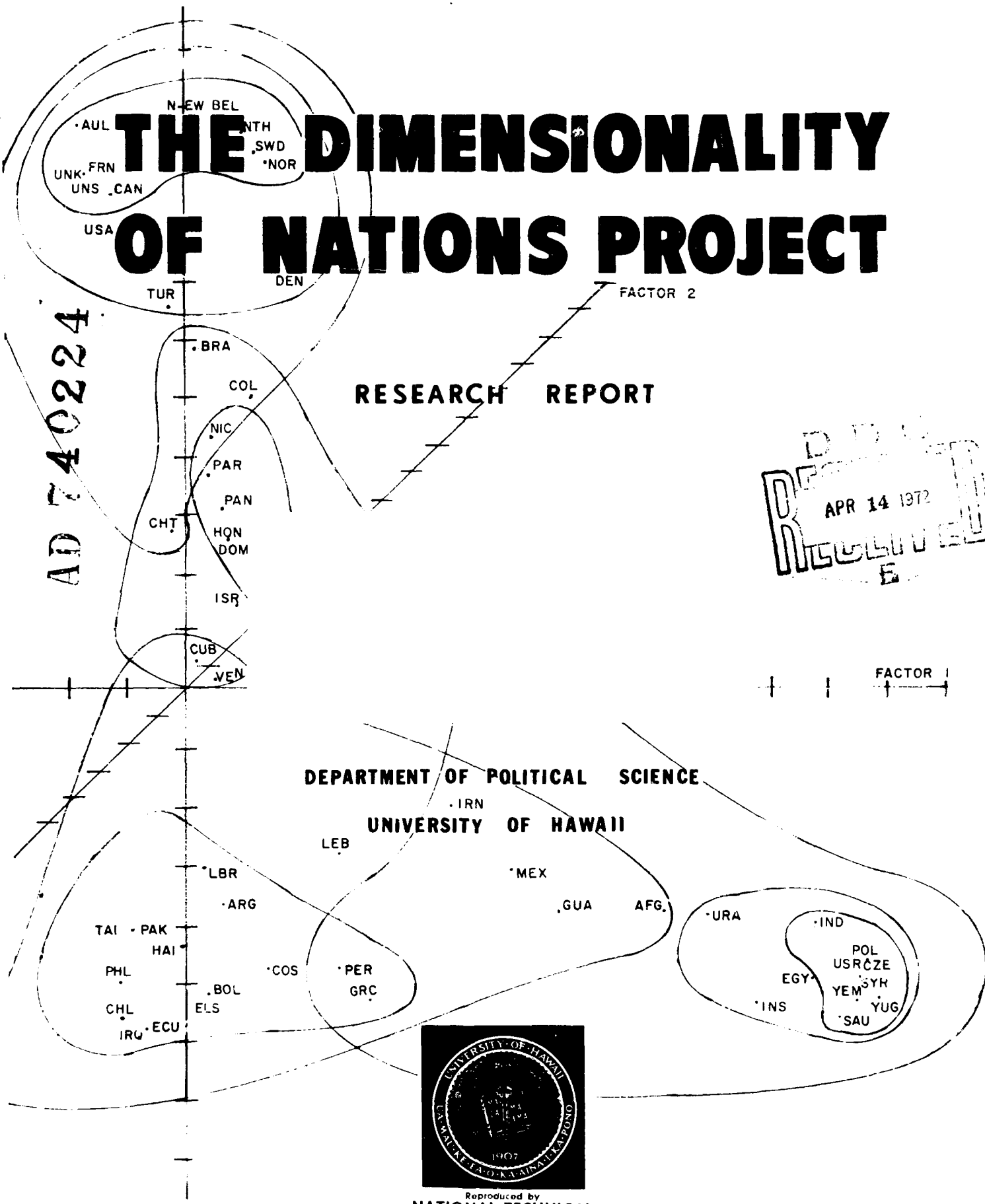
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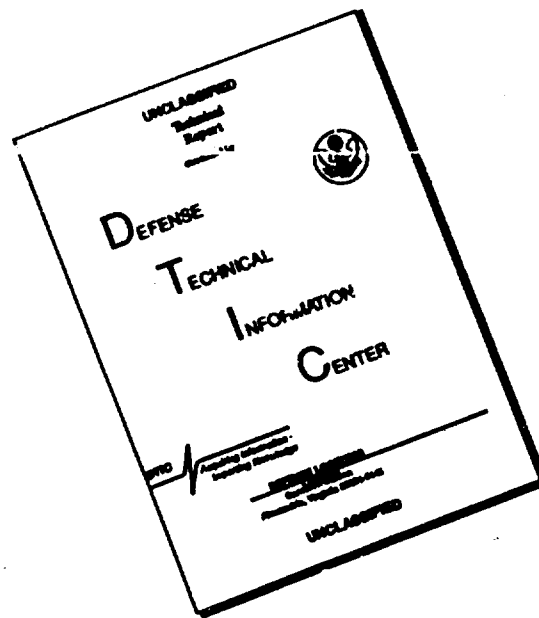
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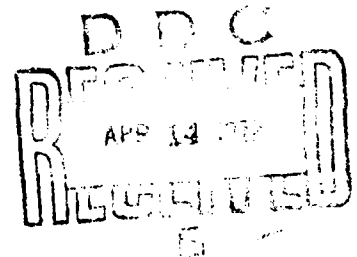
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THE DIMENSIONALITY OF NATIONS PROJECT
Department of Political Science
University of Hawaii

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RESEARCH REPORT NO. 59

PRESCRIBING FOREIGN POLICY

George Kent

January 1972

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13. ABSTRACT

How should foreign policy be made? The question has rarely been raised. Where it has been recognized, it has not been seen as a wholly legitimate question for scholarly concern. This study proposes procedures to assist the policy analyst in systematically developing action recommendations for dealing with foreign policy problems. The procedures are designed to assist rather than to substitute for the analyst's own judgement. They are based on the principle of decomposing large, difficult questions into series of smaller, more manageable questions. The policy analysis process as a whole is divided into three major stages: describing the policy problem, formulating action proposals, and evaluating alternatives. Each of these, in turn, is divided into component steps. The inescapable limitations on the analyst's time and other resources is fully recognized, and attention is given to the problem of allocating those resources over the different parts of the policy analysis task.

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FOREWORD

Groundwork for this study was offered in two of my earlier DON Research Reports, Policy Analysis for Action Recommendations and The Evaluation of Action Alternatives. This study substantially supersedes those earlier reports.

This version of Prescribing Foreign Policy should be viewed as a record of work in progress. I would appreciate having readers communicate their criticisms and relevant insights and experiences to me to help guide future revisions and extensions. I fully intend to continue work on the manuscript.

This study focuses primarily on the management of foreign policy problems within essentially stable, ongoing political systems. My future work will deal more with the question of political design, the problem of preparing the architecture and actually constructing wholly new political systems. This work is foreshadowed in a new DON Research Report called Plan for Designing the Future. The more I study the question, however, the more I suspect that the two approaches are not that radically different. Where this study refers to "alternative courses of action," perhaps we can simply substitute "alternative models of political systems." In other words, the procedures for Prescribing Foreign Policy seem to be much the same as those for political design.

The Dimensionality of Nations Project has been enormously helpful to me in this work, by providing generous support, by offering encouragement, and by leaving me alone. I would like to express here my deep appreciation to the Director of the DON Project, R. J. Rummel, and also to the Administrative Assistant, Mrs. Ora Mae Barber, for all of their help.

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1. PURPOSE AND PLAN

1.1 Introduction

Political scientists are discovering that most of their work really does not contribute much to dealing with the great or even the small political problems of our age. Some are unconcerned, arguing that political scientists should be pure seekers of knowledge, aloof from the problems of the day. While allowing that it might be appropriate for some of their number to stand apart in this way, other political scientists have become uneasy with their apparent impotence. Troubled, they ask what they might do professionally, to help grapple with the issues.

Their responses have varied widely. In the 1950s a group of eminent scholars, facing what they saw as the "world revolution" of their time, answered the challenge by launching a series of studies on political elites and another on the nature of political symbols.¹ Rather than continuing the traditional emphasis on political institutions, some political scientists began to concentrate their studies on the decision-making process.² To do what they could to "help in dealing with the great public problems and issues of our time," others were concerned that "at least since 1945 most American political scientists have focused their professional attention mainly on the processes by which public policies are made and have shown relatively

¹Harold D. Lasswell, The World Revolution of Our Time: A Framework for Basic Policy Research, Stanford: Hoover Institute Studies, Stanford University Press, 1951. One of the major works to emerge from this effort, Daniel Lerner and Harold D. Lasswell (ed.), The Policy Sciences, Stanford: Stanford University Press, 1951, is devoted entirely to research methodologies.

²Cf. Edward V. Schneier (ed.), Policy-Making in American Government, New York: Basic Books, 1969, p. ix et passim.

little concern with their contents."³ The decade of the 1970s was ushered in with the Caucus for a New Political Science calling for studies more attuned to real, rather than academic, political questions, and with the new President of the American Political Science Association expressing support of their views.⁴

Asking only for reallocation of attention within familiar terrain, however, these were not wholly new departures. The call for a shift to more applied research, for example, has come commonly understood to mean that more studies should examine the effects of variables within the control of political decision-makers.⁵ The techniques and forms by which these studies were to be conducted were expected to fit into the well-tested molds. The demands for relevance called for research asking new questions, and for efforts at achieving understanding from angles that may not have tried before. Where there have been calls for really new departures, they have not been heard that way.

For the most part, it is still research and still a search for understanding that is expected. Political scientists seem hardly aware that these particular definitions of their task have been constraining, that there are alternatives, other things one might do besides research, and even other ends to be sought besides understanding. The term political science is constraining, as is the term research, unless of course these terms are understood in a very broad sense. Studies which are not primarily devoted to empirical research and are not fully scientific may nevertheless be legitimate, and even scholarly, and if they are, they should be recognized as such by the political studies profession.

³Austin Ranney, "The Study of Policy Content: A Framework for Choice," in Austin Ranney (ed.), Political Science and Public Policy, Chicago: Markham, 1968, p. 3.

⁴David Easton, "The New Revolution in Political Science," American Political Science Review, Vol. LXIII, No. 4 (December 1969), pp. 1051-1061.

⁵Cf. David C. Schwartz, "From Political Theory to Peace Policy: Notes On a More Structured Research Process," Peace Research Society (International), Papers, Vol. XI (1968), pp. 43-46.

One of the most seriously retarded kinds of studies are those explicitly designed to produce sound recommendations for action dealing with concrete problems, studies described here as policy analyses. Of course the notion that political scientists should be concerned with developing recommendations is very old, not very new. Froman describes the traditional, normative studies of public policy in this way:

These studies attempt to analyze, usually in a critical fashion, a particular public policy (agriculture, labor, education, unemployment, etc.), and generally will also suggest either reforms in the existing policy or a new type of policy altogether. For example, there are numerous studies of our foreign aid program which describe in detail how it has failed in one way or another to live up to certain standards. These reports are accompanied by general or specific recommendations on how the program can be "improved."

Studies of this kind have now fallen into disrepute as being "value-laden" and lacking in scientific interest. Much of the dissatisfaction revolves around the point that such studies are argumentative and sometimes rhetorical, using data to score policy points rather than scientific ones.⁶

As a result, normative studies have been shunned. In his anthology on policy studies, Sharkansky favors "a primary concern with explanation rather than prescription" and is pleased that "the focus on explanation instead of prescription allows political scientists with different preferences to cooperate on common projects."⁷

Surely the observation that prescriptive studies have been done poorly should lead to their refinement, not to their abandonment. They have been abandoned. The art is now retarded more out of neglect than because of failures in serious attempts at it, and it has been neglected largely because prescriptive policy analysis has not been recognized as a fully

⁶ Lewis A. Froman, Jr., "The Categorization of Policy Contents," in Ranney (ed.), Political Science and Public Policy, op. cit., p. 42.

⁷ Ira Sharkansky (ed.), Policy Analysis in Political Science, Chicago: Markham, 1970, p. 2.

legitimate scholarly medium. This study is designed to promote the undertaking of policy analysis and to encourage the development of its methodology. The alternative to supposedly "objective, value-free" research is not solely the pressing of one's own personal political views. What is new in this attempt at the revival of prescriptive studies is its call for a new kind of explicit, systematic style. It should help political scientists with differences to deal with those differences.⁶

1.2 The Question

Many anthologies of policy-oriented studies have appeared in the late sixties and early seventies, but virtually all of them have focussed on problems of urban America and on questions of program budgeting, and they have been descriptive rather than prescriptive. A few have examined military problems and strategic analysis.⁹ But what of problems in foreign policy? The leading anthology, representative of the rest, "... seeks to explore the way international politics and foreign policy are or may be. It does not attempt to probe the way they ought to be."¹⁰

How should foreign policy be made? Given a concrete problem in foreign relations, how should one go about deciding what should be done about it? The answer is not at all obvious. Guidance on the question of

⁸ Among the few attempts at prescribing guidelines for policy analyses are David Braybrooke and Charles E. Lindblom, A Strategy of Decision: Policy Evaluation as a Social Process, New York: Free Press, 1963; and Yehezkel Dror, Public Policymaking Reexamined, San Francisco: Chandler, 1968. For reviews and rejoinders on Dror, see Ira Sharkansky and Randall Ripley in American Political Science Review, Vol. LXIII, No. 3 (September 1969), pp. 915-921; Dror in American Political Science Review, Vol. LXIV, No. 1 (March 1970), pp. 185-186; Michael J. Shapiro in Transaction, Vol. VII, No. 12 (October 1970), pp. 55-57.

⁹ Cf. S. Enke (ed.), Defense Management, Englewood Cliffs, N. J.: Prentice-Hall, 1967; Charles J. Hitch and Roland N. McKean, The Economics of Defense in the Nuclear Age, New York: Atheneum, 1967; Edward S. Quade (ed.), Analysis for Military Decisions, Chicago: Rand McNally, 1967; Edward S. Quade and W. I. Boucher (eds.), Systems Analysis and Policy Planning: Application in Defense, New York: American Elsevier, 1968.

¹⁰ James N. Rosenau (ed.), International Politics and Foreign Policy, Revised Edition, New York: Free Press, 1969, p. xix.

how one should decide might be expected from normative theory in political philosophy, from arguments and analyses by students of foreign policy making, and from examples of actual studies performed in or for foreign offices. A review of these sources reveals that in fact the question has hardly been raised.

The purpose of this study is to review and develop procedures and guidelines for the formulation of wise courses of action in foreign affairs. I do not expect to produce massive improvements in foreign policy making generally or to provide solutions for any specific foreign policy problems. My objective is more modest, to show what would constitute sound reasoning in support of recommendations for action for dealing with foreign policy problems. These ideas are assigned to help in formulating responses to policy problems where specific courses of action are to be selected.

There are many relevant issues which will not be taken up. This study is not concerned with the politics of policy making, with interaction and influence within and across bureaucracies. The question posed here asks how the individual should arrive at action recommendations rather than asking how the individual who has already reached conclusions should maneuver to have his recommendations implemented. Of course, policy analysts should not be politically naive, believing that sound analysis alone is sufficient to assure implementation. On the other hand, they should not go to the opposite extreme either and, like Roger Hilsman, insist that policy making is so thoroughly political a process that analysis has virtually no place in it.¹¹ One should know how to establish a reasonable and reasoned position for oneself before contemplating the problem of persuading others of its virtue.

The procedures to be outlined ignore the organizational structures of foreign offices, and no organizational reforms are suggested.¹²

¹¹Roger Hilsman, To Move a Nation, New York: Delta, 1967; and Roger Hilsman, The Politics of Policy Making in Defense and Foreign Affairs, New York: Harper and Row, 1971.

¹²For recommendations for reform at the organizational level see Department of State, Diplomacy for the 70's: A Program of Management Reform for the Department of State, Washington: U.S. Government Printing Office, 1970.

I am concerned with particular, possibly unique, policy problems, and not with large-scale management systems like planning-programming-budgeting-systems (PPBS) or broad planning devices like the Department of State's Country Analysis and Strategy Paper (CASP).¹³ My intention is to provide guidance for deliberation where time is available for analysis, but many of the principles will also be applicable for coping with crises demanding quicker reactions. The focus is on foreign policy, but much of the argument will be applicable in other problem areas as well.

This study draws on the insights of formal decision theory, and it also acknowledges the limitations of those abstractions. The problem of formulating policy is treated analytically, but the experiential, intuitive aspect is given full consideration as well. The guidelines that are developed are designed to aid wisdom and intuition, and not to substitute for those qualities. My objective is not to develop formally elegant models of decision-making but to propose procedures which are in fact useful in making foreign policy decisions.

The procedures offered are for the use of the individual analyst, an individual who could be anyone at all serving any kind of values at all. He could be a government official, a liberal reformist, or a revolutionary radical. They are not limited to serving prevailing values and prevailing power. The guidelines should help the outsider to make his own political decisions, or to form shadow decisions and thus provide him with a sound basis for criticism of the insider.

1.3 The Character of Policy Analyses

Policy analysis is understood here to mean that kind of systematic, disciplined, analytical, scholarly, creative study whose primary motivation

¹³On CASP, see Diplomacy for the 70's. On attempts to apply PPBS to foreign policy making, see Thomas C. Schelling, "PPBS and Foreign Affairs," in U.S. Congress. Senate. Government Operations Committee, Planning-Programming-Budgeting, Washington: U.S. Government Printing Office, 1967 (Also in Burton Sapin (ed.), Contemporary American Foreign and Military Policy, Glenview, Ill.: Scott, Foresman, 1970); Frederick C. Mosher and John E. Harr, Programming Systems and Foreign Affairs Leadership: An Attempted Innovation, New York: Oxford University Press, 1970.

is to produce well-supported recommendations for action dealing with concrete political problems. The question posed might be "How should the United States respond to the shooting down of American reconnaissance aircraft over North Vietnam?" or "What should Mothers for Peace do to protest the Indochina war?" or "What should the government of Cuba do if it wished to have the United States leave its bases at Guantanamo?" or "What should the Vatican do in relation to the Middle East conflict?" The problems can be real or hypothetical, immediate or distant, and the analyses can be addressed to any political decision-maker and can be framed in reference to any set of political values. In every case, policy analyses respond to the question, what should be done?

By the definition used here, policy analyses are analytical studies which always refer to concrete political problems and always conclude with concrete recommendations for action. There are many kinds of policy-oriented studies which are relevant to and may contribute to the goals of policy analysis, but which must not be mistaken for policy analyses. For example, many accounts have been offered of the way in which particular decisions were made, such as the bombings of Hiroshima and Nagasaki, the decision to intervene in Korea, and the Cuban missile crisis, but these reconstructions have yielded little guidance to suggest how such decisions should have been made. The specific errors that have been analyzed have not yielded well-formed general guidelines. Similarly, many discursive essays conclude with recommendations for action, but do not suggest any generally applicable procedures by which other analysts might arrive at comparable conclusions. Examples of systematic studies which begin with descriptions of a foreign policy problem and then work through to recommendations for action (which had not been chosen in advance) are extremely rare.

Studies of the contents or sources of policies which have been formed in the past by others, or studies which describe or explain policy-making institutions or procedures are not policy analyses in the meaning used here. The reference here is not specifically to formal theories of decision-making, or to large-scale management systems, or to studies of the bureaucratic politics of implementing decisions--although all of these may of course be useful to the policy analyst.

In asking what should be done, rather than what is the case, policy analysis becomes something other than a variation of empirical research. Of course the revelation of facts or the validation of empirical generalizations does have an important role to play in policy analysis. Such research is essential at the outset to establish a clear understanding of the political problem under study, and to reveal feasible courses of action. The task of evaluation may raise certain empirical questions because one alternative would be preferred if one thing were the case and another would be preferred if another situation prevailed. These questions of fact on which the choice is found to depend might be susceptible to empirical research.

Unlike most empirical research studies, policy analyses do not just hint at action recommendations and they do not pretend that the identification of wise courses of action is implicit, but somehow self-evident, in collections of validated propositions.

Policy analysis is much more than simple advocacy. The simplest advocacy states a view on what should be done. A degree more thorough is that advocacy in which reasons for taking the action are attached to the recommendation. Sometimes the reason consists of nothing more than the identification of a presumably desired end and a presumption that the prescribed action will be instrumental in bringing about that end. The statement of the motivations or reasons for taking an action, alone is never a sufficient argument, however. Somewhat more sophisticated, and showing the beginnings of analyses, are those arguments which, in addition to suggesting advantages of the prescribed action, also acknowledge at least some of the disadvantages. It is said or implied that the positive qualities outweigh the negative qualities. No matter how well balanced and fairly presented, even this is not adequate. Any good policy analysis should go beyond the examination of just one possible course of action and present an explicit comparison of alternative courses of action. In one variation of this form, based on setting up "straw men," the alternatives are selected so that all except the one that was favored a priori are quite clearly inferior. In another variation, only the advantages of the favored proposal and the disadvantages of the disfavored proposal are reported. In good policy analyses, in contrast, the outcome, the decision

as to which course of action will finally be recommended, is not predetermined, but is decided as a result of the analysis. A full range of relevant alternatives is examined, the advantages and disadvantages of each are determined with no conscious attempt to stack the deck in favor of any of the alternatives, and these alternatives are then weighed against each other to arrive at an assessment as to which of them, on balance, is best.

Each of the other forms of argument that have been described may be appropriate in particular contexts. Assessing the net quality of an action proposal simply by comparing its positive and negative features is adequate if the only alternative is doing nothing. The simple recitation of the virtues of the favored option is sensible in a debate. One-sided arguments are useful in drawing attention to proposals favored by the advocates of particular courses of action. While one-sided arguments may be appropriate in debates, they are never adequate to the purposes of policy analysis.

The purpose of a policy analysis study is to help form decisions in problematic situations, and not to defend or sell decisions that have already been made. Secretary of State Dean Rusk became familiar with such backward policy analyses:

I have seen such papers constructed with the recommendations as the base, upon which was constructed the conclusions, the facts, and the statement of the problem. In which case, the liveliest controversy can occur about how to pose the question. Physics to the contrary, pyramids can be built from the apex downward -- but it is a fragile process which endangers the entire edifice.¹⁴

Another potential abuse is the undertaking of policy analyses to avoid action, in a manner comparable to that used in the "ritual modeling" or "ritualized rationality" sometimes encountered in arms control studies. As Robert Boguslaw, drawing on the insights of Donald Michael, explains these studies:

¹⁴Dean Rusk, "The Anatomy of Foreign Policy Decisions," Department of State Bulletin, Vol. LIII, No. 1370 (September 27, 1965), p. 503.

They are more properly seen as magic-like rituals invoked by confused and frustrated decision makers or advisers to decision makers. With respect to arms control and disarmament, the luxury of ritual is possible when solutions to problems of war and peace are neither urgently required nor urgently desired by the decision makers involved ... Any method or technique -- scientific, mathematical, psychological, or religious -- may be invoked as a substitute for problem solving ...

Ritual modeling is also useful, of course, as an alternative to action. A parliamentary device that has proved far more effective than the filibuster is the device of delaying action until a ritual modeling job has been completed. Frequently these efforts are called "studies," or "investigation," or even "research."¹⁵

Once the analyst's problem is resolved and he is confident that he knows what should be done, there is no call for policy analysis at all. If the form is used to sanctify decisions and to persuade others of their virtue, or to substitute for facing up to a problem, it is abused.

Besides providing explicit recommendations, a policy analysis report should also provide a detailed account of the way in which those recommendations were reached. In sound policy analyses the concluding recommendations should sensibly follow from the preceding argument, and should not be simply tacked on as a gratuitous afterthought. A good policy analysis is to the usual essay arguing for certain actions as a sound empirical research study is to a journalistic report. The quality of a policy analysis study rests not only in the content of the final recommendations but also in the support that is developed for those recommendations, just as the quality of a piece of research lies not only in the statement of its findings but also in the nature of their validation.

¹⁵ Robert Boguslaw, The New Utopians: A Study of System Design and Social Change, Englewood Cliffs, N. J.: Prentice-Hall, 1965, pp. 65-66. Also See Donald N. Michael, "Ritualized Rationality and Arms Control," Bulletin of the Atomic Scientists, Vol. XVII, No. 2 (February 1961), p. 72.

One can do many different kinds of studies about the work of policy analysis, but these are not examples of policy analysis.

The most needed studies about policy analysis are those which guide the steps to be taken between the initial identification of the political problem of interest and the final report of well-supported recommendations for action. As in the case of empirical research, it is not obvious how policy analyses should be conducted. The art needs methodologies to help its practitioners to guard against error, and to encourage attempts by new practitioners. This study is intended to contribute to meeting this need.

1.4 Empirical Research, Futuristics, and Policy Analysis

Much of the empirical research that has been conducted in the social sciences has been motivated by the desire to help in the management of social problems, whether in the short run ("applied" research) or in the long run ("pure" research). If we examine achievements rather than aspirations, it is plain that the products of most social science research, especially that conducted in the universities, has not in fact been effective in meeting major social problems.

Many who have become disillusioned with the trends in empirical social science research are now breaking new ground in what is called futuristics or futures research. Its limited relevance has not yet become visible to most of its practitioners, even though it parallels the empirical research trends in striking ways. Empirical research studies frequently begin with a statement of concern for some social problem, assert the familiar homily about the general need for knowledge if one is to cope with such problems, and then proceed to pose specific questions whose answers could not conceivably help in the management of the particular social problem that had been described. Now the futurists too often begin their studies with a ritualistic assertion of the general importance of predictions in policy making, and then proceed to make predictions or forecasts of no particular usefulness. Just because knowledge is needed, it does not follow that all gains in knowledge are equally useful. Similarly, it does not follow that, just because policy makers need to make some predictions, any predictions will do. Given

the limited resources available for that kind of work, the argument that a given piece of research or forecasting might or could be useful is surely not good enough.

If one's primary interest is in doing empirical research or in making predictions, as an end, I will not quarrel. But if it is claimed that the primary motivation is to contribute to the management of concrete social problems, then I argue that some policy analytic work should precede the investment of substantial effort into empirical research or into forecasting. Some tentative policy analysis is needed to determine which questions really matter, since many of the questions which might be raised about a political problem are likely to be quite irrelevant to the work of the policy analyst.

Rather than focusing exclusively on showing how given questions could be answered, those concerned with developing the methodologies for empirical or futures research in the service of policy-making should give much more attention to the problem of selecting questions for study. This means showing how those questions are raised and are important in the policy analysis process.

1.5 On Methodology

Austin Ranney apparently does not take himself very seriously when he suggests that:

... political science may develop, for example, a reliable and valid system for calculating political costs and benefits; an agreed and operationalized optimizing criterion of "gross political product"; and/or an extension of ends-means analysis to specify the interrelations and priorities of instrumental values. If it does, political scientists' professional knowledge and skills will become visibly useful in the identification, comparison, and evaluation of competing policy proposals; and, inevitably, policy-makers will call on us extensively for advice and quite possibly even pay it serious attention.¹⁶

¹⁶ Ranney, Political Science and Public Policy, p. 18.

Political scientists may not be able to provide formulae for finding exact answers, but they can at least provide guidance for posing the right questions. Although there are few well developed models for doing policy analytic work, it is possible to appreciate the need for such models and to point to directions which might be taken to fulfill this need. Whatever the likelihood of success, the endeavor seems eminently worthwhile.

Methodologies of the kind sought here have been developed to a highly sophisticated level in other fields, but their carry-over to political problems is extremely limited. For example, the techniques developed for the management of large enterprises, such as planning-programming-budgeting, or PERT, are not helpful for dealing with individual problematic policy questions.¹⁷ Formal decision theories like those on decision-making under uncertainty or on game theory can be understood as prescriptive, but they are difficult to use because of the practical impossibility of expressing real political problems in the terms required by these theories.¹⁸ Instances may be found in which these techniques have been used, but this does not falsify the observation that the methods are not generally applicable for guiding political decision making. Similarly, the techniques of operations research are not of much use, primarily because of the highly multidimen-

¹⁷Cf. Fremont J. Lyden and Ernest G. Miller (eds.), Planning Program-Budgeting: A Systems Approach to Management, Chicago: Markham, 1967; Frederick C. Mosher and John E. Harr, Programming Systems and Foreign Affairs Leadership: An Attempted Innovation, New York: Oxford University Press, 1970; Aaron Wildavsky, "The Political Economy of Efficiency: Cost-Benefit Analyses, Systems, Analysis, and Program Budgeting," in Ranney (ed.), Political Science and Public Policy, op. cit., pp. 55-82; Aaron Wildavsky, "Rescuing Policy Analysis from PPBS," Public Administration Review, Vol. XXIX, No. 2 (March/April 1969). This last article by Wildavsky is included among the committee prints circulated in connection with hearings on PPBS held in the late 1960s before the Subcommittee on National Security and International Operations.

¹⁸Cf. R. Duncan Luce and Howard Raiffa, Games and Decisions: Introduction and Critical Survey, New York: Wiley, 1957; Howard Raiffa, Decision Analysis: Introductory Lectures on Choices Under Uncertainty, Reading, Mass.: Addison-Wesley, 1968; Arnold Kaufman, The Science of Decision-Making: An Introduction to Praxeology, New York: McGraw-Hill, 1968; Ward Edwards and Amos Tversky (eds.), Decision-Making, Baltimore: Penguin Books, 1967.

sional nature of most political problems.¹⁹ Operations research techniques rely on the possibility of specifying trade-offs among small numbers of variables and on the use of relatively simple optimization techniques. If real political problems could be clarified sufficiently to make these analytic techniques usable, that clarification itself would be likely to make the wise choices evident, and thus render the use of the elaborate computations unnecessary. Although these methods may not be directly applicable, they should be studied because of the insights they can provide for thinking about political policy questions.²⁰

These observations on the limited usefulness of some of the more highly developed decision-making systems and models are not intended as arguments against being analytical. The beginning of a methodology about to be suggested here is supposed to be the beginning of an analytical scheme. The argument here is that, where rigorous models have failed to adequately meet real political problems, the response to that tension has frequently been to abandon the real problems in favor of the advancement of rigorous theory in restricted domains. Many "demonstrations" of the application of sophisticated techniques to real political problems have resulted from having analysts, committed to particular techniques, search out problems to which their techniques might be applied. Political problems have been simplified and trivialized until they are adapted to the methods that are available. In other words, the common practice has been to sacrifice reality for rigor, a practice which tends to evade some of the most difficult phases of the analysis of real political problems. A major purpose of this essay is to suggest the possibility of reversing these priorities by beginning with a firm commitment to real political problems, and then asking what tools, no matter how rigorous, might be developed to meet those problems.

¹⁹ Cf. Hitch and McKean, The Economics of Defense in the Nuclear Age; Quade, Analysis for Military Decisions.

²⁰ Cf. Kenneth Boulding, Conflict and Defense: A General Theory, New York: Harper, 1962; Anatol Rapoport, Strategy and Conscience, New York: Harper, 1964; Thomas C. Schelling, The Strategy of Conflict, New York: Oxford University Press, 1963.

The function of a methodology for policy analysis is, in part, to help decompose the larger "what should be done?" question into a series of smaller, hopefully easier-to-answer questions. This follows the general "principle of subgoal reduction" advocated by Herbert Simon and his colleagues: "Make progress by substituting for the achievement of a goal the achievement of a set of easier goals."²¹ Asking what should be the formal structure of a policy analysis means asking what these smaller questions or steps or goals should be.

Policy analysis can be understood as a process where, in response to the questions that are posed, certain information is obtained and used as input, and this information is then processed in some way to finally produce recommendations for action at the output. For comparison, the empirical research process may be schematized as one in which some data input is put through a research process to yield an output of validated empirical generalizations. A research report does not simply state its findings; it includes a full description of the input data and gives an account of the process by which those results were obtained. Similarly, the policy analysis process may be schematized as one in which an information base, comprised of significant value as well as factual elements, is put through a policy analysis process to yield well-supported action recommendations.

1.6 Past Guidance for Foreign Policy Making

It is important to distinguish foreign policy analysis methods designed to aid in the formulation of action recommendations from methods designed for other purposes. Usually this other purpose is to enhance understanding, to explain past and current policies, but some schemes seem confused or uncertain about their purposes. Mastrude, for example, proposes

²¹ Allen Newell, J. C. Shaw, and Herbert A. Simon, "A General Problem-Solving Program for a Computer," Computers and Automation, Vol. VIII, No. 7 (July 1959), p. 10, quoted in Boguslaw, The New Utopians.

a system which deals only with the evaluation of given action alternatives.²² Wilkinson's system, in contrast, suggests a method for going up to the point of formulating alternatives, but proposes no procedure for selecting from among them.²³ Burton Sapin has outlined steps for foreign policy analysis and then gone on to claim that they were neither descriptive nor prescriptive.²⁴ Books on the study of foreign policy have been devoted primarily to the task of explaining the nature and formation of foreign policy, and have not taken up the question of how it should be made.²⁵

A few observers have tried to prescribe the steps to be taken in the formulation of foreign policy. In an earlier work, Burton Sapin, for example, argued ...

The policy analyst must attempt to define the external situation with which he is dealing (with the help of intelligence estimates, if he wishes), examine its implications for relevant U.S. policy objectives, develop and evaluate alternative courses of action for dealing with the situation, and then, depending on his location in the hierarchy, either recommend or decide upon that course of action that seems to offer the best net advantage to the

²²Roger G. Mastrude, "A Conceptual Framework for Analyzing Foreign Policy Decisions in the Classroom," Social Education, Vol. XXXII, No. 7 (November 1968), pp. 673-674, 690.

²³David O. Wilkinson, Comparative Foreign Relations: Framework and Methods, Belmont, California: Dickenson, 1969, pp. 138-153.

²⁴Burton M. Sapin (ed.), Contemporary American Foreign and Military Policy, Glenview, Illinois: Scott, Foresman, 1970, pp. 136-140.

²⁵Cf. Feliks Gross, Foreign Policy Analysis, New York: Philosophical Library, 1954; George Modelski, A Theory of Foreign Policy, New York: Praeger, 1962; Richard C. Snyder, H. W. Bruck, and Burton Sapin (ed.), Foreign Policy Decision-Making: An Approach to the Study of International Politics, New York: Free Press, 1962; Joseph Frankel, The Making of Foreign Policy: An Analysis of Decision Making, New York: Oxford, 1963; Burton M. Sapin, The Making of United States Foreign Policy, New York: Praeger, 1966; James N. Rosenau (ed.), International Politics and Foreign Policy, Revised Edition, New York: Free Press, 1969; John P. Lovell, Foreign Policy in Perspective: Strategy, Adaptation, Decision Making, New York: Holt, Rinehart and Winston, 1970; Roy E. Jones, Analysing Foreign Policy: An Introduction to Some Conceptual Problems, London: Routledge & Kegan Paul, 1970; James N. Rosenau (ed.), The Scientific Study of Foreign Policy, New York: Free Press, 1971.

interests and objectives of the United States. In the process, priorities must be established among relevant objectives, possible short-term consequences and longer-term implications weighed against one another, incomplete information discounted, and significant differences in relevant intelligence analyses resolved ...

This is a familiar formulation; clarification of objectives; definition of external situation; identification of problems; development and assessment of alternative courses of action; and finally, the making of decisions.²⁶

In much the same vein, Professor Charles E. Rothwell, a former member of the Policy Planning Staff in the Department of State, is quoted as suggesting a fourfold division: "first, clarification of goals; second, an exhaustive evaluation of the situation to be met; third, the selection of a course of action by weighing the probable consequences of the various alternatives; fourth, the determination of optimum means for carrying out the action decided upon."²⁷ Former Secretary of State Dean Rusk has suggested a checklist by which the policy analyst would do such things as identify his question accurately, assure his command of the factual situation, assess relevant national interests and objectives, consider the likely responses of other countries, estimate effects on the Communist world, determine the legal quality of the proposed action, and take into account the critical responses of his colleagues.²⁸

One of the more systematic attempts at formulating methods for foreign policy decision making is that advanced by Barry Blechman and James Holt. They recommend cost/effectiveness analysis, which they define as

... an objective, well-documented, logically rigorous, and, at least quasi-quantitative analysis of the cost and effectiveness consequences of alternative managerial

²⁶ Sapin, The Making of United States Foreign Policy, p. 291.

²⁷ Frankel, The Making of Foreign Policy, p. 177.

²⁸ Dean Rusk, "The Anatomy of Foreign Policy Decisions," Department of State Bulletin, Vol. LIII, No. 1370 (September 27, 1965), pp. 502-509. Also see Dean Rusk, "A Fresh Look at the Formulation of National Policy," Department of State Bulletin, Vol. XLIV (March 20, 1961), pp. 395-398.

decisions; such decisions involving the allocation of monetary, manpower, and/or other physical resources, as well as the adoption, rejection, or modification of certain behavioral procedures.

The basic steps in such an analysis, as outlined by Blechman and Holt, are

1. Defining U.S. interests in the external world.
2. Preparing a baseline forecast.
3. Specifying U.S. objectives.
4. Particularizing the baseline forecast.
5. Minimizing the cost of pursuing baseline objectives.
6. **Minimizing the cost of objectives added to baseline.**
7. **Minimizing the cost of the set of objectives left after selective deletion of baseline objectives.**
8. Sensitivity analysis of conclusions.²⁹

This summary list of steps can do no more than suggest the general character of the procedure they recommend. Fuller explanations are provided in their monograph.

Probably the most substantial attempt at developing methods for forming action recommendations for foreign policy problems was that fathered by the late Leo Pasvolksy, who served as the Director of the International Studies Group of the Brookings Institution. The approach was based on the preparation of a "problem paper," described as follows:

The problem under consideration is identified and described from the viewpoint of the general and specific objectives that the United States seeks to attain with regard to it. It is then analyzed with reference to its origin, its importance to the United States, and its development. This is followed by a statement of the main issues to which the problem gives rise; of several courses of action open to the United State for the resolution of each issue; and of the principal implications of, and arguments for and against, each particular course of action. All this is done in the light of the general guiding principles and objectives of United States foreign policy; the state of public opinion; the attitudes of other governments; the relation of the particular problem to other

²⁹ Barry M. Blechman and James T. Holt, Cost/Effectiveness Analysis of Foreign Policy Alternatives: Need, Approach, and Prospects, Arlington, VA.: Center for Naval Analysis No. 68, March 1971, pp. 4, 16.

problems confronting the United States; and the numerous other factors at home and abroad that condition the conduct of foreign relations.

Although the advantages and disadvantages of the different proposed alternatives were examined, no final selection was made:

... our papers stop with the analysis of the issues and alternative courses of action, whereas official papers are carried a step further, which is to recommend to policy-deciding officials a preferred course of action. Since our purpose is to demonstrate a technique of analysis and discussion rather than to reach conclusions, this final step is omitted from our problem papers.³⁰

The approach was practiced and developed extensively in a series of seminars and publications, but guidelines for preparing policy analyses or "problem papers" were never articulated in any detail.

1.7 Past Guidance for Policy Making Generally

These ideas on foreign policy making are of some use, but they are certainly not adequate. Perhaps some of the suggestions and recipes found outside of the foreign policy literature can be usefully adapted to guiding foreign policy making. The overview offered here will necessarily be sketchy. Fuller elaborations of these proposals may be found in the cited sources.

The "pure-rationality model" of decision-making has had the greatest impact in Western culture. It is illustrated in Theodore Sorenson's perception of the mechanics of White House decisions. In his view the component steps ideally include the following:

³⁰ Feliks Gross, Foreign Policy Analysis, New York: Philosophical Library, 1954, p. 139. The historical execution of the method can be traced in the published results. See, for example, Leo Paslovsky, et al., Major Problems of United States Foreign Policy 1947: A Study Guide, Washington, D.C.: The Brookings Institution, 1947; Major Problems of United States Foreign Policy, 1952-53, Washington, D.C.: The Brookings Institution, 1953; William Reitzel, Morton Kaplan and Constance G. Coblenz, United States Foreign Policy 1945-1955, Washington, D.C.: The Brookings Institution, 1956.

1. Agreement on the facts;
2. Agreement on the overall policy objective;
3. A precise definition of the problem;
4. A canvassing of all possible solutions, with all their shades and variations;
5. A list of all the possible consequences that would flow from each solution;
6. A recommendation and final choice of one alternative;
7. The communication of that selection, and provision for its execution.³¹

Peter Wissell points out that Sorenson's list "does not portray a means for choosing among the several alternatives. An evident leap is made from the previous steps to the sixth."³² More important is the fact that the proposal is an idealization, based on the assumption that unlimited resources are available for the analysis, and no indication is given of how it is to be adapted to the inescapable reality of resource limitations. The rational model has been severely criticized because it is unworkable.³³ The critical attacks are often unfair, however, because those who describe the model generally acknowledge that it is idealized, and do not expect it to be used without adaptation.

One method of adapting to limited resources, including limited understanding of a problem situation, is to "muddle through" with what Braybrooke and Lindblom describe as the "strategy of incrementalism." The basic idea is simply that the decision-maker should favor modest, incremental steps rather than large, bold actions. As many commentators have pointed out, it is not evident when that is wise advice, and in any case it does constitute very much advice.³⁴

³¹Theodore Sorenson, Decision-Making in the White House: The Olive Branch or the Arrows, New York: Columbia University Press, 1963, pp. 18-19.

³²Peter A. Wissel, "A Lexicographic Approach to Foreign Policy Decision-Making," Paper delivered to the American Political Science Association, Chicago, September 1971, pp. 2-3.

³³Cf. Dror, Public Policymaking Reexamined, pp. 132-141; Braybrooke and Lindblom, A Strategy of Decision, pp. 1-41.

³⁴Braybrooke and Lindblom, A Strategy of Decision. Also see Section 4.11 below, and note 50 in that section.

Probably the most frequently used outline is that applied in military staff studies. The Army version, which "assists the commander in making a decision" is typical:

A staff study is a formal staff paper containing a concise and accurate analysis and a recommended solution to a specific problem or problem area. It is the result of military research and conveys to the commander or other superiors a report of the analysis made by the author, together with his conclusions and recommendations.

The staff study is used when dealing with complex or controversial questions.

Staff studies have a fixed format ...

1. Problem
2. Assumptions
3. Facts Bearing on the Problem
4. Discussion
5. Conclusion
6. Action Recommended.³⁵

This outline is designed more to facilitate the reporting of decisions than the making of decisions. The "solution to the problem" is supposed to be determined before the staff study is prepared.

Harold Lasswell offers the following outline:

An adequate strategy of problem solving encompasses five intellectual tasks ...

Goal clarification: What future states are to be realized as far as possible in the social process?

Trend description: To what extent have past and recent events approximated the preferred terminal states? What discrepancies are there? How great are they?

Analysis of conditions: What factors have conditioned the direction and magnitude of the trends described?

Projection of developments: If current policies are continued, what is the probable future of goal realizations or discrepancies?

Invention, evaluation, and selection of alternatives: What intermediate objectives and strategies will optimize the realization of preferred goals.³⁶

³⁵United States Army Command and General Staff College, Staff Organization and Procedures, April 1966, pp. 80-81. Also See pp. 226-236.

³⁶Harold D. Lasswell, A Pre-View of Policy Sciences, New York: American Elsevier, 1971, p. 39.

This is comparable to Dror's recommended procedure which, after seven stages of "metapolicymaking," calls for ...

8. Suballocating resources.
9. Establishing operational goals, with some order of priority for them.
10. Establishing a set of other significant values, with some order of priority for them.
11. Preparing a set of major alternative policies, including some "good" ones.
12. Preparing reliable predictions of the significant benefits and costs of the various alternatives.
13. Comparing the predicted benefits and costs of the various alternatives and identifying the "best" ones.
14. Evaluating the benefits and costs of the "best" alternatives and deciding whether they are "good" or not.³⁷

Operations researchers and systems analysts have suggested a variety of schemes which could be adapted for dealing with foreign policy or virtually any other kind of problems. E. S. Quade, for example, suggests that analysis advances through something like the following stages:

Formulation - Defining the issues of concern, clarifying the objectives, and limiting the problem.

Search - Determining the relevant data, looking for alternative programs of action to resolve the issues.

Explanation - Building a model and using it to explore the consequences of the alternative programs, ordinarily by obtaining estimates of their cost and performance.

Interpretation - Deriving the conclusions and indicating a preferred alternative or course of action. This may be a combination of features from previously considered alternatives or their modification to reflect factors not taken into account earlier.

Verification - Testing the conclusion by experiment.³⁸

³⁷Dror, Public Policymaking Reexamined, p. 163.

³⁸E. S. Quade, "Methods and Procedures," in Quade, Analysis for Military Decisions, p. 156.

Quade points out that the analysis process should be viewed as iterative, to be repeated over and over again with refinements and reformulations of each stage in the cycle. In another examination of the analysis process, Quade has identified five elements as essential, the objectives, the alternatives, the costs, the models, and the criterion.³⁹ Here, too, he emphasizes the iterative nature of the process.

1.8 Plan

Each of these suggested procedures has certain distinctive qualities of its own, and yet there are certain themes which reappear regularly. Most of the steps that are suggested seem to fit clearly under the heading of describing the problem, of formulating alternative action proposals, or of evaluating those alternatives. These major stages correspond to the topics of the following three chapters. Chapter 2 says what a foreign policy problem is and how it should be described. The task of formulating candidate recommendations is examined in Chapter 3, and the task of choosing among them is discussed in Chapter 4. The whole process is then outlined and reviewed in Chapter 5.

Each of these major categories contains within it a number of subsidiary steps which will be developed in the following chapters. These steps are intended to be suggestive. They can and should be adapted by the individual analyst to his particular problem and his particular tastes.

In developing methods for policy analysis, it is important to appreciate that the test of a set of guidelines is not whether they are "true," but whether they are in fact useful. They must be useful not only to their author but to policy analysts generally. To show that, say, Dror can follow Dror's procedure proves nothing about its quality. Guidelines which are difficult to understand or to communicate are, for that reason alone, inadequate. The test of the guidelines offered here is not whether they work for me, but whether they are understandable and useful to you.

³⁹ E. S. Quade, "Systems Analysis Techniques for Planning-Programming-Budgeting," in Lyden and Miller, Planning Programming Budgeting, pp. 292-312.

This study is based on the premise that in the realm of foreign policy decision-making, it is not at all obvious how one should decide what to do. Just as guidelines can be offered for performing research designed to confirm empirical propositions, it should be possible to suggest useful procedures for developing recommendations for action. If what I have to say seems inadequate, then I hope this will provoke someone into saying it better. Whatever its source, guidance in the formulation of wise foreign policy decisions is surely desperately needed.

2. DESCRIBING POLICY PROBLEMS

2.1 Meanings

What constitutes a foreign policy problem? The first temptation might be to answer by illustration, citing obvious examples: Vietnam, the Middle East, the Bangla Desh movement in East Pakistan, the turmoil in Northern Ireland, balance of payments, tariff policy, arms control. Then what is not a foreign policy problem? The exchange of ambassadors? Navigation on the high seas? Why?

The objective of this elaboration is to examine the meaning of policy problem. The meaning of foreign, involving relations which cross national borders, is taken to be sufficiently clear. Whether something like the Northern Ireland uprising should strictly be regarded as a foreign policy issue is not regarded as important here.

For the purposes of this work, a problem is said to exist when an actor has certain goals and there are significant obstacles to their achievement. If there are no motivating goals, if one is unconcerned with a situation, there can be no problem, and if there are no impediments to the achievement of one's goals, there is no problem. A full description of a problem, then, would specify the nature of these goals and the obstacles to their achievement.

This is not to say that a full description of this kind is always easy to produce. If the question at the outset is simply what should be done about a given situation, the primary difficulty may be that the nature of the situation itself is unclear, always a formidable obstacle. The difficulties may not be tangible and external at all. Part of the function of policy analysis is to clarify the nature of the problem, and often this analysis process will itself overcome many of the major difficulties in coping with the situation of interest. A thorough problem description specifies the relevant goals and obstacles, but it is not always necessary to provide that full description at the outset.

Since only actors (usually individuals, but conceivably countries or other organizations) can have values, it follows from this definition that policy problems do not exist except as problems for someone. A careful distinction is made here between situations, which presumably have some real external existence "out there," and problems, which exist in people's heads. The Middle East problem for the United States is nothing like what it is for Egypt, and Egypt's problems are quite different from those of the Palestinians. The nature of the Middle East situation is more or less the same for all of them, allowing for differences in perspectives, but their problems in relation to that situation are wholly different. They are different; they don't just look different. For a powerless country remote from the Middle East, there is a Middle East situation (its newspaper says so), but for that country there may be no Middle East problem. Problems which fit nominally under the same label are sharply different for different actors even within the same country. What is problematic about Vietnam for the President is very different from what is problematic about Vietnam for the Students for a Democratic Society or for the American Friends Service Committee. To speak of the Vietnam problem as if it were one distinctive thing is quite meaningless. In speaking of a problem, the identity of the actor who has it should be specified; that is not necessary when speaking of situations.

Actors have problems about situations, but the situation itself is never the problem. If a policy analysis is to be devoted to the question

of what China should do about the Middle East situation, the problem is not specified by providing a history of that situation. That history would be virtually the same from any perspective. The problem is not identified until some account is given of China's goals in that situation and of the obstacles she would be likely to encounter.

In general, a situation is problematic to an actor when he is interested in its outcome, he is dissatisfied with the outcome he expects or is uncertain what that outcome will be, he thinks he might be able to do something to influence that outcome, and he is uncertain what that action should be.⁴⁰ Put more simply, a policy problem is an occasion for action where it is not obvious what that action should be. Throughout this work, I take the posing of a policy problem to imply the question what should be done? The question refers to concrete action, not to postures or attitudes (e.g., anti-communism, self-determination) to be adopted. I focus on action questions referring to specific situations (e.g., what should the Chinese do now about the insurgents in the Philippines?) rather than on doctrine, questions referring to whole classes of situations (e.g., what should be done about insurgencies generally?). Since I deal with concrete instances rather than with patterns of responses, some might say I should not be using the term policy.

Foreign policy problems can be sorted out in many different ways. Some are reactive, calling for a response to some specific events which

⁴⁰David Wilkinson's characterization of foreign policy problems in his Comparative Foreign Relations: Framework and Methods (Belmont, Calif.: Dickenson, 1969) is similar: "A situation -- normally an attitude, behavior, or action of a foreign state -- is a problem when it presents a threat or an obstacle or an opportunity." (p. 138) "Thus a policy problem is a situation requiring a state to choose from a limited range of ways of using power ... a problem exists only where the circumstances of a situation make goals difficult to attain, or where different goals appear both desirable and feasible." (p. 142) "Whether actual or merely contingent, the situation is not a problem unless (1) it is significant, that is, it offers a threat or an opportunity to the values and world goals of the state in question, (2) it involves choice, so that the state is in a position to do different things about it, and (3) it involves a measure of control, so that the state in question has some chance of affecting the outcome of the situation by the action it takes or does not take." (p. 149).

There is no pressing need to develop a perfect formal definition if you and I both know a foreign policy problem when we see one.

have occurred ("What should we do about ...?"), and some are anticipatory, asking not what should be done now, but what should be done if such and such were to occur in the future, to be answered in the form of contingency plans. Some foreign policy problems deal with crises demanding quick responses, and some allow almost unlimited deliberation. Some policy analyses are designed to serve the administration in power, and some are designed to serve its challengers. Some serve the left, some the right.

If a useful theory of prescriptive policy analysis is to be developed the most important distinctions among types of problems will be those which call for different types of analysis. That is, it may be that there is not just one set of guidelines that needs to be developed, but different sets of procedures will be needed for dealing with different kinds of problems. It is too early in the development of these techniques to know what these important distinctions will be, but some can be discerned even at this time. For example, it is clear that in some studies, those in which the motivating question is put as "Should we do X or Y?" (rather than as "What should be done about ...?") the policy analyst can forego the stage of formulation of alternatives. Of course in many of these cases, even though the analyst is not required to create options himself, he may want to take the liberty of developing, examining, and possibly recommending alternatives other than those that had been proposed to him.

A more important distinction is that between questions of the kind discussed here so far, the social design problems, where the analyst in effect becomes the architect of some entirely new institution. He might, for example, take up questions like "How should a supranational peace force be organized?" or "How should an international arms control agency be organized?" or "How should the seabed of the ocean be administered?" These questions differ from those that have been discussed in that, rather than focusing on single, well-defined problems, they call for substantial changes in social systems in order to deal with whole classes of anticipated problems. In addition to formulating some desired end, the long range designer must give careful attention to devising transition strategies for getting there. Moreover, in this kind of design work, the analyst ordinarily

would not identify the key actors in advance, but would work the analysis itself to indicate the actors to whom his recommendations should be addressed.

2.2 The Analyst's Relation to his Client

The relationship between the policy analyst and his client, the political actor to whom he addresses his analysis and recommendations is highly complex. The difficulties of communication and understanding between them are minimized if the analyst and his client have very similar perceptions and values. They are fully resolved in the extreme case of identity of views, the case in which the analyst is his own client.

Normally, however, there will be no such identity of views, and the analyst must face up to the problem this raises. The policy analyst should not view his task as purely instrumental, taking his client's objectives as given and then seeking the most effective means for their fulfillment. The policy analyst is obligated to subject these goals to examination as well, and to argue for their rejection or revision if he deems it appropriate. He acts irresponsibly if he takes assignments unquestioningly, as they are given to him. Often, there is no identity of views between the analyst and his client, and there may not even be any significant measure of sympathy. A policy analyst can quite reasonably and responsibly address recommendations even to actors he judges to be generally evil and wrong-headed.

There are limits, of course. One of the essential elements of any policy analysis is its account of the motivations which should induce the client-actor to take the actions which are prescribed to him. The actor cannot be expected to take actions which he sees as contrary to his own self-interest. Part of the policy analyst's task, therefore, is to make his client see things as he does, not so much through the power of persuasion as through the power of his analysis. This requirement, that the actor being addressed must see, or be made to see, the virtue of the actions which are recommended, establishes the outer limit of the policy analyst's potential effectiveness.

For the purposes of this work, I shall assume that the analyst is entirely free to choose his clients and his issues. He might be imagined

to be self-employed, producing unsolicited analyses at will, in response to his own motivations. There would be nothing to prevent him from, say, taking up the Kashmir problem and trying to formulate action recommendations for the head of state of India or any other actor of his choosing. This fiction allows us to set aside the question of motivation and proceed with the central task of developing procedures for conducting policy analyses.

The prior choice of a client-actor is not so constraining as it may at first appear. The target actor for any recommendation can be transferred by asking one actor to advocate particular actions to be taken by another actor. For example, Michael Reisman's suggestion that Israel should have the Golan Heights converted into a trust territory for the Druze could be promoted by asking the United States to press Israel to take that action. Of course, this can be done only if the action is seen as advantageous to both parties. This possibility of communicating recommendations through an intermediary gives the analyst a great deal of freedom to be creative in his proposals even when he is somehow constrained to addressing one particular decision-maker.

It may sometimes be wise to make no prior commitments to given actors at all. The analyst could define his problem as that of bringing about some desired end (e.g., an international police force, a new seabed regime), and then let the analysis itself indicate who should be called upon to act.

2.3 The Politics of Problem Identification

What problems should be taken up? The answer is inescapably a personal one. The analyst must appreciate that the identification of problems for analysis is always a highly political act as well. What will be seen as a problem, and how it will be seen as a problem, depends

very much on the political benefits of the perceiving individual.⁴¹ Poverty in America, for example, while always there, has only recently been discovered as a genuine problem. What it is about poverty that is problematic differs very much from individual to individual. To some, the primary issue demanding attention is the maintenance of law and order and not the uplifting of the poor. Americans seem to have an unusually strong tendency to universalize their own problems, to think, for example, that arms control must be a major concern for virtually everyone. To those in Latin America, Asia, and Africa, however, it is now quite clear that questions of economic welfare and social justice are far more important.⁴² The choice of issues for study itself reflects something about the individual's analysis of the source of major problems and about his views of what is susceptible to management. It is not just the response to problems which is politically weighted; the formulation of a problem itself has deep political implications.

Just as the analyst must question the assignment put to him by a client, he should not accept without examination the agenda put before him by his surrounding society. Even if others devote their energies to, say, choosing among alternative weapons systems, he should find room to search for alternatives to weapons systems. "Issues are not brought forward in the order of their importance, nor on their merits, even -- or perhaps most of

⁴¹Deane Neubauer and Michael Shapiro, in their unpublished "Meta-advocacy in Comparative Political Analysis," observe that "the data of social and political processes are revealed to us in a variety of ways, depending on what we identify as a problem. The identification of a problem requires the use of categories or concepts which are responsive to our normative decisions concerning what we wish to view as problematic in society." (p. 6)

On the political bias inherent in the selection of problems for research, cf. Martin Oppenheimer, "The Peace Research Game," Dissent, Vol. 11 (Autumn 1964), pp. 444-448, reprinted in Elisabeth T. Crawford and Albert D. Biderman (eds.), Social Scientists and International Affairs, New York: Wiley, 1969, pp. 170-173; Ole Jess Olsen and Ib Martin Jarvad, "The Vietnam Conference Papers, A Case Study of a Failure of Peace Research," Peace Research Society (International), Papers, Vol. XIV (1970), pp. 155-170.

⁴²Cf. Ian Baldwin, Jr., "Thinking About a New World Order for the Decade 1990," War/Peace Report, Vol. 10, No. 1 (January 1970), pp. 3-8.

all -- where the survival of the society is theoretically at stake."⁴³ The making of problems into publicly recognized issues is often the object of deliberate maneuver. Just as "the lesser politician is typically the prisoner of issues his opponents have previously defined ..." ⁴⁴ the policy analyst should be cautious and should not be trapped by agendas and definitions put forward by others.

Even the suggestion that certain problems should be handled with policy analytic techniques has political implications. Policy analysts will typically think in terms of responses which are of brief duration, discrete, well-defined, and legal, to be performed in specified ways by specified actors. They will try to separate their central problem away from other related issues. They will tend not to call for the total destruction of existing systems or for highly radical changes or for new modes of consciousness. While it may not be necessarily so, policy analysis in the hands of most of its practitioners will in fact tend to have particular political biases.⁴⁵ The analyst who is conscious of this is strengthened in that he can try to create counter-pressures to correct for these tendencies. The analyst's greatest mistake would be to pretend to himself or to others that his is a politically neutral operation.

Policy analysts must always be careful not to choose the wrong problem, wrong morally or wrong politically or wrong in the sense of missing more important issues. Even the policy analyst working under a mandate issued by

⁴³Eric Larrabee, "The Politics of Strategy," in Edward V. Schnier (ed.) Policy-Making in American Government, New York: Basic Books, 1969, p. 7.

⁴⁴Ibid., p. 6. Also see Roger W. Cobb and Charles D. Elder, Participation in American Politics: The Dynamics of Agenda Building, Boston: Allyn and Bacon, 1972.

⁴⁵The biases likely to be found in policy analysis are very close to those in peace research generally. There have been many insightful essays on this theme, among them Herman Schmid, "Peace Research and Politics," Journal of Peace Research, No. 3 (1968), pp. 217-232 and Michael D. Wallace, "The Radical Critique of Peace Research: A Non-Evangelical Interpretation," Paper presented to Western Regional Peace Research Society (International), February 15, 1971.

a client or supervisor must exercise his judgment and will in rejecting or reinterpreting assignments that are handed to him.

Having cautioned care in the selection process, hereafter this work is concerned with what goes on after the problem for analysis is identified.

2.4 Describing Problems

The analyst should describe the policy problem of concern in some detail, even if it seems to him that its character must be obvious. It is only by being explicit, laying bare his particular interpretation, that the analyst can give his readers an opportunity to judge whether the analyst's premises at this stage differ significantly from their own. The analyst's point of departure should be plainly displayed.

This need for thoroughness in describing the policy problem should not be exaggerated, however. Surely the least helpful guideline is the one that says one must gather all available information on the issue. Policy analyses are highly goal-oriented; in general, each of the component stages needs to be refined only to the extent that doing so serves the ends of the analysis as a whole. The analyst may find it difficult to precisely articulate the obstacles that are being faced, but he may find that once that question is passed, it is relatively easy to develop useful action recommendations. The policy problem needs to be described only to the extent that doing so contributes to the overall goal of the analysis, the formulation of sound action recommendations.

There is a great temptation to devote excessive time to developing historical accounts simply because the method for providing these accounts is clear while the requirements for the rest of the analysis are murky. The temptation must be resisted, and the other difficult and uncertain stages of the analysis must be given their full share of attention. The account of the problem should not be so extensive that it substantially limits the time and other resources available for the remainder of the study. (The need to conserve the analyst's resources is discussed more fully in Section 3.6)

What constitutes an adequate description of a foreign policy problem, adequate to the task of policy analysis? Two very different kinds of information are needed, on the situation, and on the problem.

The information on the situation is largely background, providing the context into which the particular policy problem is fitted. Naming it is never sufficient to describe it. What is the Middle East situation? Any such label typically identifies a large variety of complex and intertwined issues. The Middle East situation includes disputes over the Suez Canal, the Gaza strip, Jerusalem, the Palestinians, oil, military assistance, and many other questions as well. What background information should be included?

For the purposes of this study, I define foreign policy problems as always referring to situations characterized by conflict, that is, situations in which there is a substantial incompatibility in the preferences of the concerned actors.⁴⁶ (There need not be any manifest conflict behavior, such as fights or arguments, however.) I make this stipulation because it appears to me that most foreign policy questions which do not involve significant elements of conflict are not really problematic. They may raise technical questions in implementing agreements, but foreign policy questions which do not involve conflict are not of any political interest.

The description of the conflict situation should report the historical evolution of the situation, including an account of the events leading up to its present form, or to its possible future forms in the case of contingency analyses. It should also include at least the following elements: identification of the major concerned parties, identification of the major contentious issues; description of the general positions of the parties on the issues; specific identification of the critical points of incompatibility of preferences, and description of the capabilities of the parties for doing something about getting what they want.

Many of the concerned parties may be nation-states, but there may be other important actors as well, such as the Secretary General of the United Nations, the Catholic Church, or the Red Cross. It may often be important to distinguish among different factions within countries, especially within the

⁴⁶ Cf. Morton Deutsch, "Toward an Understanding of Conflict," International Journal of Group Tensions, Vol. 1, No. 1 (January-March 1971), pp. 42-54. Also see Anatol Rapoport, Fights, Games, and Debates, Ann Arbor, Mich.: University of Michigan Press, 1960.

client decision-maker's own home country. That is, it will ordinarily be important to take domestic politics into account as well as international politics. In general, any identifiable faction which has some interest in the outcome of a situation and some potential influence in determining that outcome must be counted as a relevant party.

The client-actor does not have to be one of the parties to the core conflict in the situation. The United States may wish to take action in relation to the Kashmir conflict, for example, even though it is not directly a party to the conflict. Similarly, the policy analyst may wish to address his recommendations to the Secretary General of the United Nations even though he and his organizations are not, at the outset, involved in the issues in question.

The background information about the situation should not be confused with the foreground information which describes the problem of immediate concern to the client-actor. The analyst must specify the point of view that is to be adopted, essentially that of his client, though tempered in some measure by the analyst's own views. The analyst should be clear in saying what it is about the situation that is viewed as problematic. What are the objectives, and what are the difficulties which stand in the way?

There is much information that is needed in a policy analysis which goes beyond the description of the problem and the situation. Proposals that had been offered in the past by participants and by observers for coping with the situation are highly relevant, but this information is best relegated to that section of the analysis in which action proposals are to be developed. Similarly, a review of other comparable situations in history, along with the proposals and actions that had been taken to meet those problems, should be provided, but this material also belongs elsewhere. The analyst will need to know about the capabilities of the client-actor, and he will need to know about the likely reactions of other parties to any actions that might be taken. While all this is essential, it should not be mixed in with the description of the problem itself. This information should be held for later stages of the analysis, when and where it is required.

3. FORMULATING ACTION PROPOSALS

3.1 Discovering and Inventing Possibilities

Some decision theorists speak of the evaluation of alternatives as if that were synonymous with the work of policy-making. They begin by specifying sets of action proposals which, by their stipulation, are well defined, mutually exclusive, and collectively exhaustive. Unfortunately, real problems do not begin that way. They do not begin as choices between a clear this and a clear that, but as questions of how to get there, or even more vaguely, as questions of what should be done about something. To speak as if well defined alternatives were always immediately at hand drastically oversimplifies the work of policy analysis. There is always a great deal of work to be done before any evaluation is needed, including the specification of the problem, identification of things that could be done about it, and then the reformulation of these possibilities into sets of alternatives.

Once having described the policy problem at hand, the analyst's job can be conceptually divided into two major stages, the creative work of formulating action proposals, and then the more highly analytical work of choosing among them. This chapter addresses the task of formulating action proposals, the candidate recommendations, and the following chapter takes up the problem of choosing among them.

As Walt Rostow sees it, "the very heart of the decision-making process is the posing of alternatives. Innovation -- creativeness -- consists in thinking up an alternative which hasn't been thought of before."⁴⁷ The action possibilities are by no means obvious simply upon the naming of a problem. They can be discovered and invented only through intensive study of the particular situation, the surrounding circumstances, the participants involved, the actor's resources, and so on. While some generalizations might

⁴⁷ W. W. Rostow, The United States in the World Arena, New York: Clarion-Simon and Schuster, 1969, p. 497.

be made out action possibilities in certain classes of situations, the policy analyst concerned with a specific, concrete problem must engage in a close study of that problem, and must become deeply familiar with it and its context. Only then will he be able to suggest reasonably refined and meaningful action possibilities.

Several efforts at formulating alternatives have been made in different approaches to the Middle East situation. Marver Bernstein, for example, asked ...

What options are open to the United States in its efforts to reduce Soviet influence or dominion in the region and achieve a political settlement that meets the legitimate demands of both sides, protects the security of Israel, and meets the concerns of the Arab states and the Palestinians?

He answered ...

Some can be suggested here, including a few that have already been adopted in some degree.

1. Develop an unequivocal policy of strength, recognizing that weakness on the part of the U.S. encourages brinksmanship;
2. Provide military and economic assistance now to Israel;
3. Convince western nations to stop supplying arms to Arab nations;
4. Deploy additional Polaris units to the Sixth fleet, which has been reduced to two aircraft carriers;
5. The President might advise Congress against troop reductions in Europe so long as Soviet military personnel are flying combat missions in Egypt;
6. Reaffirm the intent to keep the balance of power;
7. Warn the Soviets strongly against participation in combat in the the Canal zone;
8. Reassert the view that the only outlet from the dangerous crisis is a firm peace involving arrangements to safeguard a contractual agreement, substantial withdrawal of Israel from the occupied territories to be worked out in the course of negotiation, and guarantees of Israel's sovereignty and territorial integrity;
9. Undertake support of Israel in various ways once peace is achieved.⁴⁸

⁴⁸Marver H. Bernstein, "Alternatives for the U.S. in the Middle East," Mideast: A Middle East-North African Review, Vol. X, No. 5 (October 1970), p. 38.

Landrum Bolling saw three major options for the United States in the Middle East:

1. Encourage and help Israel to win another war against the Arabs;
2. Try to maintain a military balance and restore the cease-fire;
3. Try to develop an all-out strategy for a peaceful political settlement and see it through.⁴⁹

Michael Reisman has offered a number of highly innovative proposals, or as he calls them, "diplomatic alternatives." For example, he suggested the creation of a large-scale internationally capitalized Sinai Development Trust for the economic development and political neutralization of the Sinai peninsula.⁵⁰ Along with many others, he also advocated the establishment of a sovereign Palestinian Arab state on the West Bank of the Jordan River, in territory now occupied by Israel.⁵¹ Applying similar reasoning in another context, he made the novel recommendation that Israel declare the Golan Heights a trust territory for the Druze.⁵² Reisman also developed a proposal for the internationalization of Jerusalem particularly adapted to current conditions.⁵³

For a final illustration, suppose that the policy analysis to be performed is that of formulating recommendations for United States action specifically in relation to the Palestinians. After a preliminary study, the policy analyst might draw up a list of things which the United States could do which would be related to that problem. The list might look something like this:

⁴⁹Landrum R. Bolling, "Alternatives for the U.S. in the Middle East," Mideast: A Middle East-North African Review, Vol. X, No. 5 (October 1970), p. 38-41.

⁵⁰Michael Reisman, The Art of the Possible: Diplomatic Alternatives in the Middle East, Princeton, N. J.: Princeton University Press, 1970, pp. 30-43.

⁵¹Reisman, The Art of the Possible, pp. 51-58.

⁵²Reisman, The Art of the Possible, pp. 66-70.

⁵³Reisman, The Art of the Possible, pp. 71-79.

The United States could:

1. encourage programs designed to advance the welfare of the refugees in the camps;
2. encourage enhanced political organization of the Palestinian groups;
3. decrease, continue, or increase the funds it supplies to the refugees through the United Nations Relief and Works Agency, UNRWA,
4. attach any of a variety of political conditions to the funds it supplies through UNRWA;
5. modify its policies for supplying arms;
6. call for and arrange a variety of different kinds of conferences or commissions to propose actions dealing with the refugee problem;
7. liberalize immigration laws so that Palestinian refugees could take up residence in the United States more easily;
8. have Congress pass resolutions publicly advocating programs favored by the United States;
9. curtail training of military officers from Arab states in the United States;
10. make financial support of the American University of Beirut contingent on its systematic support of political outcomes favored by the United States;
11. offer to provide American troops to serve as a buffer between Israel and the Palestinians, or to police occupied territories;
12. resume efforts at working in collaboration with the Soviet Union to determine arrangements which would be satisfactory to Israel, the Palestinians, and the Arab states.

A good deal can be learned from a critical examination of these examples. The suggestions differ partly because they are addressed to different policy problems, but they also differ because they employ very different meanings of the concept alternative. In some cases, as in Bernstein's list and in my own list of actions which might be taken in response to the problem of the Palestinians, the intention was to point out some of the actions which might possibly meet the problem, while in Bolling's case the list of categories is apparently supposed to be exhaustive. Reisman's suggestions, unlike those of the others, were each intended to meet a different political problem, at least in the immediate sense. Reisman also differs from the others in that he has not included any options with which he himself is not sympathetic. For him, the work of evaluation presumably precedes, rather than follows, the enumeration of alternatives. Reisman's suggestions are distinctive, again, in that they do not specify the target date at the outset;

the others are all addressed directly to the United States. Finally it should be noticed that, although in his book he did take up the question of implementation, Reisman's proposals were devoted primarily to formulating rather distant ends. Bernstein's list and my own, in contrast, are addressed more directly to the immediate actions which might be taken.

None of these interpretations of the task can be said to be wrong, but the differences among them should be fully appreciated, especially since some of these approaches might be more useful than others.

I believe that it is wise for policy analysts to make a sharp distinction between the specification of actions that could be taken and actions that should be taken. The list of actions which are possible (as distinguished from advisable) should at the outset be very broad, open, and uninhibited. When asking what different things an actor could do in a given situation in response to a particular policy problem, the analyst poses a question of capabilities, a more or less pure question of fact. An action is possible if the actor could do it if he wanted to do it. The evaluation question, asking what should be done, should be temporarily set aside. At this early stage the analyst should not yet ask about the wisdom of the possible actions, but should seek only to identify them.

With the exception of Bolling's supposedly exhaustive categories, it is clear that many other possible actions could be added to any of the lists. Their lengths could be multiplied many times just by permuting the entries through a variety of possible conditional statements or other qualifications, by including all the different possible mixtures of the actions, and by counting the many different time sequences in which they might be mixed. The basic elements can be compounded in many different ways.

The number of possibilities that can be listed depends on the level of specificity or abstraction at which they are identified. At the outset one might use grosser, more abstract categories like Bolling's, or suggestions like, say, that the United States might take 1. political, 2. economic, or 3. military actions. These labels can be useful if they are understood as reminders to search more intensively within each of these categories. At the beginning stages of analysis something as vague as "action through the

United Nations" might be noted simply to prompt a look into that category of possibilities. When the list of possibilities is first drawn up it should be viewed simply as an idea new, with suggestions for action being listed as they occur to the analyst, without concern for the organization of the list and without concern for the detailed descriptions of each possibility.

Ideas for action possibilities should be drawn from sources beyond the analyst's own imagination. He should make a thorough survey of proposals that had been made in the past by participants in the situation and by outside parties. The analyst concerned with, say, the conflict over Jerusalem, need not begin new, as if he were the first and only one to think about the problem; he should survey the wide variety of publicly available proposals. Analysts dealing with major world conflicts should familiarize themselves with the quarterly Bulletin of Peace Proposals published in Oslo. A particularly vigorous effort should be made to discover the proposals made by the client-actor's opponents. Experts and specialists on the problem area should be consulted for their suggestions. Often fresh ideas can be obtained from individuals who are not at all familiar with the particular problem.

The analyst should also be alert to the objections that had been raised to past proposals, since they may suggest new and interesting variations on old themes. It is usually also worthwhile to study other comparable policy problems in history to see if actions and proposals applied to them are adaptable to the particular problem at hand.⁵⁴

While all these sources should be consulted, the analyst may find that his own imagination works more freely if he develops some of his own ideas first, and only then goes out to survey the ideas of others.

The list of action possibilities at first consists of little more than a variety of roughly noted ideas. The first step in processing that list is to clean it up so that the entries are of consistent form, with each entry specifying only a single action, course of action, or kind of action. Suggestions like 'decrease, continue, or increase the funds ...'

⁵⁴Cf. David O. Wilkinson, Comparative Foreign Relations: Framework and Methods, Belmont, California: Dickerson, 1969, p. 145.

(Number 3 in the list on Palestinians) should be rewritten as three separate suggestions.

Those things which cannot be accomplished with high certainty by the client-actor should be preceded with a softening "Try to" If the list for the Palestinians was understood to be addressed to the President or the Secretary of State, for example, number 8 should read "Try to have Congress pass resolutions" The President cannot simply have the Congress do anything, but it is certain that he can try to have the Congress do something. Similarly, Bernstein's suggestion that the United States should convince western nations to stop supplying arms to Arab nations (his number 3) should more modestly suggest that the United States try to do that.

Except where it is needed to explain the character of the action one has in mind (as in Number 7 for the Palestinians), the statement of an action possibility should not include the reasons for taking them. In Bernstein's first suggestion, for example, he explains that a policy of strength should be taken because "weakness on the part of the U.S. encourages brinksmanship." That explanation should be placed elsewhere, not in the statement of the action possibility itself.

Once a number of basic ideas has been established, the variety of possibilities can be extended in several different ways. One way is simply to develop new ideas and add them onto the bottom of the list. Another way is to intensively examine individual ideas to identify the variety of options contained within them. The idea of providing military assistance, for example, can be manifested in many different ways. Another way to generate new possibilities is to propose different mixtures of previously proposed actions, perhaps different combinations, perhaps different time sequences, perhaps small variations on the basic themes that had been suggested, perhaps by making some of the actions conditional on other actions or events in different ways.

To get a sense of the number of possibilities inherent in an original list of elementary possibilities, consider what happens if we allow only simple conjunctions. New action possibilities can be created from elemental ones by conjunction, by suggesting the possibility of taking ont action and

another. With three elementary action possibilities, A, B, and C, there are three different compound action possibilities that can be suggested, (A and B), (A and C), and (A and B and C). In general, if one begins with M elementary action possibilities, the total number of distinct possibilities, elementary and compound, that can be suggested using nothing more than simple conjunctions is $2^M - 1$. If one begins initially with, say, ten elementary possibilities, allowing conjunctions transforms them into 1023 distinct action possibilities.

At least for a time, the analyst should suspend disbelief and skepticism, and freely generate action ideas. He should be mindlessly indiscriminate. Then, however, that game must stop, and the analyst must go on to the more serious examination of the possibilities. The stopping point should be just a little bit beyond the stage at which the exercise stops being fruitful.

3.2 Reformulating Possibilities into Alternatives

Given an initial list of possible actions like that offered for dealing with the problem of the Palestinians, it would be premature to try to systematically evaluate the entries in the list to determine which of them is best or to determine a preference ranking for them. No clear choice problems have yet been posed. There is no merit to investing energy in making comparisons between, say, providing increased funds to UNRWA and liberalizing immigration laws if one is not going to make a choice between those possibilities. Before engaging in the work of evaluation, considerable effort should be devoted to determining what choices should be made. Some choices will be necessary to make and some will be optional.

What choice problems could be posed? If the full range of potential choice problems implied in an initial list of suggestions is not fully appreciated, the analyst's repertoire may be unnecessarily constrained. As defined here, a choice problem refers to a set of alternatives in which two or more action possibilities are explicitly specified, and it is asked that a choice be made of one and only one of these possibilities. The action possibilities which comprise the set of alternatives under examination are set apart by the disjunction, or.

To demonstrate the potentials for forming choice problems, consider a list of just two substantive action possibilities, A and B. The following different sets of alternatives could be constructed from them:

1. A or do nothing
2. B or do nothing
3. A or B
4. A or B or do nothing
5. A or (A and B)
6. A or (A and B) or do nothing
7. B or (A and B)
8. B or (A and B) or do nothing
9. A or B or (A and B)
10. A or B or (A and B) or do nothing
11. (A and B) or do nothing

And these do not even allow for doing A or B in different degrees or in different ways, or for combining them other than by simple conjunction! In general, the number of distinct sets of action alternatives which can be created from N distinct action possibilities, elementary or compound, is $2^N - 1 - N$. (The number is N less than the number of possible combinations because a set of alternatives must contain more than one action possibility.)

The number of sets of alternatives listed above is smaller than would be obtained with three substantive action possibilities and no do-nothing possibility because there is no difference between a given action and its conjunction with do nothing. (B) alone is different from (B and C), but it is not different from (B and do nothing).

Thus, it is clear that even when beginning with a relatively small number of suggestions of elementary action possibilities, the number of distinct sets of alternatives which can be constructed out of them is outrageous. No wonder it is wise not to assume that it is always obvious what choice problem one has in mind simply upon the naming of a few possibilities! Policy analysts should adhere to the rule that when choice problems are finally posed, all of the alternatives that are to be considered should be explicitly specified. This is of great importance, since policy analyses cannot properly conclude with assertions of the form "This action is best," unconditionally. Strictly speaking, one can do no more than say "Of those

alternatives which were examined here, this particular alternative is best." Thus the alternatives must be specified if the meaning of the analysis and of the concluding claims are to be clear.

Fortunately for the analyst, in practice the lists of possibilities and the lists of sets of alternatives can be limited in several different ways.

For example, many of the action proposals formed by mindless conjunction will in fact be impossible to do, even though each of the individual elementary actions are perfectly possible. One can increase aid, one can decrease aid, but one cannot do both at the same time. With alternatives like these, one must choose.

Actually, however, great care should be taken in making such declarations of impossibility, since often what seems impossible at first turns out to be possible under closer examination. One can increase aid in one sector or of one type while decreasing aid in another sector or of another type. It is possible to disarm while at the same time increasing one's bomber force, perhaps by discarding some tanks or rifles. By suggesting new action mixtures, finer differentiations and increasing specificity often make the seemingly impossible possible. Actions which may at first seem to be mutually exclusive, in the sense that doing one makes it impossible to do the other, often are not. Seemingly incompatible actions can be mixed in different ways, if not at the same time, then at least through time. One can have his cake and eat it, at different times, or at the same time if one can be satisfied with eating less than the whole cake. Insisting that one must choose between one possible action or another when in fact independent choices can be made for each of them can be a serious mistake. There is nothing inherently incompatible between, say, increasing funds to UNRWA and liberalizing immigration laws. The analyst can make decisions on each of these separately.

The analyst could, however, choose between these alternatives if he wished to, if he deemed it wise to do so. He might want to choose between them if, for example, he saw them both as leading to much the same ends, so that while possible, it would not be wise to do both. There may be conditions

under which it is not necessary to choose, but it is desirable. Thus, there are two kinds of reasons for posing choice problems: because it would be impossible to take more than one of the proposed courses of action, or because it would be unwise to take more than one of the proposed courses of action.

Thus, distinctions should be drawn among those sets of alternatives in which the analyst must choose, can choose, or chooses to choose. It is this last category that is of primary concern to the policy analyst because it establishes the basis for his following work. Of course, the analyst may sometimes, quite properly, decide not to make any systematic and explicit choices at all, but instead select one idea that is "obviously" good for elaboration and development into a concluding action recommendation. Where a choice problem is explicitly posed for study, however, the reasons why the analyst senses that that choice should be made should be clearly established. Often the reasons will not be obvious.

3.3 The Elaboration of Action Proposals

Sets of alternatives like the following might be described:

The United States could:

- 1A. encourage programs to advance the welfare of the refugees in the camps;
- OR 1B. not encourage programs to advance the welfare of the refugees in the camps.

The United States could:

- 3A. decrease the funds it supplies to the refugees through the UNRWA;
- OR 3B. continue the funds it supplies to the refugees through the UNRWA;
- OR 3C. increase the funds it supplies to the refugees through the UNRWA.

Such sets do not bring out the real problems faced by the policy analyst, however, because the proposals, as stated, are much too vague. How should the United States encourage what programs to advance the welfare of the refugees? In what degree should the United States decrease or increase appropriations to UNRWA? Should the funds be given unconditionally?

Each of the abstract proposals listed earlier can be manifested concretely in hundreds of different ways, and choices must be made among these possible variations. If an affirmative answer is given to the question of whether to encourage welfare programs, one must still ask what kind of program it is to be, and this in turn will lead to many other questions.

This suggests a hierarchical decision-making system in which commitments are made at higher levels of generality, at the "strategic" level, and lower level "tactical" questions are then dealt with after those higher level questions have been settled. That procedure is simple and elegant, but unrealistic. It creates a misleading illusion of simplicity. The higher level question cannot be answered in its abstract form without reference to the way in which the concrete action that is suggested would be carried out. A firm commitment cannot be made at a higher level until some of the lower level options are recognized and decided. The analyst can pursue his work by asking, if the United States were to encourage welfare programs for the refugees, what form should these programs take? He could then go on to suggest concrete programs.

Each of these proposed programs could then be evaluated on its own merits. There is no need to go back up the abstraction ladder to answer the highly generalized question about whether that kind of activity should be undertaken. Decision problems posed at high levels of generality are not only difficult to answer, but are often not worth answering. This is illustrated by a series of studies that were supposed to systematically examine the problem of choosing among five different basic defense postures.⁵⁵ The authors failed to deal with the problem, partly, it seems, because the five options that were offered were never made concrete. The first phase of their analysis should have been devoted to specifying in detail how each of the five configurations would have been implemented if adopted. Doing this would have also helped to show whether the original question was well formed, since that initial probe might have revealed that there was actually

⁵⁵ Davis Bobrow (ed.), Weapons Systems Decisions: Political and Psychological Perspectives on Continental Defense, New York: Praeger, 1969.

a smaller or larger variety of distinctly different defense postures which needed examination.

Thus, a single sentence is never sufficient to describe an action proposal; the abstraction always requires elaboration. The proposal that the United States should "try to develop an all-out strategy for a peaceful political settlement and see it through," for example, is quite vacuous as it stands. It is expanded and explained by Bolling as meaning (to him) that ...

American policy toward the Middle East should be based on these principles and commitments:

1. A reaffirmation, categorical and unequivocal, that we accept UN Security Council Resolution 242 in its entirety as the only practical basis for a satisfactory, peaceful political settlement of the Arab-Israeli conflict, and a declaration of support for its immediate implementation.
2. A declaration that in line with the UN resolution, we are prepared to give an explicit 20-year commitment that the United States will guarantee the fulfillment of any agreement concerning boundaries, demilitarized zones, navigation rights, refugee resettlement claims Israel, Jordan, Lebanon and the United Arab Republic accept in conformity with that resolution. We should also extend an invitation for the Soviet Union to join us in making a similar commitment, hopefully as part of the general international guarantee under the United Nations, but we should pledge that the United States will fulfill this commitment whatever the Soviet Union does.
3. A declaration to Israel that in conformity with the UN Resolution's directive on the "inadmissibility of the acquisition of territory by war," Israel must withdraw from all the Arab territories taken under Israeli control on or after June 5, 1967, as part of, and in a suitable sequence of events related to, the overall settlement.
4. A declaration to the Palestinian Arabs that the United States will give its full support to efforts to enable the Palestinians to have genuine self-determination up to and including the right to establish their own state, if that is their desire, embracing the West Bank and Gaza.
5. A further pledge to the Palestinians that the United States will provide generous financial support, in cooperation with other nations, for settling in full the claims of Palestinians who have lost their homes and property as a result of the Middle East conflict, in help-

ing them to resettle inside Israel to the extent such resettlement is provided for in the peace agreement or to resettle elsewhere.

6. A declaration to Israelis and Arabs, to Jews, Muslims and Christians that we support efforts to make Jerusalem a truly unified City of Peace, open to all races and religions, governed in some suitable condominium arrangement and with some permanent symbolic United Nations presence.

7. A pledge to support suitable international agreements to keep the entire Middle East free of nuclear weapons and free of Great Power military bases.

8. A firm promise to enter with other interested nations into the organizing and financing of Middle East regional research and development institutes, a regional development bank, and such other international enterprises as will facilitate the fullest possible advancement of the social, economic and cultural interests of the people of the region and their peaceful cooperation.⁵⁶

A fully developed action recommendation consists of much more than just the hint of an idea. The advocacy of desired ends is never enough. Implementation strategies must be suggested as well. As Wilkinson suggests:

If each alternative the problem analysis yields could be conceived of as an instruction given by some specific government office to some other such office, such that some specific actions or statements would have to be done by some specific persons if the instructions were to be complied with, then the alternative is probably well formulated.⁵⁷

Whether in the governmental context or not, the recommendation must be clear enough to know what concrete actions are to be taken, with specifications of who should do what, when, how, and under what conditions.

There are two different reasons for elaborating the initially sketchy action proposals. One is to serve the requirements of evaluation, whose function is to help form choices among alternatives. Highly abstract and vague

⁵⁶ Bolling, "Alternatives for the U.S. in the Middle East," p. 41.

⁵⁷ Wilkinson, Comparative Foreign Relations, p. 149.

prescriptions usually cannot be meaningfully compared, and thus the original raw ideas must be given concrete form. Ambiguity should be resolved, not simply for its own sake, but to serve the requirements of the evaluation process as well.

The second reason for elaborating action proposals is to meet the requirements of the client-actor. The final recommendations that are delivered to him should not be so unhelpful as the simple statement that "the United States should develop an unequivocal policy of strength" or that "the United States should encourage programs designed to advance the welfare of the refugees." Far greater specificity is needed to guide the client's action. The policy analyst should be as helpful to his client as possible, which means that he should propose a draft of instructions he might send to his subordinates, as Wilkinson suggests, or draft communiques to other actors, or whatever else may be required by the final recommendation. Here the policy analyst focuses on developing a single recommended course of action to facilitate its implementation. In the pre-evaluation elaboration, in contrast, the analyst develops specifications on several different courses of action to facilitate comparison and choice among them.

3.4 Describing Characteristics

As suggested in the preceding section, action proposals should be elaborated by providing detailed specifications of the action that is to be taken: who is to do what, when, and how? There is also another sense in which fuller descriptions are needed, namely in describing those attributes or traits which go beyond the description of the proposed action itself. I call these the characteristics of the action. Elaborations are of the action, while characteristics are about the action. Actions can be identified and distinguished by reference to the descriptions of the proposed actions themselves and also by reference to their distinctive characteristics. The descriptions of actions generally must be elaborated first to permit their characterization.

Usually the most important characteristics of proposed actions are the outcomes to which they are likely to lead. The analyst should be sensitive not only to the desired or intended outcomes but also to other effects, any...

to anticipate all of the possible consequences as thoroughly as he can. If outcomes are understood to mean consequences, future efforts for which the proposed action would be the cause, it should be recognized that there are other characteristics which need to be considered as well. It is not only the possible future outcomes and associated risks which need to be identified, but also other characteristics such as the resources which would be needed to take the action, the extent to which taking the action would affect the possibility or wisdom of taking other actions, how other parties are likely to feel about the action (as distinguished from how they are likely to react to it), the ways in which it could go wrong, the effects it would have on the actor himself, and so on.

It is the characteristics and not the elaborated descriptions which will enter into and be weighed in the soon-to-follow evaluation process. At this stage the question is what are these characteristics likely to be, in the factual sense. It is recommended here that the analyst first estimate what sorts of things are likely to result from a given course of action and then, in a separate step, determine which of them are advantageous and which are disadvantageous. The assessment of desirability or undesirability is deferred until the evaluation stage of the analysis.

Anticipation of the requirements of the evaluation stage can, however, guide the work of characterizing the proposed actions. Since the purpose of evaluation is to compare alternatives to help in making choices, it is only those characteristics on which the alternatives can be differentiated that need to be discerned. Characteristic features which are the same for all of the alternatives under examination are of no interest to the policy analyst since information about such features should not affect choices among the alternatives.

The characteristics of the proposed actions could be displayed in the form of simple lists, one list for each action. But since evaluation implies comparative analysis, which in turn implies asking the same questions about two or more different entities and then comparing the answers, the characteristics that are identified as significant should be transformed into questions to be asked of all of the action alternatives under examination.

That is, even though one of the possible outcomes may be associated with only one of the actions, since the actions are to be compared it is important to explicitly ask how each of the other actions stand with respect to that characteristic.

To illustrate, suppose a policy analyst concerned with United States action with respect to the Palestinians has tentatively decided to recommend that the United States should help those Palestinians who wish to do so to immigrate to the United States. The question might then arise as to whether the United States government should go so far as to provide the transportation. The action alternatives, then, are for the United States government to provide the transportation, or for it not to provide the transportation. For the sake of illustration, it is assumed that a choice is to be made between these two options.

After elaborating his description of these action possibilities in some detail, the analyst's next step would be to try to think of and name the kinds of characteristics which determine their qualities. He does not have to worry in advance about whether they will, in fact, distinguish between the alternatives. The characteristics might be like those listed in Figure 3-1. The analyst may not know the answers at the outset, but formulating the questions will help him to decide what information matters, and will help him to guide his research.⁵⁸ The answers then constitute parts of his empirical characterization of the alternatives. Descriptive terms serving as reminders of the answers are included in Figure 3-1, but of course, the detailed characteristics, in generous prose, would have to be provided in the accompanying text in the policy analysis report.

Consider another example, this one drawn from Barry Blechman's "The Quantitative Evaluation of Foreign Policy Alternatives, Sinai, 1956."⁵⁹

⁵⁸ A method for assessing likely reactions to particular proposals is suggested in my paper, "Foreign Policy Analysis: Middle East," Peace Research Society: Papers, Vol. XIV (1970), pp. 95-112.

⁵⁹ Barry M. Blechman, "The Quantitative Evaluation of Foreign Policy Alternatives: Sinai, 1956," Journal of Conflict Resolution, Vol. X, No. 4 (December 1966), pp. 403-426.

CHARACTERISTICS	ACTIONS	
	<u>Facilitate immigration and provide transportation</u>	<u>Facilitate immigration and not provide transportation</u>
1. Dollar cost to U.S.?	Small; limit can be set	None
2. Effect on U.S. military security?	Might help; negligible risk	Might help; negligible risk
3. Reactions of Palestinians?	Mixed; small pockets of hostility	Mixed; large pockets of hostility
4. Reactions of Israel?	Officially favorable; some private opposition	Officially favorable; some private opposition
5. Reaction of American Jewry?	Broad, weak support; some substantial opposition	Broad weak support; inaudible opposition
6. Reaction of United Arab Republic?	Strongly favorable	Favorable
7. Reactions of Asian and African countries?	Viewed with suspicion	Viewed as a positive gesture
8. Moral quality of the action?	Greatly benefits individual Palestinians, but could weaken Palestinian organization.	Benefits individual Palestinians, but could weaken Palestinian organization.
9. Effect on Middle East stability?	Defuses situation	Defuses situation
And so on . . .		

Figure 3-1. Empirical characterization of action alternatives.

In Blechman's view, Israel had five major action alternatives in 1956, summarily labeled as reprisal, threat of force, propaganda and psychological warfare, diplomacy, and formalized pacific settlement. He also distinguished nine possible outcomes: preempt invasion, end Fedayeen raids, open fully, end threat of war, open Aqaba, capture of armaments, direct economic costs, economic repercussions, and political repercussions. Blechman provides more elaborate prose descriptions for each of these briefly labeled actions and outcomes in his article, so the ambiguities in these terms should be overlooked here. The report of the characterization of the actions with respect to these outcomes can be reported in a form like that shown in Figure 3-2. Here the questions are (supposed to be) reformulated and differentiated to the point at which generous prose is no longer needed, but instead answers can be given simply as yes, no, or perhaps maybe.

Tabulation of this form can accommodate any specific objectives or criteria or test questions that might be suggested. These may include questions about the likelihood of fulfilling particular objectives, legality, morality, cost, likely reactions or likely effects on the actor himself, likely reactions of the home constituency, likely reactions of others, ease of implementation, risks of failure, questions about feasibility, and so on. Many characteristics worthy of attention can be identified through a survey of the arguments that others may have raised for or against each of the proposals. The table is open-ended and able to take into account any considerations at all, whether or not they are identified prior to the evaluative analysis.

Of course the requirement of efficiency in policy analysis demands some upper limit on the number of different characteristics of the alternatives which can be taken into account. Certainly some will be so utterly unimportant that they will not merit any attention at all. A characteristic is potentially significant if it can affect the choice among the alternatives, if it can conceivably tip the balance. It has already been remarked that only those characteristics which serve to differentiate the alternatives matter. If all cars under consideration are the same shade of red, they cannot be distinguished on that basis, so that characteristic cannot possibly affect the choice. Sometimes features which are differentiable empirically do not

CHARACTERISTICS

ACTIONS

(questions) (references) → (answers)					
	Reprisal	Threat of Force	Propaganda and Psychological Warfare	Diplomacy	Formalized Pacific Settlement
Would the action . . .					
preempt invasion?	not likely	not likely	no	not likely	not likely
end Fedayeen raids?	not likely	maybe	no	not likely	not likely
open Suez?	no	not likely	no	not likely	not likely
end threat of war?	no	no	not likely	no	not likely
open Aqaba?	not likely	not likely	no	not likely	not likely
lead to capture of armaments?	not likely	no	no	no	no
incur direct economic costs?	likely	likely	no	no	no
lead to economic repercussions?	maybe	not likely	no	no	no
lead to political repercussions?	maybe		no	no	no

Figure 3-2. Empirical characterization of action alternatives using likelihood estimates expressed as simple words.

matter so far as the analyst's evaluations are concerned. One car may be red while the other is blue, but if the analyst is indifferent to color, then that empirical difference does not matter so far as the evaluation process is concerned. To qualify as significant, the identification of any characteristic must reflect to the advantage of one or the other of the alternatives.

If the questions that are first posed about the alternatives are found to be difficult to answer, the analyst may find it useful to refine or decompose them further. Some of the questions, like the one about moral quality, may not be of the sort that are normally regarded as purely empirical or factual, but that does not matter. Any variable on which the alternatives can be characterized and differentiated may be incorporated within this scheme, by these procedures, whether or not the question is a purely empirical one.

3.5 Predicting Characteristics

Only rarely will the analyst know with certainty what outcomes or other characteristics would be obtained as the result of taking any given course of action, particularly in the realm of foreign policy decision-making. He must make predictions to estimate what characteristics are likely and what characteristics are unlikely. Instead of asking "Would the action do such and such?" to be answered simply as yes or no, the analyst should refine his questions to ask "How likely is it that the action would do such and such?" to be answered as a matter of degree.

Strictly speaking, at this stage of analysis there is no requirement for explanations of why a given consequence is likely to follow a given action. Of course, explanations may help in providing predictions and may indicate the conditions under which particular predictions are likely to hold, but there is no need for explanations for their own sake, beyond what is required for making predictions. If good predictions were already available, there would be no need for explanations at all.

The term prediction is commonly understood to refer to the unfolding of concrete events in future time, but here I speak of predicting characteristics, generally and not just outcomes, to make the point that predictions (guesses) can be made about any kind of factual proposition about which one is uncertain and thus about any kind of characteristic at all.

It should also be noticed that the predictions under discussion here are in every case conditional predictions, conditional on the taking of a specified action. The question is not simply how likely is it that a particular characteristic will be the case, but how likely is it that it will be the case if a particular action were to be taken. Much of the work on prediction and prediction outlook is not very useful for the purposes of policy analysis because it fails to show how the futures would differ as the result of different interventions in the ongoing process.

The predictions that are used could come from many different kinds of sources.⁶⁰ They could be "scientific" in the sense of being firmly established through systematic quantitative analysis. They could come from individual experts or from groups of experts, possibly through systematic techniques such as the Delphi method.⁶¹ They could be made with the assistance of a Ouija board or an astrologer. They could be based on the analyst's own intuitions.

Predictions can be made in many different ways, but making good and useful predictions is another matter. Unfortunately, the predictions that have been made with scientific techniques in international relations have, for the most part, been inadequate to the requirements of policy analysis. Scientific studies are inclined to offer nothing more useful than proportions of variance accounted for; they work at too high a level of aggregation; they are often off-target in their questions; and their obtained results are too imprecise. There is no reason to believe that scientific predictions will

⁶⁰ On the varieties of predictions and forecasts, cf. Daniel Bell, "Twelve Modes of Prediction: A Preliminary Sorting of Approaches in the Social Sciences," in David V. Edwards (ed.), International Political Analysis: Readings, New York: Holt, Rinehart and Winston, 1970, pp. 378-408; Irwin D. J. Bross, Design for Decision, New York: Free Press, 1953, pp. 33-53; Theodore J. Gordon, "The Current Methods of Futures Research," in Albert Somit (ed.), Political Science and the Study of the Future, New York: McGraw-Hill, 1971; Wayne Wilcox, "Forecasting Models and Foreign Policy" in Wolfram F. Hanrieder (ed.), Comparative Foreign Policy: Theoretical Essays, New York: David McKay, 1971, pp. 385-402; Herman Kahn and Anthony J. Wiener, The Year 2000, New York: MacMillan, 1967; Bertrand de Jouvenal, The Art of Conjecture, New York: Basic Books, 1967.

⁶¹ On the Delphi method for obtaining specific numerical estimates from panels of experts, see Murray Turoff, "The Design of a Policy Delphi," Technological Forecasting and Social Change, Vol. 2, No. 2 (1970), pp. 149-171, and the bibliography in that article.

necessarily be more accurate or more useful than, say, those obtained through consultation with experts. One kind of source may be better in some circumstances while others are better in other circumstances. The analyst trying to obtain predictions of the likely consequences of proposed actions can do nothing more than muster the sources and resources available to him, including his own talents, and use them according to his own best judgment of their relative qualities in the particular circumstances.

Rather than defer to others, the analyst may develop the needed predictions himself. Even if he does not do all the work himself, knowing how to do it will guide him in posing the questions to be put to others.

The consequences of proposed action alternatives can be predicted in a two-stage process in which the analyst first asks what outcomes might possibly be obtained as a result of the given action, and then estimates the likelihood with which that action will lead to each of the possible outcomes. The first stage is similar to that outline in the preceding section, with the important difference that now, rather than focusing only on the likely outcomes, the analyst gives attention to possible outcomes which are unlikely as well. The results of the second stage, in which likelihood estimates are formed, can be recorded in the form shown in Figure 3-3. The entries in the figure are estimates of the probability with which each of the actions would lead to each of the possible outcomes, or more generally, characteristics. For simplicity's sake, in each case I have shown only the low end of the range of probabilities estimated by Blechman.

Another, equivalent method of portraying this information, one which demonstrates the interrelationships among the different variables more clearly, is shown in Figure 3-4.

Rather than using numbers, the probability estimates could just as well be expressed in words like "almost certain," "very unlikely," "moderate chance," and so on. The entries in the cells of the table should be words rather than numbers if that is what seems more natural and useful to the individual analyst.

CHARACTERISTICS

ACTIONS

	Reprisal	Threat of force	Propaganda and Psychological Warfare	Diplomacy	Formalized Pacific Settlement
Would the action . . .					
preempt invasion?	.10	.15	.05	.10	.20
end Fedayeen raids?	.40	.50	.02	.40	.19
open Suez?	.05	.25	.01	.10	.10
end threat of war?	.02	.01	.33	.01	.12
open Aqaba?	.25	.40	.02	.20	.12
lead to capture of armaments?	.25	.00	.00	.00	.00
incur direct economic costs?	.75	.75	.00	.00	.00
lead to economic repercussions?	.50	.40	.02	.00	.00
lead to political repercussions?	.60	.33	.05	.02	.00

Figure 3-3. Empirical characterization of action alternatives using likelihood estimates expressed as numbers.

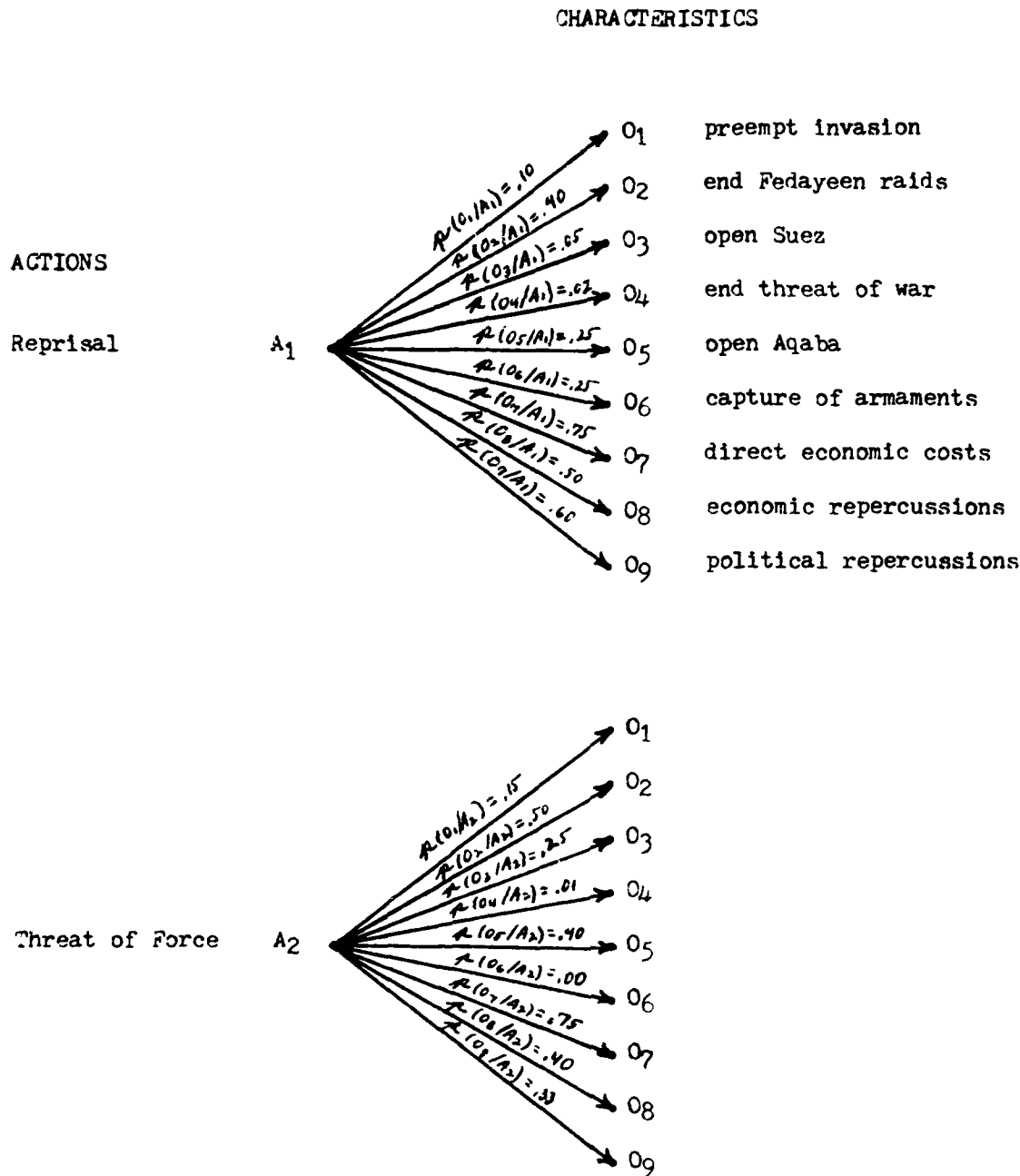


Figure 3-4. Empirical characterization of action alternatives portrayed in terms of likelihoods of producing different outcomes.

If the probabilities are indicated in a numerical form, they can be interpreted in two very different ways. The most common is that used in expected value theory. (See Section 4.9, below) Unlike the case in Figure 3-3, in expected value theory the descriptions of the characteristics must be formulated in a way that makes them mutually exclusive and collectively exhaustive, so that only one of them could possibly occur. Outcomes or characteristics must be defined so that they are comprehensive, with one outcome understood to be a particular compound of the elementary kinds of characteristics that have been discussed here. Each distinct set of answers to the elementary questions would constitute one possible outcome. With these definitions, only one outcome or the other could occur, and no combinations would be possible. This would mean that the probabilities for the different possible outcomes associated with any given action would necessarily add up to exactly one.

Although perfectly logical, describing outcomes or characteristics in the way required by expected value theory is, in practice, difficult and unnatural, particularly in dealing with complex social problems like those encountered in foreign policy making. It is easier to list a variety of elementary characteristics in a form in which several of them could occur at once, as in Figure 3-3 where the different characteristics are clearly not mutually exclusive. (This point about the characteristics should be distinguished from the question of whether the proposed actions are mutually exclusive.) Preempting invasion, for example, does not preclude the possibility of ending Fedayeen raids. In this form, the probability estimates are understood to refer to the probability of a given outcome being obtained as against the probability of that same outcome not being obtained -- as a result of the action. Since they refer to several different sets of possibilities, here the probabilities associated with any given action can add up to more than one. This method is far simpler than than required by expected value theory in that it requires consideration of far fewer distinct outcomes. If all different possible combinations of eight different elemental outcomes were to be listed, there would be $2^8 - 1$, or 255 different possible compound outcomes to consider.

With this interpretation of the probabilities, the possible outcomes are understood to be dichotomous variables: either invasion is preempted or it is

not; either Fedayeen raids are ended or they are not; either the threat of war is ended or it is not. Where finer distinctions are needed in order to provide an adequate conceptualization of the situation, additional possible outcomes can be listed to meet that requirement. Consider, for example, an inherently continuous variable like economic cost. It would be silly to ask simply whether or not there would be some cost. Instead, the analyst could break the continuum into some broad ranges, like "cost between zero and \$10,000," "cost between \$10,000 and \$150,000," "cost between \$150,000 and \$750,000," and so on, to cover the range of interest, and then ask in each case about the likelihood of the actual cost's falling within that range. Any complex set of predictions can be portrayed, at least roughly, in terms of dichotomous variables, and thus in a format like that shown in Figure 3-4.

If this (or any other) subset of the possible outcomes is comprised of elements which are mutually exclusive and collectively exhaustive, the probabilities associated with them should sum to exactly one.⁶² Of course, this is not strictly necessary if the numbers are used simply to display the analyst's estimates and are not to be used in subsequent calculations. Representations like that shown in Figure 1 can be understood simply as heuristic devices designed to help the analyst to identify, clarify, and make explicit his own understanding of the problem under study. It is not always possible, necessary, or worthwhile to perform detailed computations of the kind proposed by Blechman. Indeed, numbers can be dangerous if they create a false illusion of precision. Until he feels the need to be more specific, the analyst may find it useful and natural to express his probability estimates in words, simply as "likely," "highly unlikely," "almost certain," etc.

This diagram is a representation of the analyst's model of the situation, or more precisely, it represents the results of using whatever model he uses. It serves exactly the same function of the more formal models used by operations researchers in that it shows how certain variables

⁶²The problem of assigning probabilities where there are several distinct subsets of possible outcomes is examined in Shlomo Reutlinger, Techniques for Project Appraisal Under Uncertainty, Washington: International Bank for Reconstruction and Development, 1970.

are related to other variables so that one can know how manipulations of one variable will affect the values of others.⁶³ In other words, it portrays the analyst's best understanding of how the situation in which the policy problem is embedded would respond to different actions.

3.6 Risk Balancing

Most of the guidelines suggested so far have implicitly assumed that the policy analyst functions with virtually unlimited time and other resources at his disposal. In practice, of course, the resources available for conducting analyses are always limited, which means that overspending analytic resources on any one step would reduce the resources available for other steps in the study. Perfection cannot be approached in any given stage without running excessive risks that other steps will be given insufficient attention. Analytic resources should be allocated so that the risks are well balanced across the different steps.

Since it is usually not worthwhile to conduct a thorough, formal "meta-" policy analysis to decide which step is most worthy of attention at any given moment, the choice simply has to be made according to the analyst's own best judgment. Of course he should be fully aware of the kinds of factors which should enter into that judgment. The effort invested in any one step should be stopped, at least temporarily, at some point, not arbitrarily, but when further effort seems to stop being fruitful, when it seems that the gains that can be made in terms of achieving the goals of the overall policy analysis no longer warrant the expenditure of the analyst's resources on that particular task.

The discussion so far may have suggested that policy analyses can be conducted through a progressive series of discrete steps. While this view is useful conceptually, for describing the basic components of the process, it

⁶³Cf. R. D. Specht, "The Why and How of Model Building," and Edward S. Quade, "Methods and Procedures," both in Edward S. Quade (ed.), Analysis for Military Decisions, Chicago: Rand McNally, 1967; Bross, Design for Decision, pp. 161-182; Olaf Helmer, Social Technology, New York: Basic Books, 1966, pp. 6-10; Herbert A. Simon and Allen Newell, "Models: Their Uses and Limitations," in Leonard D. White (ed.), The State of the Social Sciences, Chicago: University of Chicago Press, 1956.

is highly artificial and it might be misleading. The analyst should not actually try to do one step first, mark it finished, and then begin work on the next step. The tasks of analysis should interact so that the anticipation of what will be done and what will be required later guides what is done in earlier stages. Maintaining a clear view of the ultimate goal of the study helps the analyst to perform its earlier parts more efficiently, and to know when it is sensible to move from one step of analysis to another. This movement may be backward as well as forward, since new ideas and new insights for earlier stages may be suggested in later stages of the analysis.

To acknowledge the real and inescapable (though sometimes alterable) constraints, and thus the need for carefully allocating the analyst's limited resources, it is necessary to modify and qualify the guidelines that have been offered so far.

Describing the Policy Problem. The description of the policy problem and of the situation in which it is embedded should not be carried on so far that it absorbs so much of the analyst's energy that the other steps in the analysis are given too little attention. The temptation to extend the historical account beyond what is needed is great simply because it is usually very clear how one should investigate and report history, while the methods for conducting the other steps of policy analysis are usually not nearly so clear. The description of the problem should not go (far) beyond what is needed for the specific purposes of the study.

Listing Action Possibilities. It is sometimes argued that the list of possible actions to be considered should be exhaustive, that it should include all action possibilities. Taken literally, that guidance is absurd. It cannot be fulfilled because the number of possible actions is always limitless while the analyst's resources are always limited. For the analyst to even try to list all action possibilities of which he can conceive would make his work utterly unmanageable.

Of course there should be no arbitrary or unjustified exclusions of action possibilities. The policy analyst's art lies, in part, in his ability to find good, convenient, and reasonable ways to delimit the list of possibilities to be examined. In accordance with the generalization advanced

earlier in this section, the extent to which it is worthwhile for the analyst to continue listing possible actions depends on how fruitful that effort is likely to be when compared with the opportunities for investing that same effort elsewhere in the policy analysis process.

After a substantial list of ideas has been built up, the next step is to whittle it down. It is probably best to be carefree in building the list of ideas, and then careful in selecting from it. Usually some ideas can be dismissed without being subjected to detailed examination. Rather than including all those actions which the analyst can imagine, those retained for further consideration should be limited to those actions which the client-actor is capable of taking. It was also suggested that at this initial stage the analyst should be unconcerned with the wisdom of the proposed actions. The reality of the analyst's resource limitations require that this statement be softened. A rough intuitive evaluation must be made even at this early stage just to determine whether it is worthwhile to retain any given action possibility for further examination. A possible action must merit further consideration. It does so only by having some significant chance of being adopted. Early rejection, based on the analyst's confident anticipation that the proposal would not survive the later steps in the analysis, is motivated by the analyst's appreciation that the early rejection of clearly inferior ideas saves energy for the examination of more promising possibilities. There is a risk of premature rejection of possibilities which would, under closer examination, turn out to be good, but with limited analytic resources that risk is inescapable. Where there is substantial doubt, a proposal generally should be retained for closer examination. It should be fully appreciated that the test question at this stage is not whether the action proposal would ultimately be worth following, but simply whether it is worthy of further examination in the policy analysis process.

It is not worthwhile for the analyst to prepare fully developed arguments for these early rejections, but he should at least offer some reasons for making those decisions. Doing this gives potential critics the opportunity they should have for arguing that these reasons are inadequate

and for making a case for more thorough analysis of those rejected possibilities.

Formulating and Choosing Among Sets of Alternatives. The exercise of displaying all the different sets of alternatives which could be constructed out of a given list of possible actions in Section 3.2 was intended simply to show the variety of choice problems which are implicit in such a list. There is no reason for the harassed and pressured policy analyst to actually go through such an exercise. But he should appreciate the range of possible choice problems, and he should be very explicit about which one it is that he finally focuses on.

In general, the policy analyst should not rush to choose among the different choice problems. The most comprehensive one, the one containing the largest number of alternatives (Number 10 in the illustration in Section 3.2) is not necessarily the best one to work on. A choice problem can be too comprehensive in that it requires the analyst to spread his energy too thinly in examining too many different options. The analyst's energy might be more profitably invested in developing just one or two kinds of action possibilities, examining the options contained within them, specifying implementation strategies more precisely, suggesting modifications to minimize deficiencies and to amplify advantages, and so on. Thus, action possibilities may be rejected from consideration after the formulation of alternatives as well as before. The analyst should focus his attention on certain sets of alternatives and set aside others on the basis of his best judgment of which would be most worth pursuing.

It may sometimes be sensible to plan on examining a variety of different sets of alternatives in sequence, beginning with the most worthwhile, to a depth determined by the total time and other resources available for analysis. That is, instead of deciding to work only on the options contained within the one most promising action possibility, it might be decided that the analyst should pursue that one to a conclusion, then follow with an examination of the second most promising possibility, and then on to the third, and so on, as time permits.

Even though there may not be any external constraints forcing a choice among kinds or sets of action possibilities, the analyst's resource limitations force him to choose among them. He can give full attention to no more than a few of the most promising possibilities. He should be careful to be clear about which possibilities are rejected because his analysis leads to the conclusion that they are deficient, and which are simply set aside without serious examination. If he redefines his mandate and focuses the body of his analysis on just one cluster of possibilities, on funding policy for UNRWA, for example, he is no longer asking what is the best thing the United States could do about the problem of the Palestinians generally. He should indicate that his concluding recommendations on conditions to be attached to UNRWA appropriations are not to be understood as implying a rejection of possible actions in other domains. His conclusions should acknowledge whatever limitations he has imposed on the analysis, and should include a clear description of the way in which he may have redefined his original problem.

Elaborating and Characterizing Action Proposals. Most of the work of developing action proposals should be undertaken after the alternatives in the choice problem of concern are clearly identified, that is, after it becomes clearer which action proposals are worth developing. As discussed earlier, there are at least two good reasons for elaborating and thoroughly characterizing action proposals: to facilitate the analyst's evaluation of them, and to facilitate the client-actor's implementation of the concluding recommendation. There is also a good argument against doing that work. Developing action proposals in detail consumes a great deal of the analyst's energy, so much that he cannot expect to do a good job on more than a small number of proposals. It would be impractical to expect the analyst to fully elaborate and characterize every one of the action proposals that are suggested.

The single course of action which is finally chosen for delivery as the final recommendation should be elaborated, and to a lesser extent, characterized, to the extent that doing so seems worthwhile, in accordance with the generalized principle of allocation of analytic resources. It is possible to be even more precise about how finely the alternative action proposals need to be characterized prior to the evaluation process. They

must be developed to some extent, but they do not need to be fully developed, down to fine details of implementation. In the pre-evaluation stages of policy analysis, action alternatives need to be characterized only to the degree that is needed to make a clear choice. Detail beyond that level can be decided upon after one particular course of action is chosen to be recommended.

Where sets of alternatives are arranged hierarchically, as in a branching decision tree, it is not true that a firm commitment must be made to selecting from a given branch or category of actions before the members of that category can or should be subjected to closer scrutiny. But a tentative commitment does have to be made to determine whether it is worthwhile to invest energy into elaborating the lower level options. Again, a given cluster of possible actions contained within a single abstract label must merit further examination by holding out a substantial promise of ultimately having one of its concrete members chosen. It is usually not worthwhile to work out detailed tactics for strategies that have very little chance of being implemented.⁶⁴ Since the policy analysis process involves much more than just the elaboration of alternatives and their evaluation, and those other steps demand the analyst's attention as well, it is unwise for him to expend energy in that work beyond that needed to make clear choices. But at least that much is needed.

⁶⁴ A systematic procedure for moving back and forth between higher and lower levels of abstraction, describing as "mixed-scanning," is developed by Amitai Etzioni in The Active Society: A Theory of Societal and Political Processes, New York: Free Press, 1968, pp. 282-309.

4. EVALUATING ACTION ALTERNATIVES

4.1 The Problem

Eugene Meehan, noting that there are certain areas of behavior "in which the consequences of choice may be catastrophic for very large segments of the world's population," asks "How can such choices best be made?" The question is urgent:

The justifications offered in support of existing values are seldom very convincing. And there is little evidence to show that the quality of the value judgements men make improves with the seriousness of the decisions being made, and some evidence to the contrary--witness the considerations alluded to when modern governments make major policy decisions. According to the news media, and to the participants themselves, stakes of unbelievable magnitude are wagered out of irrational fear, foolish pride, conceit, ignorance, malice, and even stupidity. The vehemence with which the moralists of the age attack such idiocy seems more than justified, though the attack would fare better if the reasoning of the critics were substantially better than the reasoning of those they criticize--and that is seldom the case.⁶⁵

The need for research on bases for guiding judgment in national and international decision-making was described by Richard Snyder and James Robinson more than a decade ago:

Value judgments of policy decision processes are natural and necessary, but rigorous analysis and conceptual clarification of criteria have been notably lacking. In the absence of explicit and agreed criteria, the evaluation of policy consequences gives rise to some of the most troublesome problems in the whole arena of public affairs. If, as the late John Foster Dulles asserted, wars result from miscalculation, what is an error in policy-making and how is it to be ascertained or measured?⁶⁶

⁶⁵ Eugene Meehan, Value Judgment and Social Science: Structure and Process, Homewood, Ill.: Dorsey, 1969, pp. 26-27; also p. 58.

⁶⁶ Richard C. Snyder and James A. Robinson, National and International Decision-Making, New York: Institute for International Order, 1951, p. 27.

The question has remained unanswered, and worse, ignored. The problem of the evaluation of foreign policy alternatives has received very little attention.

The purpose of this chapter is to study the character of evaluation in the work of policy formation. The term evaluation has been used in many ways, as will be apparent from the review in the following section of its uses in foreign policy studies. Here, however, it refers specifically to the task of determining which of several alternatives confronting a decision-maker is preferred and should be chosen. The pre-evaluation work described in the preceding chapters has brought the policy analyst to the point at which he faces several well-defined alternative courses of action from which he must select one to forward as his concluding recommendation. How should he decide which alternative to choose?

The problem under study is that of a single individual trying to decide his own preferences. Another different problem arises when several individuals, in a *common committee* or as political opponents, confront each other with incompatible preferences and try to reconcile their differences. That group problem is set aside here on the grounds that the question of formulation of preferences by the individual is naturally prior to the question of how several different decision-makers reconcile their preferences. As de Rivera put it, "in the last analysis, it is the conflict within each person that will decide policy."⁶⁷

4.2 "Evaluation" in Foreign Policy Studies.

The problem of evaluation has been recognized by some students of foreign policy, of course, but it has been understood in several different ways. For example, according to Glenn Paige's definition

⁶⁷ Joseph H. de Rivera, The Psychological Dimension of Foreign Policy, Columbus, Ohio: Merrill, 1968, p. 106.

By evaluation is meant the judgment (assignment of values to) actual or potential empirical states of affairs in terms of certain criteria.⁶⁸

His evaluative method

... is suggested by studies of "ordinary language" that have been done by ethical theorists in philosophy. That is, rather than impose from outside a set of evaluative criteria that has been created out of professional polemics in political science, we might begin with the ordinary language of moral discourse that is revealed by the Korean case materials themselves.⁶⁹

Paige analyzed the responses of critical observers of the United States' decision to intervene in Korea in 1950 and summarized their views in eight different normative propositions, some saying the decision was wrong, and some saying it was right. No attempt was made to coalesce the findings into a single encompassing judgment. Certain categories and criteria of evaluation were suggested by the analysis, however. These were

Antecedent behavior: Was the behavior of the decision-makers in the pre-crisis period such as to minimize the occurrence of the crisis precipitating the event?

Decisional process: Was the response to the crisis decided in such a way as to gain widespread acceptance of the authority of the decision makers through the legitimacy of the decisional processes?

Ends: Were the ends pursued of deep and enduring human value?

Means: Were the means employed such as to receive widespread acceptance as being appropriate for the ends sought?⁷⁰

Paige also suggested another possible approach:

⁶⁸Glenn Paige, The Korean Decision: June 24-30, 1950, New York: Free Press, 1968, p. 329.

⁶⁹Paige, The Korean Decision, p. 330.

⁷⁰Paige, The Korean Decision, p. 339.

Another avenue for exploration in evaluating the Korean decision is to invoke certain criteria that are commonly employed, either explicitly or implicitly in political science analyses. This approach differs from that of the normative inventory in that it brings to bear criteria of judgment that originate outside the Korean case.⁷¹

These criteria were illustrated by questions about such things as the attainability of the ends, the suitability of the means, the timeliness and flexibility of the response, and the accuracy of the calculated support.

Speaking of the critical assessment of past actions, another student of foreign policy, John Lovell states that

The desirability of a decision or action, however, is determined from an assessment of the consequences ... knowledgable evaluation is invariably dependent upon adequate explanation. To decide whether the decision of the Truman administration to send troops to Korea was good or bad, it is essential to investigate its consequences ... Actually, assessment of a decision or act requires not only a determination of the consequences, but also a comparison of the actual consequences with the probable ones if an alternative course of action had been selected ... In short, what is required in the evaluation of past decisions, programs, and organizations is a comparison of what was with what might have been.⁷²

Paige was concerned with the critical assessment of past decisions made by others, a task which may be differentiated from our main concern, the future-oriented assessment of contemplated actions. Lovell makes that distinction, and according to his terminology, one evaluates past actions, but prescribes future actions. Similarly, in Lovell's usage, one explains past events, but predicts future events:

⁷¹Paige, The Korean Decision, p. 339.

⁷²John Lovell, Foreign Policy in Perspective: Strategy, Adaptation, Decision Making, New York: Holt, Rinehart and Winston, 1970, p. 15.

The relationship between prediction and prescription is analogous to that between explanation and evaluation. ... Thus, sound prescription rests upon accurate prediction, just as knowledgeable evaluation rests upon accurate explanation. Moreover, just as assessment of a past decision requires a comparison of what was with what might have been, assessment of future decisions and actions requires one to compare the consequences of a prescribed course of action with the probable consequences of alternative courses.⁷³

Later, Lovell asks:

Can any universally acceptable criteria be established that could serve policy makers as guideposts in choosing among various intermediate policy objectives and among policy means and tactics, or that could serve the student of foreign policy in evaluating the choices made by policy makers? ... our quest is for a standard of evaluation that can be applied objectively rather than subjectively. That is, we are searching for a standard by which each of us, in appraising the same set of foreign-policy goals and means, would arrive at the same conclusions as to which goals and means were good and which were bad.⁷⁴

He then examines three candidate criteria, legal norms, moral principles, and "realism" to determine whether any of them is "both universally acceptable and operationally meaningful."⁷⁵ As Lovell understands the last of these criteria, "realistic goals and means would be those that, in the existing pattern of demands and opportunities, would best maintain or promote the national interest."⁷⁶ All three criteria are found wanting for predictable

⁷³ Lovell, Foreign Policy in Perspective, p. 15.

⁷⁴ Lovell, Foreign Policy in Perspective, pp. 291, 297.

⁷⁵ Lovell, Foreign Policy in Perspective, p. 290.

⁷⁶ Lovell, Foreign Policy in Perspective, pp. 296-297.

reasons, including especially their ambiguity and their questionable applicability in concrete cases.⁷⁷

Lovell finds that

... reasonable men can and do disagree about what is legal, moral, and in the national interest, and under what conditions various norms are applicable. Indeed we may conclude that politics is a struggle not only to influence particular policy outcomes or to influence the allocation of costs and benefits that accrue from the policy process; politics is also a struggle to influence the structuring of norms by which various policy choices are judged to be legitimate and broadly acceptable.⁷⁸

Many observers suggest that wisdom should be socially defined. According to Charles Lindblom, for example, "Agreement on policy thus becomes the only practicable test of the policy's correctness."⁷⁹ In a context which qualifies its meaning considerably, Roger Hilsman has said that "The test of policy is not that it will most effectively accomplish an agreed-upon value, but that a wider number of people decide to indorse it"⁸⁰ Interpreting this as a prescription, Joseph de Rivera disagreed, and responded to this statement by saying that

⁷⁷Cf. Werner Levi, "The Relative Irrelevance of Moral Norms in International Politics," in James N. Rosenau (ed.), International Politics and Foreign Policy, Revised edition, New York: Free Press, 1969. As Rosenau says in his introduction, Levi "tackles the difficult task of assessing the extent to which moral values, as distinguished from national interests, serve as goals of foreign policy." He does not, however, inquire into the extent to which moral considerations should affect foreign policy.

⁷⁸Lovell, Foreign Policy in Perspective, p. 301. The influence of political power on the determination of prevailing norms is insightfully analyzed in E. H. Carr, The Twenty Years' Crisis, 1919-1939, New York: Harper and Row, 1964.

⁷⁹Charles E. Lindblom, "The Science of 'Muddling Through'," Public Administration Review, Vol. XIX (Spring 1959), pp. 79-88.

⁸⁰Roger Hilsman, "The Foreign Policy Consensus: An Interim Research Report," Journal of Conflict Resolution, Vol. III, No. 4 (December 1959), p. 364.

While we might call the above the "test of consensus," it would be a mistake to assume that this is the only test of policy and that policy can not be evaluated from a value-free point of view. For the real test of policy it is not simply that a number of people think it will help them achieve their values. Thus, in spite of the fact that policy is a-rational, we may ask a kind of reasonableness of it. We would like the policy to: (1) achieve the goals which its supporters hoped it would achieve, and (2) to achieve these without having unanticipated consequences that damage other values which its supporters hold. If a policy meets these criteria, then it is a "good" policy, whether or not it is good for a particular individual who may not have supported the policy. We may call this the "test of reasonableness."⁸¹

None of these suggested tests is adequate. While many students of foreign policy gladly say which particular policies seem to them to be wise or unwise, few have had anything to say about how one should decide. Those who have recognized the question have not agreed in their answers. They have been most effective in showing that the answer to the question of how foreign policy alternatives should be evaluated is not at all obvious.

4.3 Separating the Fact and Value Questions

Decisions are based on the factual and the value aspects of the analyst's understanding of the alternatives under examination. It is not only the value component which is "psychological" and internal to the decision-maker, while the relevant facts are somehow "objective" and external. The factual component (past, present, and projected) which enters into the decision is a matter of judgment, just like the value component. The decision is necessarily based on the way the alternatives appear to the decision-maker, according to his best judgment of the evidence. He does not compare actual consequences or actual costs or actual features of any kind; he compares his informed judgments on these dimensions. The decision-maker or analyst may draw his

⁸¹ de Rivera, The Psychological Dimension of Foreign Policy, pp. 90-91.

information from some authoritative source, but it is still his judgment, rather than the external fact, that enters into the analysis. He makes his choices on the basis of his beliefs about the nature of the alternatives under examination.⁸²

Evaluative judgments are about beliefs of fact. It follows that difficulties in forming evaluations may be partially due to uncertainties with respect to those facts. But difficulties may sometimes be encountered even when the relevant facts seem clear to the decision-maker. The analytical process involved in the "pure" evaluation problem can be raised in clear relief by separating it from the associated questions of fact by postulating a variety of hypothetical answers to the empirical questions that arise, and then performing evaluations and determining the appropriate choice for each hypothetical set of facts. The usefulness of this procedure was appreciated by Harold Lasswell, especially in relation to projected facts:

It is generally held that the evaluation of policy alternatives is more a field of professional competence than that of the making of comprehensive estimates of the future. A specialist can make himself comfortable among alternatives of policy by the expedient device of adopting successive sets of working assumptions about future contingencies. The expert can in this way evade the responsibility for committing himself to a definite estimate of the likelihood that a given contingency will in fact appear.⁸³

Strictly speaking, evaluative analyses should always report their results on a conditional basis. Rather than simply saying that a certain alternative should be chosen, the findings should say something to the effect that if the postulated facts are the case and if one has the values

⁸²This distinction between the fact and value aspects of evaluation corresponds to the distinction between affective and belief components of attitudes in social psychology. Cf. Martin Fishbein (ed.), Readings in Attitude Theory and Measurement, New York: Wiley, 1967. Fishbein's suggested rule of composition by summation of products of affect and belief components (pp. 394, 437) may be viewed as a generalization of the expected value model described in Section 4.9. The formulation is offered as a basis for explanation, but it could reasonably be suggested as a basis for prescription.

⁸³Harold D. Lasswell, Politics: Who Gets What, When, How. New York: Meridian, 1958, p. 189.

described, then one's best choice would be to take such and such action. If the underlying argument is sound, denial of these stated conditions can then provide a basis for denying the consequent imperative. Of course, in practical policy analysis it may be awkward or impossible to frame concluding recommendations in this logical form, but the principle should be fully appreciated, and the body of the argument should make clear the conditions and assumptions on which the final recommendations are based.

One important reason for carefully distinguishing between questions of fact and questions of desirability is that often, through sloppiness or carelessness, one type of question replaces the other. The debate over the supersonic transport, for example, has sometimes focused on this question of whether it would generate excessive noise, as if it were obvious that if it did not generate excessive noise it would be a good thing. The arguments against the underground nuclear test on Amchitka Island in November 1971 dealt almost exclusively with its environmental effects, suggesting that there would be nothing wrong with it if it were shown to be ecologically safe. For a time, the argument over the shootings at Kent State University swirled around the question of whether the National Guardsmen actually heard sniper fire, as if a positive answer would have been sufficient to justify their shooting into the students massed in front of them. It is in these ways that questions of fact are sometimes improperly substituted for, and treated as surrogates for, questions of value.

4.4 Begging the Question, Strategically

Policy makers frequently resist policy making. Asked "if it were true that it was his ambition to go down in history as the Secretary of State who solved the Berlin crisis," Dean Rusk reportedly replied, " 'No. I'm not quite that vain. But I do want to go down in history as one of those Secretaries of State who succeeded in passing the Berlin crisis on to his successor! ' "84 While the failure to face up to hard decisions often does reflect an abdication

⁸⁴ Hilsman, To Move a Nation, p. 41.

of responsibility, it is sometimes justified. Unnecessarily impaling decision-makers on the horns of dilemmas wastes good talent. Charles Lindblom plainly acknowledges that "muddling through" is sometimes positively wise. The underlying principle is simply that it may be better to make no decision than to take a high risk of making a bad decision. Of course, "no decision" really means choosing the null alternative. If there is no null alternative and a risky decision must be made, the choice of a less consequential alternative may help to assure that blunders can only be small ones.

One good reason for refusing to choosing among substantive alternatives, and instead deferring the decision, is to gain time to obtain new information. Sometimes delays are not very costly. New information may be expected to present itself to the decision-maker with the passage of time, as events unfold, or information may be actively pursued through some sort of research process. It may be anticipated that that new information will clarify the nature of the alternatives sufficiently to make the best choice obvious.

Another good reason for deferring decisions is simply to allow more time for processing the information the analyst already has. More thorough evaluative analyses take more time.

Avoiding hard decision problems does not necessarily mean avoiding policy problems. Any difficulty in choosing that is encountered in the evaluation stage should suggest to the analyst that it might be wise to revert back to the earlier stages of the policy analysis at which proposals are formulated. Instead of struggling to choose among alternatives, the analyst's energy may be more profitably invested in modifying them or in developing wholly new alternatives. A skilled policy analyst usually can find many possible stopping points between different action proposals, often by creating a variety of interesting mixtures of the proposals. Coalescing action proposals may be more productive than differentiating and choosing among them. If a new proposal can be created which is clearly superior to any of the previously considered alternatives, the hard question of evaluation will have been very elegantly begged.

It is often wise to avoid hard choices by modifying old alternatives or creating new ones, not only to reduce the work of choosing, but also to avoid undesirable political consequences. Even after a difficult choice is made, it is still likely to raise political controversy. If one alternative is found superior to another only by a narrow margin, that finding is not likely to resolve the arguments over them.

Systematic evaluation procedures can be avoided by avoiding decisions, and also by making decisions without going through a systematic evaluative analysis. Some policy analyses may be initiated simply in response to a diffuse uncertainty about what should be done and, never encounter any difficult choices as the options are clarified. The choice questions that are posed might not be really problematic. Evaluation is only a part of policy analysis, and in some policy analyses systematic evaluation can be dispensed with altogether.

In other cases, the differences in the overall qualities of the alternatives may be relatively small so that the risk of making the wrong choices is small. It is not worth investing as much energy into comparing bicycles being considered for purchase as it is in comparing homes being considered for purchase. Where the risk is small, it is not sensible to undertake a tedious and costly analysis. In foreign policy making, however, where errors can be extremely costly, large investments in evaluative analysis generally are warranted.

4.5 The Function of Evaluation Procedures

Two very different approaches to evaluation are possible, described by Braybrooke and Lindblom as corresponding to meliorative and peremptory values. In their view

... the distinction between meliorative and peremptory values is a distinction between two views of the necessity of inspecting alternatives before passing judgment on a policy. On a meliorative approach, judgments about accepting or rejecting any policy must wait upon a comparison of that policy with alternatives to it. On a

peremptory approach, certain characteristics are looked for on the basis of which a policy would be approved or disapproved taken by itself, without any attention necessarily being given to alternatives.⁸⁵

In this study, evaluation is defined as being meliorative rather than peremptory in character. Here, the function of evaluation is to determine preferences among alternatives. Evaluation is understood as fundamentally comparative, and thus value is understood as fundamentally relativistic. This position corresponds to Meehan's:

... if a value judgment is an expression of preference, a proposed value judgment that specifies only one outcome is improper and incomplete, whatever the situation to which it applies, because the term "preference" implies comparison and comparison requires two or more class members.⁸⁶

The decision-maker needs to know, not whether a given action would be good or wise in an absolute sense, but whether it would be better or wiser than its competitors.

Since his purpose is simply to make a choice, the analyst may not be much concerned with how much better one alternative is than another. If he does not need that information, he may not find it worthwhile to pay the extra effort required to determine that subtle measure of degree. It may be sensible for him to rest with simple determinations of superiority and inferiority.

The purpose of evaluation is to determine preferences. The purpose of systematic evaluation procedures is to guide the determination of preferences in problematic situations, that is, where choices are difficult to make. Such procedures are of no use where the decision-maker is already

⁸⁵David Braybrooke and Charles E. Lindblom, A Strategy of Decision: Policy Evaluation as a Social Process, New York: Free Press, 1963, p. 150; also see pp. 147-167.

⁸⁶Meehan, Value Judgment and Social Science, p. 3; also p. 48.

confident in his selection of one or another of the alternatives. He might use the technique to sanctify decisions he has already made, and to persuade others of their virtue, but that use would be an abuse.

If it were possible to find a procedure by which it was possible to evaluate alternatives without the analyst's active intervention, that procedure would serve as a substitute for judgment, and would also allow the analyst to remain quite ignorant of the nature of the political problem at issue. The simplest such procedure, flipping a coin, requires only a purely mechanical activity, and does not demand any knowledge or judgment on the part of the "analyst." Similarly, deferring decisions to a group consensus or to a more or less arbitrary voting procedure is often a way of not deciding hard issues on their merits. It is possible to find ways to avoid facing up to a decision, but no really good way has yet been devised.

Evaluation procedures of the kind studied here are intended to help the analyst to deal with, rather than evade, decisions. They should be viewed as aids to judgment, not as substitutes for judgment. They demand deep knowledge of the particular political problem and of the alternatives at hand.

Three major kinds of systematic evaluation procedures will be discussed in the following sections, the use of goals and objectives, the use of criteria, and the decomposition of problematic decisions. None of these procedures eliminates the work of evaluation and the need for judgment and decisions. They only change the scope or magnitude or locus of that work in some sense. Where, for example, goals or objectives are offered as the basis for choice, those goals or objectives always must, in turn, be selected from a large variety of alternative goals. If a certain criterion is proposed, the analyst must still decide that being higher on a particular measure is to be preferred. (Of course, seeking criteria by which to select criteria can lead to the same endless regression encountered in selecting goals.) Similarly, decomposing complex alternatives into simpler components still requires evaluative judgments on each of those components. In the expected value model, for instance, where actions are evaluated according to the qualities of the

outcomes to which they might possibly lead, those possible outcomes still require evaluation. For the incrementalists, too, "Choice among policies is made by ranking in order of preference the increments by which social states differ."⁸⁷ That is, the analyst is asked simply to exercise his judgment to decide which marginal alternative would be best. The evaluation task cannot be wholly evaded, but it can be rearranged in such a way that it becomes more manageable. That is the function of a systematic evaluation procedure.

4.6 Goals and Objectives

It is often suggested that one of the first things the policy analyst must do is define his objectives. He is asked to identify his target, to specify where he wants to go, like a general mapping out of the territory he intends to capture.⁸⁸ Those who speculate about the policy-making process finds this to be a very reasonable-sounding suggestion, but practitioners find that it just does not work very well.

The imputation of goals is useful after the fact to help understand decisions that have been made, but these helpful explanatory constructs may have little to do with the deliberative processes which impelled the actions in the first place. As Lasswell remarked, "the analysis of political results in terms of certain values (like deference, safety, income) does not imply that the result or the values are consciously sought."⁸⁹ Surely few statesmen think about the national interest or about the pursuit of power in the cosmic sense that Hans Morgenthau and others prepared to explain past foreign policies do.

⁸⁷Braybrooke and Lindblom, A Strategy of Decision, p. 86.

⁸⁸Cf. Barry M. Blechman and James T. Holt, Cost/Effectiveness Analysis of Foreign Policy Alternatives: Need, Approach, and Prospects, MacLean, Va.: Center for Naval Analysis, No. 68, March 1971.

⁸⁹Lasswell, Politics, p. 26.

One reason why systematically specified goals and objectives are not very useful to the policy analyst is that they are usually described in abstract and vague terms so that it is difficult to decide how concrete action alternatives differ with respect to those goals. Rowen and Williams observe

The formulation of policy objectives would seem to be an important part of policy analysis. However, the results of formal policy planning processes of the last three administrations do not strongly support this contention. In practice, statements of objectives have tended to be series of homilies that were unobjectionable in principle but not of much use as measures of policy success or program effectiveness.⁹⁰

Charles Hitch reacts in much the same way:

For all sorts of good reasons that are not about to change, official statements of national objectives (or company objectives) tend to be nonexistent or so vague and literary as to be nonoperational. It is easy, but not helpful to the systems analyst, to say that the objective of the military establishment is to prevent war if possible and to win one if it occurs.⁹¹

Objectives like "the defense of freedom" or "self-determination for all peoples" hardly provide adequate guidance for the choices of action ordinarily encountered. Such objectives can be listed, but they are not likely to be very meaningful.

If there is a broad consensus on a particular objective, chances are that it will not be particularly helpful. Discussing attempts to formulate

⁹⁰ Henry S. Rowen and Albert F. Williams, Policy Analysis in International Affairs, Santa Monica: Rand Corporation, P-4243, November 1969, p. 17. Also published in United States Congress, Joint Economic Committee, The Analysis and Evaluation of Public Expenditures: The PPB System, Washington: Government Printing Office, 1969, pp. 970-1002.

⁹¹ Charles J. Hitch, "On the Choice of Objectives in Systems Studies," in Donald P. Eckman (ed.), Systems: Research and Design, New York: Wiley, p. 45. The usefulness of systematically articulating objectives is also questioned in Aaron Wildavsky, "The Political Economy of Efficiency: Cost Benefit Analysis, Systems Analysis, and Program Budgeting," in Austin Ranney (ed.), Political Science and Public Policy, Chicago: Markham, 1968, especially pp. 64-67; and in Lindblom, "The Science of Muddling Through."

agreed objectives among different agencies of the United States government, Rowen and Williams find that

The predictable results have been "lowest common denominator" statements of objectives which are either bland enough for all agencies to accept or vague enough for each agency to interpret to its satisfaction. In fact, getting agreement on objectives is often much more difficult than getting agreement on specifications--unless the objectives have been largely drained of content.⁹²

Although several of his examples are no longer valid, Hitch reached much the same conclusion

The illusion that there is broad agreement on national objectives stems from the practice of listing, with no exchange rates indicated, nice things for the nation to have. We are all (or almost all) in favor of God, motherhood, peace (and therefore deterrence), winning a war if deterrence fails, protection against nuclear blast and fallout, the containment and rollback of our enemies, better education, more superhighways, a higher standard of living, a balanced budget, lower taxes, more rapid economic growth, etc., etc., etc. But lists of this kind are almost useless for the analyst. In addition to being imprecise, they ignore the all-important question of choice among nice things when having more of one means having less of another.⁹³

Rather than begin by listing objectives, the analyst might come to grips with his policy problem more effectively if he thinks first in terms of the different kinds of responses which are available, examines their qualities, and then makes choices where choices should be made. There is no questioning that values, goals, and objectives must be taken into account in the policy analysis process. The question is, where and how? Values have an explicit place in the procedure when it comes to choosing among well specified action alternatives, but that occasion does not arise until a good portion of the policy analytic work has already been accomplished. Detailed objectives do not have to be stated at the outset.

⁹² Rowen and Williams, Policy Analysis in International Affairs, p. 17.

⁹³ Hitch, "On the Choice of Objectives in Systems Studies," p. 47.

Apparently, the difficulty is due to a confusion between the statement of the goals or purposes for which a policy analysis is initiated and the statement of the values by which its final products are to be measured. Obviously, a policy analysis would not be conducted if the analyst had no purposes; there must be something to motivate the formulation of alternatives. Every policy analysis study should include an early statement of the reasons for its being undertaken, including some specification of the goals of the action to be recommended. This initial statement may be something quite vague, however. Something like "amelioration of the Middle East conflict in a way that is not harmful to the United States, Israel, or Egypt" might be a perfectly adequate opening statement of purpose.

That statement of purpose ordinarily will not be a sufficient basis for choosing among concrete action alternatives, however. Basing the evaluation on initially stated objectives can lead to the neglect of other important considerations like costs or unintended consequences of the proposed actions. The intended effects may be included within the basis for making the final choice, but they should never be the whole basis. Since real political problems are highly complex and the variety of possible proposals cannot be anticipated in advance, the basis for evaluation can never be fully specified prior to the conduct of the analysis itself.

4.7 Criteria

In the eyes of Yehezkel Dror, and many others as well, ...

In principle evaluation involves two main steps:
(1) a criterion is used to ascertain the actual level or quality (including both quantitative and qualitative aspects of "quality") of a process; and (2) a standard is used to appraise the ascertained quality.⁹⁴

Criteria for evaluation may be understood as dimensions of variation in the character of alternatives which have clear value associations, in the

⁹⁴Yehezkel Dror, Public Policymaking Reexamined, San Francisco: Chandler, 1968, p. 25. A good discussion of the selection and use of criteria may be found in Charles J. Hitch and Roland W. McKean, The Economics of Defense in the Nuclear Age, New York: Atheneum, 1967, pp. 158-205.

sense that an alternative which measures higher on a given dimension is, at least in that respect, preferred to other alternatives which measure lower on that dimension. The dollar cost of an item, for example, might be regarded as a criterion of choice, since a less costly item is clearly preferred to a more costly version of that same item. These dimensions can also be simply nominal, where for example, particular colors are preferred over others.

For any suggested criterion to serve its function in evaluation, it must be decidable in the sense that it can be clearly determined where each alternative stands on that particular dimension. It might be argued that, say, "likelihood of success" would be a good basis for choosing among alternatives, but the criterion is not useful if it is not possible to decide which of the alternatives is higher on that dimension. Similarly, criteria like legality or morality are only applicable where the alternatives are readily differentiable on these dimensions.

Lovell, like many other observers, suggests that any valid criterion for choice must be universally acceptable, universally applicable, and exclusive.

The requirement that criteria must be universally acceptable suggests a particular concern with resolving differences among decision-makers, that is, with the group decision-making problem. There is no particular reason why the criteria used by the individual faced with a problematic choice should necessarily be broadly agreed upon. Consensus is nice, but not necessary, and certainly not always the best indicator of wisdom. Inappropriate strictures of this kind can seriously confound the decision-maker's task.

Insistence on universal, or at least general, applicability implies a search for criteria which usefully distinguish alternatives in a very broad variety of problem situations. In this conception, criteria would not vary from one decision problem to another, as goals or objectives would. It is evident, however, that since the significant dimensions of variation of alternatives are very different in different situations, it will not be

possible to discover any general applicable criteria for the evaluation of alternatives.

In addition to suggesting that it be universally applicable and universally agreed upon, Lovell also asked that any criterion for choosing among alternatives should be exclusive, in the sense that choices should be made according to legal considerations alone or according to moral considerations alone. Given the highly multidimensional nature of action alternatives (apparent from any thorough description), it is plain that no single criterion can serve as an adequate guide to choice. The only measure which might conceivably serve in this way would be a construct such as utility or goodness or desirability which, by its definition, comprehensively subsumed all individual dimensions of variation. Herbert Simon's generalized criterion of efficiency is comprehensive in this way, but only by virtue of his expanding its meaning beyond recognition.⁹⁵ Conceptualizing indicators of this kind is not, in itself, helpful, since it is not evident how the utility or efficiency of alternatives is to be gauged. Indeed, that measurement problem is simply another way of describing the general problem of evaluation under study here.

Criteria like legality or morality may nevertheless be useful. Relevant criteria can be identified through an exercise in which hypothetical questions based on the "other things equal" assumption are posed. If two alternatives differed only in the degree to which they were legal, and the decision-maker would prefer the more legal alternative, that is an indication that legality is, for him, an appropriate criterion to be considered in evaluating alternatives. Any such distinction which potentially can, under certain circumstances, affect the choice that would be made, can be regarded as a significant criterion for choice. Legality may not be the criterion by which choices should be made, but it is certainly a relevant criterion. The quality of alternatives is partially determined by their legal character, and therefore, this variable can make a difference in the choice. If the alternatives differ in their legality, that difference should be taken into consideration.

⁹⁵ Herbert A. Simon, Administrative Behavior, Second Edition, New York: Free Press, 1957, pp. 178-186.

Used with care, a wide variety of criteria can help decision-makers to form their choices in difficult situations. It is plain, however, that no small number of criteria will serve as an adequate guide to choice for most decision-makers in most situations. The idea of using selected criteria may be misleading because it tends to narrow, rather than expand, the range of vision of the analyst. Potentially, there are as many different valid criteria as there are ways of distinguishing among alternatives. An action alternative should not be chosen simply because it has some good features, and should not be rejected simply because it is possible to point to some bad features. A good evaluative analysis is comprehensive, and takes into account the full range of attributes of the alternative actions.

4.8 The General Ledger

John Lovell asks

Are there any objective, or universally acceptable, criteria by which one may measure the goodness or badness, the desirability or undesirability of foreign policy goals and means? Or are the norms of evaluation to be selected or rejected merely on the basis of personal preference?⁹⁶

The dichotomy is false and unhelpful. It is not true that if generally acceptable criteria (or goals) cannot be found, there is nothing left to guide choice but taste and whim. There may be other ways to help.

A number of considerations always enter into the determination of preferences. Usually the particular elementary characteristics of the proposed actions are not articulated, but are viewed as a unitary gestalt, without differentiation. This is typically the case for non-problematic decisions, where there is no felt need for probing investigation. Where decisions are difficult to make, however, the analyst might well be able to transform his original difficult question into a series of smaller questions, each of which is easier to answer than the larger decision problem. This

⁹⁶ Lovell, Foreign Policy in Perspective, pp. 289-290.

would follow the general "principle of goal reduction" described in Section 1.5. The smaller questions can clarify problems sufficiently so that appropriate choices become apparent, even without further systematic and explicit analysis.

Different decision-makers or analysts with different beliefs may answer the smaller questions differently, and thus may produce different responses to the larger question. That is, the same procedure may lead different analysts to different conclusions because they use different inputs into it. The procedure may nevertheless be helpful for each of them.

A procedure for decomposing and presenting the empirical characterization of action alternatives was presented in Chapter 4. Once this empirical information base is established, the analyst can proceed to examine each of the elemental differences and evaluate them, deciding which tend to make one alternative better and which favor the choice of another alternative. These elementary evaluative judgments should be easier to form than the overall composite evaluation because each of them is based on a single dimension of variation.

In some instances a knowledgeable analyst may be able to form clear evaluative judgments without first developing detailed and explicit empirical characterizations of the proposed actions. He may be able to list advantages and disadvantages directly. In any case, however, the evaluations will reflect the analyst's response to what he understands to be the facts. Even if he does not need it for himself, being explicit about the empirical information base can be useful because it can help the analyst to communicate his reasoning to others.

The analysis of a decision problem can be laid out in the form of a general ledger, as shown in Figure 4-1, a refinement of the format used in Figure 3-3. Only two of the action alternatives are displayed. The form is described as a ledger simply because it provides a way to account for credits and debits, assets and liabilities, advantages and disadvantages, costs and

benefits.⁹⁷ Each row corresponds to one characteristic, that is to one question, one basis for comparison, one variable or dimension or feature which characterizes, and possibly distinguishes, the alternatives. Three columns are associated with each alternative. The first column provides a place for recording the analyst's best understanding of the factually correct answer to the question posed in that row. It is now assumed that the questions are all of that simplified form which can be answered in terms of likelihood estimates. The second and third columns summarily record the analyst's evaluative response to the facts as he understands them.

The evaluative judgments on the elementary characteristics could be made in two different ways which should be clearly distinguished. The first discounts the evaluation in accordance with the likelihood estimates immediately, and the second tries to decompose the evaluation and the discounting into two separate steps. The first method asks "how desirable is preempting invasion, given that there is only a ten percent chance of achieving that through the use of reprisals?" With this method the second column could be dispensed with, and the judgment recorded directly in what is now shown as the third column. The second method first asks for an unconditional evaluation: "how desirable would preempting invasion be if that were certain to be achieved?" That answer presumably would be the same regardless of which action was being contemplated. (The unconditional evaluation should be the same across any given row of the ledger, regardless of which alternative was being considered.) Its contribution to the value of any particular action would then have to be discounted in accordance with the estimate of the likelihood of that action's producing that outcome or characteristic. With this method, separate judgments are reported in the first and second

⁹⁷The ledger idea has deep historical roots, tracing back at least to Jeremy Bentham's "felicific calculus" calling for the balance of pleasures and pains. Another balance sheet method for the comparative analysis of foreign policy alternatives have been developed in Ralph E. White, Nobody Wanted War: Misperception in Vietnam and Other Wars, New York: Doubleday, 1970, Appendix, pp. 339-358. The policies were measured against ten different "values" like "avoiding World War III in the long run," "avoiding the domino tendency," and "ending the war quickly." While these values were not chosen blindly, as a priori criteria, they did not go to that other extreme, advocated here, of attempting to take into account all significant features by which the particular alternatives can be distinguished.

columns shown in Figure 4-1, one empirical and one evaluative, and these two are then somehow combined together, intuitively or by some explicit rule, to produce the net evaluative judgment recorded in the third column.

The first method for arriving at elementary evaluations can be used if it seems easier. Often, however, the second method may be helpful because it decomposes the judgmental task into the very basic components. It may be easier to form an evaluative assessment of a particular characteristic or feature first on the basis of the premise that it was certain to be obtained, and then discount that assessment according to the separately-made assessment of the likelihood of its being obtained as a result of the action.

Here, again, the entries in the columns could be expressed in words or in numbers. Appropriate measures are those which are adequate to the task, and not necessarily those with the greatest mathematical elegance. It may sometimes be possible to get by with very rough measures, distinguished into categories no more refined than, say, "good," "extremely bad," "neutral," and other such terms. Or the analyst might use a more elaborate judgment scale on which higher positive numbers indicate greater goodness and higher negative numbers indicate greater badness. More sophisticated measures, generally more difficult to obtain, can be introduced if and when the "cheaper" ones prove to be inadequate for guiding the analyst's choice.

Together with the measurement problem, there still remains the problem of determining appropriate rules by which the elementary conditional evaluative judgments should be combined to form the larger, composite evaluation. How should the analyst put all of the bits of information together to determine which of the alternatives, taken as a whole, would be best to choose?

The natural inclination is to calculate some sort of sum of the elementary evaluations for each alternative, with the more important characteristics given extra weight. The more desirable alternatives would then be that one which had the higher overall measure. Systematically assigning weights may be impractical, however, because the efforts it would take would be too great, and would draw energies away from the particular decision problem at hand. Another sensible approach would be to simply let the magnitude of each elemental unconditional evaluation measure reflect an implicit weighting of that characteristic, so

CHARACTERISTICS

ACTIONS

	Reprisal			Threat of Force		
	likelihood of occurrence	unconditional evaluation	conditional evaluation	likelihood of occurrence	unconditional evaluation	conditional evaluation
Would the action . . .						
preempt invasion?						
end Fedayeen raids?						
open Suez?						
end threat of war?						
open Aqaba?						
lead to capture of armaments?						
incur direct economic costs?						
lead to economic repercussions?						
lead to political repercussions?						

Figure 4-1. General ledger for comparative evaluation of action alternatives.

that the more important characteristics had higher positive or negative value measures associated with them.

Sometimes, however, thinking in these terms can lead to careless propositions. For example, it is sometimes suggested that one should take an action if its advantages outweigh its disadvantages, that is, if the column sum were positive rather than negative. It should be clear that this would be true only if the only alternative against which it was to be compared was one whose net value was counted as zero. There may actually be a number of alternatives, all of which have a net positive quality, in which case the rule would provide no guidance at all. Sometimes one may have to choose the best out of a bad lot of alternatives, where positive features are outweighed by negative features in every case. It may be wiser to take an action than not to take it, but it does not always follow that it would, therefore, be wise to take that action. This is so simply because there may be other alternative actions which would be even better. The good can be the enemy of the best.

The suggestion that an alternative should be chosen if its assets outweigh its liabilities is misleading because it fails to take into account the essentially comparative nature of the evaluation process. The analyst should not simply compute the (possibly weighted) sum for a single column and examine it to determine whether it is positive or negative. He should compare that overall measure of the quality of one alternative with the corresponding overall measure of quality for that alternative's competitors.

Instead of taking column sums, one for each alternative, and then comparing those sums, another equivalent, but possibly more convenient approach, would be to compute differences characteristic by characteristic (line by line in the ledger), and then sum those differences. A positive sum of differences would show that one alternative is superior, while a negative sum of differences would show that the other alternative is superior. This procedure clearly acknowledges the comparative nature of the evaluation process. It also shows very plainly why it is that characteristics on which the alternatives cannot be differentiated can be omitted from the analysis.

In practice, it may not be important to have exact measures and perfectly clear, logical rules of combination. There are even reasons to doubt whether good rules can be created, since the reasonable-sounding answers that have been tried in the past all have had serious deficiencies in practice. I concur with G. H. Fisher's feeling that one cannot find satisfactory procedures that will make the decision, but one can find methods for providing information that will provide a basis for decision-makers to better exercise their judgment.⁹⁸ Thus I intentionally stop short of trying to provide generally satisfactory formalistic answers to the problem of composition. I suggest procedures for decomposition, but do not provide any guidance for recombination. The argument is simply that analyzing problems in the general ledger format that has been described will itself often clarify problematic decisions sufficiently to make wise choices obvious. The policy analyst should use the simplest scheme sufficient to his task, and that will often mean that he can stop before encountering rigorous measurement problems or the formal problem of composition. The ledger is not supposed to make the decision. It is a systematic display device intended to help the analyst himself make decisions.

4.9 A Formalized Procedure: Expected Value Theory.

In the last section, I insisted that in practice the policy analyst usually can and should do without highly formalized analytic procedures. I stand by that position; my major argument on evaluation was presented in the preceding section. That discussion was not simply a prelude, setting the foundations for the decision analysis procedure to be outlined here. I am reluctant to present any formalized procedure because of the danger of its being misunderstood and misused. Nevertheless, handled with care, a formalized system of decision analysis can serve as a useful heuristic to the decision-maker, suggesting to him what needs to be thought about, and suggesting how it might be thought about.

The conceptual apparatus developed in the preceding section was based on that used in expected value theory. In this section, I will take the next

⁹⁸G. H. Fisher, Some Comments on Conceptual Frameworks for Comparing Alternatives, Santa Monica, Calif.: Rand Corporation P-4506, November 1970, p. 5.

step and sketch out its formal structure. It is important to appreciate that expected value theory has not always been intended to be used in the prescriptive mode rather than the explanatory mode; its proponents have often been unclear in this respect. It will be discussed here as if it were prescriptive, designed to provide guidance on how one should make decisions.⁹⁹

A standardized notation will help. Let $A_1, A_2, \dots, A_m$ stand for each of the alternative actions under consideration, and let $O_1, O_2, \dots, O_n$ stand for the different outcomes or characteristics which might be relevant for the set of actions under consideration. These symbols do not represent numbers. They stand for different actions and different characteristics, or more precisely, for different prose descriptions of actions and of characteristics which should be provided in the policy analysis report.

The estimated likelihood of probability of a given action having or producing a given characteristic can be represented as $p(O_j/A_i)$. The estimate of the likelihood of obtaining outcome O_2 as the result of taking action A_7 , for example, would be represented as $p(O_2/A_7)$. The unconditional evaluations of the different possible characteristics can be represented as $U(O_j)$, for the "utility" of the particular characteristic. These are numbers which represent judgments about the actions and the characteristics. Thus, there are two classes of information, the empirical ones represented as the probability estimates, and the values, represented as the utilities. The core question posed in expected value theory is, given this information, which of the action alternatives should be chosen?

Setting aside the requirements on the measurement procedures for the moment, the basic idea of the answer given in expected value theory is that the contribution of each characteristic to the overall "expected value" of each action is equal to the value of the characteristic, discounted by the probability of its being obtained as the result of that action. Thus, the contribution of the possible characteristic O_3 to the quality of action A_1

⁹⁹ For more thorough expositions of the expected value model, cf. Howard Raiffa, Decision Analysis: Introductory Lectures on Choices Under Uncertainty, Reading, Mass.: Addison-Wesley, 1968, or Robert Schlaifer, Introduction to Statistics for Business Decisions, New York: McGraw-Hill, 1961.

would be $p(O_3/A_1) \cdot U(O_3)$. The total expected value for the action would be the sum of all of these components, one for each characteristic under consideration. Thus, the expected value, E , for action A_1 would be

$$E(A_1) = p(O_1/A_1) \cdot U(O_1) + p(O_2/A_1) \cdot U(O_2) + p(O_3/A_1) \cdot U(O_3) + \dots \text{etc.}$$

More generally

$$E(A_1) = \sum_{j=1}^m p(O_j/A_1) \cdot U(O_j)$$

In other words, the expected value for any given alternative is equal to the product of the probability measure and the value measure for each possible outcome, summed over all the possible outcomes for that alternative. The best action to choose, then, is that one for which the expected value is highest. That is the essence of the argument of the expected value model.

The interrelationships among the different pieces of information can be seen by presenting them in an array like that shown in Figure 4-2. One column corresponds to each action alternative, and one row corresponds to each characteristic under consideration. The unconditional evaluations of each characteristic are noted outside of the array to show that they do not depend on the choice of action. One probability estimate must be made for each cell. The entries recorded in the cells are the utilities for the characteristic in the particular rows multiplied by these probabilities. The expected value for each of the alternative actions is computed as the sum of these products down each column. According to the expected value theory, the best action is that one for which this column sum is highest.

The measurement procedures, how numbers are assigned to the fact and value judgments, are directly related to the question of whether this argument is true or applicable. (Recall the discussion in Section 3.5 on the interpretation of the probability estimates.) Considerable effort has been devoted to the problem of devising suitable procedures, but without

CHARACTERISTICS	UNCONDITIONAL VALUES	ACTIONS		
		A_1	A_2	A_3
O_1	$U(O_1)$	$p(O_1/A_1) \cdot U(O_1)$	$p(O_1/A_2) \cdot U(O_1)$	$p(O_1/A_3) \cdot U(O_1)$
O_2	$U(O_2)$	$p(O_2/A_1) \cdot U(O_2)$	$p(O_2/A_2) \cdot U(O_2)$	$p(O_2/A_3) \cdot U(O_2)$
O_3	$U(O_3)$	$p(O_3/A_1) \cdot U(O_3)$	$p(O_3/A_2) \cdot U(O_3)$	$p(O_3/A_3) \cdot U(O_3)$
O_4	$U(O_4)$	$p(O_4/A_1) \cdot U(O_4)$	$p(O_4/A_2) \cdot U(O_4)$	$p(O_4/A_3) \cdot U(O_4)$
O_5	$U(O_5)$	$p(O_5/A_1) \cdot U(O_5)$	$p(O_5/A_2) \cdot U(O_5)$	$p(O_5/A_3) \cdot U(O_5)$
O_6	$U(O_6)$	$p(O_6/A_1) \cdot U(O_6)$	$p(O_6/A_2) \cdot U(O_6)$	$p(O_6/A_3) \cdot U(O_6)$
		sum = $E(A_1)$	sum = $E(A_2)$	sum = $E(A_3)$

Figure 4-2. Expected values of actions as sums of component conditional evaluations.

much success.¹⁰⁰ Whatever the technical difficulties may be, however, it should be fully appreciated that the "correct" methods of measurement are simply those which make the argument true! The system is really one that is logically closed.

Rougher measures than those which fulfill the strict mathematical requirements of expected value theory may be used, and the same rule of composition may be applied to that data, provided that it is clearly understood that the resulting expected values for the action alternatives must be treated as nothing more than rough working estimates.¹⁰¹

If in a concrete situation an expected value analysis indicates that a particular alternative is best, while at the same time the analyst intuitively favors another alternative, he should not simply defer to the conclusions of the formal analysis. Instead, he could review his work and possibly revise or fudge his elementary judgments to make the formal answer match his intuitions. Or he could reject the rule of composition which calls for summing the products of the probability estimates and the value scores. In any case, the formal decision rule should not be allowed to rule the analyst and overpower his judgment. The rule has not yet been shown to deserve that sort of deference.

¹⁰⁰ On the problems of measuring utilities and subjective probabilities, cf. Frederick Mosteller and Philip Nogee, "An Experimental Measurement of Utility," Journal of Political Economy, Vol. LIX, No. 5 (October 1951), pp. 371-404, republished in Edwards and Tversky, Decision Making; Patrick Suppes and Karol Walsh, "A Non-Linear Model for the Experimental Measurement of Utility," Behavioral Science, Vol. 4, No. 3 (July 1959), pp. 204-211; S. S. Stevens, "A Metric for the Social Consensus," Science, Vol. 151, No. 3710 (February 4, 1966), pp. 530-541; Ward Edwards, "Subjective Probabilities Inferred from Decisions," Psychological Review, Vol. 69, No. 2 (1962), pp. 109-135.

¹⁰¹ For attempts at applying expected value theory in political studies, cf. Michael J. Shapiro, "Rational Political Man: A Synthesis of Economic and Socio-Psychological Perspectives," American Political Science Review, Vol. LXIII, No. 4 (December 1969), pp. 1106-1119; Arthur S. Goldberg, "Social Determinism and Rationality as Bases of Party Identification," American Political Science Review, Vol. LXIII, No. 1 (March 1969), pp. 5-25; Barry M. Blechman, "The Quantitative Evaluation of Foreign Policy Alternatives: Sinai, 1956," Journal of Conflict Resolution, Vol. X, No. 4 (December 1966), pp. 408-426; Daniel Ellsberg, "The Crude Analysis of Strategic Choice," American Economic Review, Vol. LI, No. 2 (May 1961), pp. 472-478; republished in Martin Shubik (ed.), Game Theory and Related Approaches to Social Behavior, New York: Wiley, 1964, pp. 230-239.

Even if its rule of composition were demonstrably valid, expected value theory, as such, would be of very limited usefulness for political policy analysis. The approach does not address itself at all to the analyst's problem of clarification. Generally, if a political analyst knew enough about the policy problem he faced to formulate the alternatives, clearly identify the possible outcomes or characteristics, evaluate them, and associate unambiguous likelihood estimates with each of them, all of which is presumed in expected value theory, he would probably know enough about the situation to know which alternative would be best, without bothering to carry out the calculations indicated by the formula. Once the information that is needed to begin to use the expected value theory was obtained, the decision problem would likely be solved. The analyst typically begins with a fuzzy, diffuse kind of uncertainty, and not with the neatly ordered kind that is presumed by the theory.¹⁰²

Highly systematic decision analysis procedures like expected value theory can be dangerously misused. They can create false illusions of precision, they may be pressed into service where they are not strictly applicable, and they can be wrongly treated as a substitute for, rather than as an aid to judgment. Moreover, increasing formalization of the analysis process tends to make it appear increasingly unrealistic to the practical policy maker. Nevertheless, even if it cannot be directly applied in concrete instances, formalization may be helpful because of the insight it provides into useful ways of thinking about the analysis of practical policy problems.

¹⁰²Limitations on the applicability of expected value theory and others like it are discussed in Braybrooke and Lindblom, A Strategy of Decision, pp. 21-33; Günter Menges, "The Suitability of the General Decision Model for Operational Applications in the Social Sciences," in J. R. Lawrence (ed.), Operational Research and the Social Sciences, London: Tavistock, 1966, pp. 565-577; Philburn Ratoosh, "Defense Decision-Making: Cost Effectiveness Models and Rationality," in Davis Bobrow (ed.), Weapons Systems Decisions: Political and Psychological Perspectives on Continental Defense, New York: Praeger, 1969; Martin Patchen, "Decision Theory in the Study of National Action: Problems and a Proposal," Journal of Conflict Resolution, Vol. 9 (1965), pp. 164-176.

4.10 The Pair-Wise Evaluation Strategy

It may be objected that the general ledger evaluation procedure is well suited to the comparison of pairs of alternatives, but in practice it is often necessary to examine much larger numbers of alternatives. The working of comparing every alternative with every other alternative can become extremely tedious. Except for certain mathematically anomolous situations, however, those in which preference orderings are intransitive, pair-wise analysis is entirely appropriate.¹⁰³ The analyst can zero-in on the one best action alternative by comparing two at a time. He can begin by comparing any pair of the alternatives. The inferior one, the "loser" in that comparison, can be rejected altogether; it does not have to be compared with any of the other alternatives. The "winner" is then compared with another alternative, and the "loser" of that second round of evaluation can then be rejected. This step-wise comparison of pairs is continued until the one best alternative is identified.¹⁰⁴

¹⁰³On the problems of intransitive preferences, cf. R. Duncan Luce and Howard Raiffa, Games and Decisions, New York: Wiley, 1957, p. 25; Anatol Rapoport, Strategy and Conscience, New York: Harper and Row, 1964, pp. 7-11; C. West Churchman, Challenge to Reason, New York: McGraw-Hill, 1968, pp. 101-102. While certain patterns of choices may, when compared with particular "rules" of logic, appear inconsistent and illogical, this does not mean that such patterns cannot occur, nor does it mean that the decision maker should not want them to occur. To insist that choices should follow certain rules of consistency is itself a matter of preference. My argument for the strategy is not based on a logical presumption of transitive preferences. My argument is that the increase in analytic efficiency obtained by the use of the pair-wise evaluation strategy is generally great enough, and the likelihood of encountering actual situations in which one would want to make intransitive choices is small enough (I can't think of any), that in my judgment it is always worthwhile to take the miniscule risk incurred in using the strategy.

¹⁰⁴This strategy should not be confused with the search-by-dichotomy procedure suggested by information theory, a procedure designed for moving from abstract, inclusive categories down to specifics in a successive branching process. The pair-wise strategy is intended for operations at a single level of abstraction. Applied at a single level, search-by-dichotomy calls for dividing the alternatives into two subgroups, and then deciding which of them would be likely to contain the best alternative. That selected subgroup would be divided again into two parts, and then one of those would be selected. This process of division and selection would continue until one alternative was chosen. The procedure is useful when there is some non-arbitrary basis, such as strong similarity, for clustering alternatives within given subgroups. A procedure like this may be used intuitively when moving from abstract, general descriptions of proposed courses of action down to specifics. On search-by-dichotomy, see Stafford Beer, Cybernetics and Management, New York: Wiley, 1959, pp. 55-56, 82-87.

This procedure makes use of the fact that there is no need to locate all the steps in the rank-ordered preference ladder if the only real requirement is to locate the top rung. The full preference ordering does not have to be determined, so the total number of comparisons that have to be made is sharply reduced. With the pair-wise evaluation strategy, the best alternative is located rapidly and efficiently.

The strategy also suggests a guideline for the investment of effort into the articulation of alternatives. The rule is simply that an alternative does not have to be developed in detail unless it has some reasonable chance of showing itself to be superior to the current, tentatively chosen, best alternative. According to the procedure described earlier, the policy analyst drew up a list of alternatives, then described them in detail, and then evaluated them. The policy analyst could instead proceed by first fully articulating one promising course of action, and making a tentative commitment to choosing it. He then tries to think up or find some other course of action (possibly a minor variation on the one in hand) which would be better than the tentatively chosen one. If he finds any candidate which apparently would have a hope of showing itself to be better than the current tentative best one, he develops it in more detail, and then carries out a systematic evaluative analysis, comparing the new candidate with the previous, tentative winner. If that newly developed candidate is found to be superior, he then makes a tentative commitment to choosing it. This process of developing and systematically evaluating new, promising candidates is continued until no new alternative can be found to challenge the current tentative winner, at which time the evaluation procedure is concluded. With this evaluation strategy, rather than being spread all over the field, the energy available for articulating alternatives is invested only where it promises to provide the highest possible benefit. Furthermore, this openness, this constant probing, helps to protect the analyst against premature closure. With this scheme, he will be less likely to deceive himself into believing that a particular alternative is the best possible when he has only shown that it happens to be better than some "straw-man" alternative.

4.11 Managing Uncertainty

Foreign policy problems are distinguished by their high complexity or multidimensionality and by the very high levels of uncertainty normally associated with them. The general ledger accounting form is designed to help the analyst to cope with the many dimensions of a particular policy problem. The most common method for coping with uncertainty is to minimize it by obtaining new information to answer one's questions. Where certainty cannot be achieved, the common temptation is to focus on the most likely circumstances or "best estimates" and to ignore the rest. The ledger improves on that by providing a method for taking relatively unlikely features into account as well. Nagging uncertainties will still remain, however. The analyst needn't resign himself to them; there are a number of ways in which uncertainty can be managed.

There may be considerable doubt about the accuracy of the likelihood estimates themselves. Is there really a 40 percent chance that reprisals would end Fedayeen raids, or should that be estimated as 35 percent or as 60 percent or some other figure? The analyst may find it useful to record his likelihood estimates in terms of a plausible low-high range, as Blechman did, rather than as a single number.¹⁰⁵ Similarly, the evaluation judgments might be recorded in terms of a range rather than as a single point on the judgment scale. The breadth of the range conveys some notion of the magnitude of the analyst's uncertainty. Reporting judgments in this form helps to dispel the illusion of precision sometimes created by single numbers. One could go further than specifying ranges, and instead specify full probability distributions over the possible probabilities, but for practical problems that would usually be too difficult to be worthwhile.

This should be followed by a sensitivity analysis to determine whether, and to what extent, variations in this input information would affect the overall conclusions of the study. It may be found that wide variations in judgments on particular characteristics would not make any difference in the

¹⁰⁵ Blechman, "The Quantitative Evaluation of Foreign Policy Alternatives...."

final choice of action anyway. Sometimes, if all of the elemental judgments together were taken even to the limits of plausibility against the tentative selected action, it would still be the best choice. Adopting a term from inferential statistics, such an action could be described as robust, that is, relatively insensitive to broad variations in the underlying premises.

Normally, of course, some plausible variations in judgments on individual or combinations of characteristics would lead to a change in the choice of action. For example, if the likelihood of reprisals ending Fedayeen raids was really much lower than first assumed, it might be best to choose some other course of action. The analyst should thoroughly review the information and assumptions which underlie his policy analysis to assess the ways in which his concluding recommendations would be affected by variations in them.

Knowing about this sensitivity to particular information elements provides a clear indication of the exact characteristics on which further research is most worthwhile. This means that it makes sense to pursue policy analysis to considerable depths before investing a great deal of energy into systematic research. Sensitivity analysis will show that there are many uncertainties which are not worth resolving because the final decision does not critically depend on those characteristics.

Sometimes, of course, the information needed to resolve particular critical uncertainties cannot be obtained, or is not worth obtaining. There will always be some residual uncertainty to be managed.

Besides the diffuse kind of doubt which leads to the recording of fact and value judgments as ranges, another kind of uncertainty, studied very intensively in decision theory, is that in which the likelihood estimates are seen to depend on particular events or conditions whose occurrence is not certain. The wisdom of building a particular kind of defense system, for example, depends in part on one's estimate of the likelihood of receiving particular kinds of attacks. Similarly, in long range planning, one's choice of action now may depend on which of several different conceivable futures is anticipated. In these kinds of situations, the analyst's doubts about the quality of his likelihood estimates are traced directly to uncertainties about

the occurrence of some particular events. The events in question may be limited in scope or they may be wholly different conceptions of possible future worlds, or they may be other kinds of contingencies as well.

The first step in managing the problem is to identify the contingencies that might matter, namely those which could conceivably affect the choice that is made. They don't all immediately come to mind. The analyst can begin by sitting and thinking some up himself. A more ambitious approach would be for the analyst to engage in systematic scenario writing.¹⁰⁶

If he has the resources, the analyst can undertake simulation exercises, whether wholly computerized, wholly based on role-playing individuals, or mixed.¹⁰⁷ Although generally not very useful for making predictions, for showing what would happen, simulations are useful for giving the analyst a broader conception of the kinds of things that could happen under different circumstances. They are particularly effective for showing interesting ways in which things might go awry.

The policy analyst should develop the habit of always circulating draft versions of his analysis and recommendations for critical commentaries. They should be offered not only to close colleagues and to experts in the problem area, but also to people whose views are likely to be very different from the analyst's. He should then give close attention to the arguments against his proposals, especially those which are based on differences in forecasts, and seriously entertain the possibility that those critics might be right. One good measure of the quality of a finished policy analytic study is the degree to which it anticipates its critics. The analyst could ask some consultants directly for ideas about contingencies which might significantly affect the outcome of the proposed actions.

¹⁰⁶ On scenario writing, cf. Herman Kahn, "The Alternative World Futures Approach," pp. 83-136 in Morton Kaplan (ed.), New Approaches to International Relations, New York: St. Martin's Press, 1968; Herman Kahn and Anthony Wiener, The Year 2000, New York: Macmillan, 1967.

¹⁰⁷ On simulation exercises, cf. the periodical Simulation and Society; Harold Guetzkow, et al., Simulation in International Relations: Developments for Research and Teaching, Englewood Cliffs, N. J.: Prentice-Hall, 1963; William D. Coplin (ed.), Simulation in the Study of Politics, Chicago: Markham, 1968, Jay Forrester, World Dynamics, Cambridge, Mass.: Wright-Allen Press, 1971.

After thinking up the contingencies which might matter, the analyst must examine them to determine which of them really do matter, and he then must decide what to do about it. Ideally, the policy analysis should be wholly repeated for each of the contingencies, with each analysis postulating the occurrence of a different event or combination of events. Because of the limitations in analytical resources, however, this work must in practice be limited to the most significant-appearing contingencies.

Focusing on the simplest situation in which there are two action alternatives and two mutually exclusive events (possibly an event and its non-occurrence) under study, the situation is problematic if Action 1 would be preferred if Event A were to occur, while Action 2 would be preferred if Event B were to occur. The problem is that the analyst must make the choice without knowing in advance which of the events will in fact occur. This situation is described schematically in Figure 4-3. Whether based on the general ledger or some other sort of evaluative analysis, the judgements reported in the cells represent overall evaluations of the actions. These evaluations are conditional, however, conditional on the particular event's occurring. The upper row can be understood as "containing" the ledger analysis for the decision problem which would be faced if Event A were the case, while the lower row represents the analysis which postulates the occurrence of Event B.

Given such a problematic situation, how should the analyst decide which of the action alternatives should be chosen?

In some cases, the analyst may be able to form an estimate of the likelihood of occurrence of the events in question, and guide his choice accordingly. Following the logic of expected value theory, the analysis might proceed roughly as follows. First, it must be supposed that numerical probability estimates can be associated with each of the events, $p(A)$ and $p(B)$. The events should be described in such a way that they are collectively exhaustive and mutually exclusive, so that $p(A) + p(B) = 1$. It must also be assumed that the overall conditional evaluations for each of the actions can be expressed on a numerical scale, with more favorable judgments corresponding

	ACTION 1	ACTION 2
EVENT A	good	bad
EVENT B	bad	good

Figure 4-3. Uncertain choice due to uncertainty over which event will occur.

to higher numbers. The evaluation for Action 1 if Event A were to occur could be represented as U_{1A} ; the evaluation for Action 1 if Event B were to occur could be presented as U_{1B} ; and so on.

The overall expected value of Action 1 is composed of two components, one for each of the contingencies that is contemplated. The contribution from each must, of course, be discounted by the estimated likelihood of its coming about. Thus, the expected value of Action 1 can be estimated as the sum: $p_A \cdot U_{1A} + p_B \cdot U_{1B}$. Similarly, the expected value of Action 2 can be estimated as: $p_A \cdot U_{2A} + p_B \cdot U_{2B}$. The preferred action would then be that one whose expected value was higher.

It should be recalled once again that it is not suggested here that the analyst should make his decisions by carrying out computations of this kind. He may carry out the exercise, but he should do it only to clarify, and not to substitute for, his own thinking. This procedural sketch is intended only to suggest a systematic way of conceptualizing the problem.

In some cases, there may be no good way to estimate the probability of occurrence of the critical event. This could happen, for example, where that event is an action by some other party. The likelihood of the other party's attacking you may be affected by the kinds of defenses you choose to establish. If his choice of actions is based in part on his expectations of what you will do, and your choice is based in part on your expectations of what he will do, it may be that neither of you will be able to formulate a sound estimate of the likelihood of the other party making once choice or the other. This is the problem studied in mathematical game theory, which unfortunately has not yet produced much useful guidance for the practical decision-maker. Fortunately, however, the prototype game situation is not so common as some of the professional game theorists would have us believe. In real political situations, there is always a past and a future to be considered, and there is usually extensive communication among the parties, even among enemies, so often each is able to formulate reasonable working

estimates of the likelihood of the other party choosing one alternative or another.¹⁰⁸

In general, sensitivity analysis means studying the effects on the concluding recommendations of variations in fact or value judgments or in any of the premises or assumptions which go into the policy analysis. This includes the study of the effects of (information about) uncertain-to-occur events on the decision.¹⁰⁹ The importance of this work in foreign policy studies is described by Rowen and Williams in these terms:

The systematic examination of uncertainties which we have prescribed may itself appear laborious and "uncertain." It is, but the stakes are high." To us many painstaking ex ante examinations of the "what if's***?" seem justified if they can avoid a few hopeless ex post "but I had assumed ..." excuses.¹¹⁰

Another set of methods for dealing with uncertainty, only rarely considered by decision theorists, is based on reverting back from the evaluation to the formulation stage of policy analysis in order to modify the action proposals themselves. Sometimes the analyst can modify his old suggestions or create new ones so that, even though it still exists, the uncertainty matters less.

¹⁰⁸ Those wishing to review the seductive and overabundant literature on game theory might select from the following, listed in order of increasing complexity and sophistication: John McDonald, Strategy in Poker, Business & War, New York: W. W. Norton, 1950; Anatol Rapoport, Two-Person Game Theory: The Essential Ideas, Ann Arbor: University of Michigan Press, 1966; R. Duncan Luce and Howard Raiffa, Games and Decisions: Introduction and Critical Survey, New York: John Wiley, 1957; John Von Neumann and Oskar Morgenstern, Theory of Games and Economic Behavior, Third Edition, New York: John Wiley, 1964.

¹⁰⁹ The problem of analyzing cost sensitivity, how the cost of a system varies as a result of changes in the configuration of systems, is discussed in G. H. Fisher, "Costing Methods," pp. 288-299 in Edward S. Quade (ed.), Analysis for Military Decisions, Chicago: Rand McNally, 1967. Fisher examines cost variations with variations in design (e.g., in payload capacities of aircraft), and not only with respect to uncertainties in performance. My discussion refers only to the latter kind of sensitivity, and assumes that in the current stage of analysis the design of the alternatives is fixed.

¹¹⁰ Rowen and Williams, Policy Analysis in International Affairs, p. 26.

Consider, for example, the problem of designing defense systems and procedures. A variety of active defense techniques might be proposed, some of which involve defense by offense, penetrating into the enemy's area. The most extreme form would be a preemptive attack, launched in anticipation of the enemy's initiating an attack on one's own territory. In contemplating a preemptive strike, it should be fully appreciated that the wisdom of the strategy depends on the accuracy with which the enemy's intentions are estimated. A preemptive attack launched on the basis of an erroneous prediction that an attack is about to be received would lead to unnecessary damage to the other party.

Aware of this difficulty, the analyst might search for other policies whose success would be less dependent on the precision of his intelligence. This could be accomplished, for example, with passive defense systems, systems designed to blunt the impact of an enemy attack if one were to be launched. Having a shield go unused because of mistaken intelligence is not so bad as using a sword unnecessarily because of mistaken intelligence. Of course, there are other considerations to be taken into account as well. The point is simply that sometimes action proposals can be developed which are less sensitive to the quality of one's information. If it is found that sensitivity to the quality of one's information is a significant feature distinguishing the action alternatives under examination, that characteristic may be included among those examined in a general ledger analysis.

Another way to cope with uncertainty is through the underdeveloped art of hedging. As Rowen and Williams explain:

In many circumstances, the decisionmaker may choose a hedging course of action that preserves some of his options. This may involve initially proceeding, in effect, along several paths with the full knowledge that all but one path must be abandoned eventually, and that the sunk costs of abandonment must be accepted as the price of ascertaining feasibility. AID may finance several types of village radios on an experimental basis, knowing that it is infeasible for district offices to develop maintenance for more than one. In other circum-

stances, options may be preserved by selecting a course of action that will solve only interim problems, but will retain future options.¹¹¹

This is the buckshot approach. By taking many redundant actions, the analyst protects against the failure of individual actions.

Another way to modify proposed actions is to include the purchase of insurance. With insurance, one can make particularly bad outcome possibilities less bad. As Hitch and McKean point out, the extra cost can be computed in money and resources or in the degradation of performance in more favorable contingencies. A tank designer can insure against direct hits by decreasing the thickness of the armor plate, but that increase in weight will cost something in mobility and other performance characteristics.¹¹² An improvement for some contingencies may cost some deterioration for other contingencies.

Insurance is often built into treaties and other agreements by specifying procedures to be followed in cases of strains or breakdowns in the agreement. For example, it might be stated that once any individual party dissents, the agreement shall cease to have force, and instead the parties shall revert back to the status quo ante. Or it might be indicated that in cases of disputes over the agreement the parties should submit the dispute to some particular forms of arbitration, adjudication, conciliation, or mediation. While it is usually wise to anticipate the varieties of possible breakdowns in agreements and to exercise considerable forethought in establishing machinery for dealing with those breakdowns, it should not be assumed that such insurance is wholly cost-free. Softening the effects of possible breakdowns may in some measure increase their likelihood of occurrence. If the consequences

¹¹¹Rowen and Williams, Policy Analysis in International Affairs, p. 25.

¹¹²Rather than making the distinction outlined here, Hitch and McKean view insurance as an example of hedging. See Hitch and McKean, The Economics of Defense in the Nuclear Age, p. 199.

This sequential examination of action alternatives is similar to Herbert Simon's "satisficing" procedure. See Herbert A. Simon, Models of Man, New York: Wiley, 1957. It should not be confused with "lexicographic" decision rules which call for a sequential examination of the characteristics of alternatives. See Peter A. Wissel, "A Lexicographic Approach to Foreign Policy Decision-Making."

of withdrawal from contractual agreements are made less bad, the temptation to withdraw may be enhanced.¹¹³

Confronted with his own ignorance, the policy analyst should take advantage of the great flexibility inherent in his ability to prescribe conditional recommendations. His instruction to his client may be to take some action if some specified thing is the case. Of course, he should also say how the client is to find out. The prescribed action can be conditional on the actor's receiving information in the future about particular consequences of his earlier actions (feedback) or about some other events. One course of action could be prescribed for what are conceived of as normal circumstances, with switches to other courses of action prescribed for other, special circumstances.¹¹⁴

Until now, I have been assuming that there was no significant difference between the beliefs of the policy analyst and of his client. It should be noted here, however, that the analyst can make conditional recommendations to compensate for uncertainties he may have about his client's views. His recommendations can be made conditional on the client's fact beliefs ("If you believe A is the case, do X; if you believe B is the case, do Y), or on the client's values ("If you prefer X over Y, do A; if you prefer Y over X, do B.")

Braybrooke and Lindblom's strategy of incrementalism is specifically intended to help policy analysts plagued with uncertainty.¹¹⁵ The strategy

¹¹³This argument is discussed in my article, "Determinants of Bargaining Outcomes," Peace Research Society (International): Papers, Vol. XI(1968), pp. 23-42.

¹¹⁴Cf. Robert A. Levine, The Arms Debate, Cambridge: Harvard University Press, 1962, pp. 27-28.

¹¹⁵Braybrooke and Lindblom, A Strategy of Decision. Also see Charles E. Lindblom, "Policy Analysis," American Economic Review, Vol. 48 (June 1958), pp. 298-312; Lindblom, "The Science of Muddling Through"; Yehezkel Dror, "Muddling Through -- 'Science' or Inertia?" Public Administration Review, Vol. 24, No. 3 (September 1964), pp. 153-157; Charles E. Lindblom, "Contexts for Change and Strategy: A Reply," Public Administration Review, Vol. 24, No. 3 (September 1964), pp. 155-158; Review by Enid C. B. Shoettle in American Political Science Review, Vol. LXIV, No. 4 (December 1970), pp. 1268-1272; Dror, Public Policymaking Reexamined, pp. 143-157.

recommends taking actions which would lead to small rather than large changes, on the grounds that with smaller changes the risk of error is generally smaller. The danger and difficulty is in not knowing where incrementalism ceases to be wise and instead becomes overly timid and conservative. In spite of the arguments of its advocates, it is unwise to make an a priori determination that the action that is to be selected must be incremental in nature. It makes much more sense to entertain a full range of action possibilities, from the bold and radical to the modest and incremental. Then, with awareness of the uncertainties in the problem situation at hand, the analyst can decide which would be best through examination of the variety of proposals. It is surely important to appreciate that more incremental actions normally entail less risk, but that is only one characteristic, too narrow a basis on which to make a decision. It would certainly be myopic to make an indiscriminate commitment to incrementalism, thus rejecting bold proposals without examination for no other reason than that they are bold.

The extent to which uncertainty should be managed is again a question of resource allocation, and the only answer is: it should be managed to the extent that doing so is worthwhile. The question of what that extent is in the problem at hand usually should be treated as a matter of informal judgment, since rigorous analysis to determine that extent is likely to be too difficult and too costly.¹¹⁶

¹¹⁶ See Wade P. Sewell, "Some Policy Issues in the Analysis of Research and Development Programs," in United States Congress, Joint Economic Committee, The Analysis and Evaluation of Public Expenditures: The PPB System, Washington: Government Printing Office, 1969, especially pp. 1074-1076.

5. OUTLINE OF THE POLICY ANALYSIS PROCESS

5.1 Programming

An excellent way to sharpen thinking about the policy analysis process is to try to say what would be required of a machine that was to do the policy analyst's job. The technique is illustrated by Irwin Bross, who speculates on the design of a general purpose super-consultant which I had no part in naming:

... let me go farther and try to look ahead a few centuries rather than a few years. It is 2450 A.D., and at last a research team has designed, built, and debugged a super Decision-Maker which has been affectionately called George.

George has a prodigious memory. In his acres of memory tanks he stores most of the recorded past experience of the human race ... George is a psychologist as well; he can determine the value systems of his customers. In a blink of an eye, George can characterize the decision problems of these customers, calculate the probabilities and desirabilities, balance these quantities in a manner appropriate to the value systems of his customers, and arrive at a recommended course of action.¹¹⁷

This sort of vision has a long history in the realm of foreign policy making. E. H. Carr quotes J. Fischer-Williams as saying that between the World Wars it came to be believed that there can exist

... a sort of carefully classified card-index of events or, better still, "situations," and that when the event happens or the situation presents itself, a member of the Council or Foreign Minister can easily recognize that event or situation and turn up the index to be directed to the files where the appropriate action is prescribed.¹¹⁸

¹¹⁷ Irwin D. J. Bross, Design for Decision, New York: Free Press, 1953, p. 264.

¹¹⁸ E. H. Carr, The Twenty Years' Crisis, 1919-1939, New York: Harper Torchbooks, 1964, p. 29.

Under the pseudonym of Mark Epernay, John Kenneth Galbraith, in The McLandress Dimension, has carried this to its illogical conclusion in an engaging fantasy of a fully automated Department of State.¹¹⁹

What kinds of information would be required by a machine doing analysis on foreign policy problems, and what sorts of skills must it have? Rather than try to program a robot that could pick up ideas on the diplomatic cocktail party circuit, we must of course be less ambitious, and think in terms of programming a computer to do policy analysis.

Even that is impossible to do. But brief reflection suggests that a well-programmed computer could indeed be helpful. There are judgments to be made which could not or should not be trusted to any mindless machine, but there are also some mundane tasks to be performed for which the machine might be helpful. It is very good at listing things, for example, and at moving lists around. And while the machine may not be competent to answer certain questions, it may be very good at posing them and at storing the answers and reporting them out when they are needed. If we could think of a check-list of questions that a policy analyst should be reminded to consider, a computer could be given the job of doing the reminding. This would be especially useful where certain answers given at certain points raise particular subsets of other questions, while other answers raise other questions. Such a machine could be useful, not as a replacement for the policy analyst, but as a device to help him in his own thinking.¹²⁰

Genuinely useful programming for the policy analyst is not yet in sight, simply because we do not yet know enough about the policy analysis process. A useful start in that direction can be made, however, by making a relatively informal list of the major steps that should be taken in a policy analysis

¹¹⁹ Mark Epernay (John Kenneth Galbraith), The McLandress Dimension, Boston: Houghton, Mifflin, 1963.

¹²⁰ A useful, if overoptimistic, look at possible applications may be found in Fisher Howe, The Computer and Foreign Affairs: Some First Thoughts, Department of State, Center for International Systems Research, 1966. A more sophisticated overview may be found in Davis B. Bobrow and Judah L. Schwartz (ed.), Computers and the Policy-Making Community: Applications to International Relations, Englewood Cliffs, N. J.: Prentice-Hall, 1968.

study. I will try to do that here, not so much for the purpose of programming, but to provide an outline and a review of the major steps sketched out in the preceding three chapters. I will on occasion take the liberty of making some new points here.

Several remarks need to be made about the interpretation of these enumerated steps. They are to be understood as guidelines, not as a recipe to be followed mechanically. Steps are listed to remind the analyst to consider following them, not to command him to follow them. Some steps can be skipped, and others can be added, at the discretion of the individual analyst. Also, I have not been able to articulate satisfactory "stop-rules" to say when the analyst should quit doing one task and move on to another. The analyst will have to use his own good judgment to economize and to allocate his resources among the different steps of analysis (See Section 3.6). It should be understood that there is no requirement to always move to the immediately following step in the sequence. The analyst can skip ahead, or backwards, whenever doing so seems worthwhile. The basic purpose of this outline is to show the kinds of things the analyst should do, and the sequence in which he might do them, but the outline can also be used to guide the structuring of the final written report.

The following three subsections outline the "program subroutines" which correspond to the three major stages of the policy analysis process.

5.2 Describing the Policy Problem

Policy analyses may be conducted because the individual analyst becomes personally aware and concerned with an issue, because the boss says so, or because of a variety of other combinations of circumstances. While it may sometimes seem reasonable to jump ahead of the policy analysis process, where, for example, a small number of alternative proposed courses of action is somehow "given," it is generally wise to retreat and to examine the assumptions which underlie those givens. This means stepping back and examining the problem which the final recommended actions are supposed to meet.

The basic steps to be covered in this stage-setting phase of policy analysis can be outlined as follows:

1. Identify, that is, name the policy problem of interest. Pose the "what should be done about ...?" question that is to be answered. (See Sections 2.1, 2.3)
2. Identify the "client," the actor(s) to whom the final recommendations are to be addressed. (Section 2.2)

Rather than identify the client in advance, it may sometimes be preferable to let the analysis itself indicate who should act in order to bring about particular desired outcomes. (Section 2.2)

3. Describe in detail the specific policy problem with which the policy analysis is concerned. State the general objectives or purposes which motivate the identification of this question as a problem and which motivate the policy analysis effort, from the points of view of both the client and of the analyst. Identify the impediments to the achievement of these objectives. (Sections 2.1, 2.4)
4. Describe the underlying political and social situation in which the policy problem is embedded, including its history, the identities of the major parties to the situation, and their expressed and apparent values in relation to the situation. (Sections 2.1, 2.4)

5.3 Formulating Action Proposals

Once the policy problem is clearly described the analyst can go on to think about what sorts of things might be done about it. The task at this stage is to generate ideas and to formulate them into candidate action recommendations. While the approach here should be rather free and uncritical, some selectivity will have to be exercised to assure that the analyst's time is used well. This creative work can be guided by the following suggestions:

5. Review previous proposals for dealing with the problem. (Section 3.1)
6. Review past experiences with other comparable problems.
7. Draw up a list naming the different kinds of things which might be done which would bear some relationship to the problem, without concern for detail, and without concern for the wisdom of taking the actions.

8. On the basis of a tentative, essentially intuitive evaluation, select that subset of possibilities which is judged to be worthy of further investigation. In doubtful cases, retain the action possibility for further development and examination. This list should be kept open for later additions, as new, interesting possibilities occur to the analyst.
9. Reformulate the list of plausible actions into sets of alternatives to show where choices can be made. (Section 3.2)
10. Of those choices which can be made, select out and focus attention on those choices which should be made.
11. If the choices are not difficult to make, that is, if certain courses of action are clearly worth recommending, skip to step 20.
12. Where systematic and explicit choices are to be made, elaborate the descriptions of the alternative actions in the choice problem under study sufficiently to permit their empirical characterization. (Section 3.3)
13. Identify the characteristics on which the alternatives might be meaningfully differentiated. These should include possible consequences or outcomes. Keep this list open-ended for possible later additions. (Section 3.4)
14. Describe each of the action alternatives under consideration on each of the characteristics. If appropriate, estimate the probability with which each of these actions is likely to bare or lead to each single-dimensional characteristic. (Sections 3.4, 3.5)

The assessments, or measurements, could be in generous prose, in the form of a selection from a multiple-choice set of words, or in numbers. In any of these forms, the answers represent the analyst's best judgment. Where the answers are to be unidimensional in form, whether in words or in numbers, the questions corresponding to each characteristic will have to be refined so that each question asks about a single dimension.

These last steps in which the alternatives are characterized are designed to serve the information requirements of the following evaluation procedure. Thus, the extent and detail to which they are carried out should be guided by the anticipation of, and coordinated with the actual execution of, the next stage of analysis.

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6. Review past experiences with other comparable problems.
7. Draw up a list naming the different kinds of things which might be done which would bear some relationship to the problem, without concern for detail, and without concern for the wisdom of taking the actions.

5.4 Evaluating Action Alternatives

Explicit and systematic evaluation procedures should be initiated when a choice problem is posed which is both important and difficult, and should be continued up to the point at which the choice problem is resolved. The work of evaluation should not be extended beyond the point at which it ceases to be worthwhile in serving the larger purposes of the policy analysis.

Assuming that the action alternatives have been clearly identified and characterized in the preceding stage of analysis, the next steps to take in coping with a difficult choice problem could be as follows:

15. Evaluate each action on each elementary characteristic to determine its relative goodness or badness (desirability or undesirability). (Section 4.8)

This step can be broken down into the following subroutine:

- 15.1 Evaluate each elementary characteristic on an unconditional basis, that is, without reference to the particular action alternatives. These unconditional values can be designated by $U(O_j)$.

- 15.2 Consider the previously determined (in step 14) estimate of the likelihood with which each of the action alternatives would have or would lead to each of the characteristics, $p(O_j/A_i)$. Estimate the contribution of each elementary characteristic to the value of each action alternative by discounting each characteristic's unconditional value by that likelihood estimate. The contribution of characteristic O_j to the value of action A_i can be estimated as $p(O_j/A_i) \cdot U(O_j)$.

The next step is that of recomposition:

16. Combine the elementary evaluation judgments to form comprehensive evaluative judgments of each alternative.

The overall values can be estimated by summing the component values on the elementary characteristics for each alternative action.

The next step is to make the choice, at least tentatively:

17. Compare the comprehensive evaluative judgments to decide which of the action alternatives appears to be best.

Now, having a specific recommendation in mind, the analyst should work at thinking up ways in which it might turn out to be a bad choice. Several different things could be done, including the following:

18. Review the fact and value judgements on which the analysis is based and estimate the likelihood of having made errors in establishing these premises. Assess the degree to which the choice of action is sensitive to plausible variations in those premises. Entertain the possibility that special, possibly abnormal events might occur in the future which would affect the problem situation and thus alter the analysis. (Section 4.1)
19. Where the choice of action is found to be sensitive to particular uncertainties, make efforts to improve information about those contingencies, and make efforts to modify the action proposal so that it becomes less sensitive to those uncertainties.

Some work remains to be done even after a recommendation is firmly decided upon. For example, the analyst should ...

20. Elaborate the description of the prescribed actions to the extent that it would be useful to the client-actor. The analyst should suggest details such as appropriate means of communication, draft versions of relevant messages, timing of different phases of the proposed course of action, administrative or procedural points which require attention, and so on. (Section 3.3)

As part of the elaboration, the policy analyst might suggest some pre-tests of the proposed action which the analyst himself was not able to perform. For example, he might

21. Suggest some pre-tests of the proposed action, such as requesting reactions from other parties, planting advance "leaks" to the press, or having lower level functionaries launch "trial balloons" to gauge likely reactions.

This advance work may have other purposes as well.

22. Where appropriate, the client should be reminded to communicate his plans and to solicit advance reactions from other parties, even if only as simple political courtesies.

These other parties may be associates and colleagues, possibly in adjacent bureaucracies, as well as counterparts in other countries. The Department of State, for example, may want to signal its moves to several other agencies in Washington, as well as to the foreign offices of other countries.

The analyst should also suggest follow-up work to be taken by the client himself. For example, he should

23. Suggest measures to be taken after the recommendations are implemented to monitor their effectiveness.

The policy analyst may wish to refine his recommendations by indicating the actions which should be taken, conditionally, depending on the feedback reports returned by the monitoring system. It is generally wiser for the analyst to err on the side of providing overly detailed recommendations than to provide insufficient guidance for his client.

Before wrapping up his analysis and committing it to a report, the analyst should once again review his recommendations to see if they might be improved:

24. Try to find ways in which the identified disadvantages of the proposed actions could be made less disadvantageous.

25. Try to find ways in which the advantages can be enhanced.

26. Prepare the policy analysis in draft form, solicit competent critical reviews from a broad range of readers, and revise the analysis in the light of these critiques.

27. Prepare and submit a summary analysis and the concluding recommendations to the client.

5.5 Preliminaries and Postliminaries

Describing the policy problem, developing candidate action recommendations, and then selecting from among those candidates constitute the core of the policy analysis process. There are several other steps, outside that core, which merit full consideration as well.

One of the most important steps is the preparation, at the outset, of the policy analyst's own plan of action. The general purpose plan outlined here is not likely to be fully satisfactory for any specific policy analysis task. The first thing the policy analyst should do, then, is to formulate his own plan of action, whether by adapting the procedure suggested here or by devising something entirely different. He should also try to work out a rough schedule, setting targets for completion of different stages of analysis. If several individuals are to work on the job, some division of labor should be worked out among them. The analyst should use as much foresight as he can to plan out the full course of his work. If he does not do that, he is likely to be captured by particular steps in the process, and find himself left with insufficient time to do justice to other necessary steps.

There are also certain preliminaries that should be included in the written policy analysis report, although chronologically some of them may be prepared after the main body of the analysis has been performed. The written report should, of course, contain a title page, table of contents, and a very thorough abstract. It should also provide a statement of the conditions under which the analysis came to be written, indicating, for example, whether the study was undertaken at the direction of a superior, as a paid consultant, or at the analyst's own initiative. The analyst should also present an account of his own interest in the problem, and specify his own biases and predilections.¹²¹ An explicit statement should be made

¹²¹Methods for dealing with perceptual bias are suggested in Robert Jervis, "Hypotheses on Misperception," in James N. Rosenau (ed.), International Politics and Foreign Policy, pp. 239-254. Also see Robert Jervis, The logic of Images in International Relations, Princeton: Princeton University Press, 1970.

describing the purpose and the plan of the study as a whole to provide the reader with a preview of the structure of the report.

In some cases, the main body of the report should contain nothing more than a description of the recommended course of action and a brief explanation of the reasons for taking those actions, with the full account of the underlying policy analysis, showing how that recommendation was arrived at, relegated to the status of an appendix. That is, some clients may just want to know what to do, with no more than sketchy reasoning to back it up. They may prefer to have the detailed analysis reported separately so that they have the option of consulting it or ignoring it.

5.6 Follow-Through

The policy analyst should go further than elaborating his recommendations and writing and delivering his report. My position here matches Johan Galtung's view of what peace researchers should do. He first rejects the more conventional view of the researcher whose "... task would be completed when the research publication appears."

The end product of the scientific process, traditionally understood, is paper with print on it. But this is a very classical concept indeed, and from the very beginning peace researchers seemed to have found the concept wanting. The idea of ending a research project with policy implications was helpful for a while, perhaps, but fell short of the desire to tie peace research to peace action. Peace research should lead not only to the designation of action implication and actions, but also to concrete action. It should lead not only to a man capable of reading and writing, but to a man capable of acting.¹²²

To be sure, some policy analyses may be performed as exercises, for practice or as demonstrations to help build competence in the art. Where the work is serious, however, the policy analyst should follow through on

¹²²Johan Galtung, "Peace Research: Past Experiences and Future Perspectives," Gandhi Marg: Journal of the Gandhi Peace Foundation, Vol. 15, No. 3 (July 1971), pp. 185-200.

his recommendations. Policy analysts face a terrible occupational hazard, a very high likelihood of being ignored. When the analyst can get the decision-maker's attention, it is still likely that his ideas will be rejected. But the policy analyst should not simply resign himself to this fate, blaming himself for his own inadequacies or blaming the decision-maker for failing to see the wisdom of his proposals. He should not allow himself either of these indulgences. The policy analyst whose recommendations have not been implemented should continue pursuing the matter, chasing it down, to find out why his proposals have not been adopted. If it is found that the actor cannot see the advantages of the recommended course of action, the analyst should take that discovery into account and strengthen his old arguments, make new and different arguments, alter his recommendations, or devise ways to circumvent the reluctant actor. The analysis should be modified in the light of whatever new information can be obtained. A policy analysis is fully successful only when its recommendations have been implemented and have proven successful. Short of that, there is no such thing as a final report which relieves the analyst of all further responsibilities. He should begin with the expectation that much of his work remains to be done after his first report is submitted.

Because of this obligation to follow-through, then, the policy analyst should regard himself as a political actor. The distinctive thing about his role is that he does not operate on the basis of authority. The policy analyst expects no deference because of who he is; he is nameless. His influence is derived from the substance of what he says; not from the way he says it (that is, not from the sheer persuasiveness of its rhetoric); and not from the force of his personality. This point should not be misinterpreted, however. The prototype policy analyst is politically powerless, but this does not mean that the individual who does policy analysis is obligated to hold back whatever political influence he can muster. He should not be a political neuter. The point is simply that the two types of activity should not be confused with one another. Attempts to persuade or to force issues should not be smuggled into the political arena around the camouflage of policy analyses.

5.7 Conclusion

The development of a methodology for policy analysis can begin with obvious-sounding steps like: 1. list the alternatives; 2. select the best alternative. When it is discovered that it is really not evident how each of these tasks should be performed, and that other steps need to be taken as well, the guidelines should be modified and elaborated accordingly, so that they are in fact helpful. That has been the purpose of this study. But certainly the steps that have been suggested are not wholly satisfactory. The best route for getting from the identification of a policy problem to sound recommendations for action may not look anything like that outlined here. Some of the steps probably should be described in other ways, some can be usefully decomposed further, and others can be added. Cyclical phases should be built into the scheme, with some stages of analysis reiterated until specified criteria are met. The whole procedure might ultimately be described in the form of a flow chart for a computer program, with detailed stop and go rules where they are needed.

This emphasis on methods should not be carried too far, however. Policy analysis procedures need not follow precise programs, any more than empirical research must be conducted by some rigid formula. An overly insistent demand for formal analytic schemes may in fact detract from the task of policy analysis. Although it certainly may help, one does not have to have a fully articulated, rigorously logical methodology in order to do policy analysis. To insist on that would make the development of methods into an end in itself, and might defer the treatment of real problems. They have been put off enough. All one needs to start is a clear determination to work toward formulating sound, helpful recommendation for action dealing with the policy problem that is chosen for study. The worthwhileness of each intermediate step can then be estimated by the extent to which it is likely to contribute toward that well-defined and fixed end. Intrude as they might, substitute objectives should not be allowed to divert the study. Deeper and deeper understanding, detailed histories, elaborate theories, methodologies, and other similar distractions, by themselves, do

not meet problems. The best way to develop recommendations for action dealing with real political problems is to work at that, rather than at something else.

Policy analysis requires very large doses of intuition, unformalized wisdom, and unscientific knowledge. Procedural outlines cannot substitute for those inputs, and they can guide their use. The argument here is simply that how policy analyses should be done is no more obvious than how empirical research should be done. This outline, and this study as a whole, represents a vicarious trip through a generalized policy analysis study. It will have to be adapted in specific applications, and with the cumulation of insight and experience the generalizations themselves should be modified and refined so that they become progressively more useful for guiding the policy analyst in his work. The procedures described here should be used as the basis for beginning another round of critical review and refinement, to be repeated over and over again. We must become engaged in constant self-critical practice if the art of policy analysis is to be advanced. The investment of effort would surely be worthwhile. This conclusion, this end, then, should be understood as only tentative.

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