6

Are the Main Assumptions About Process and Outcome Warranted?

This chapter is devoted to an examination of research evidence bearing on two central assumptions introduced in the preceding chapters. One assumption is that the vigilant problem-solving strategy (as represented in Figure 5–1) is in the repertoire of most policymakers, along with contrasting quick-and-easy strategies that rely primarily on simple decision rules. When I say that both types are in the repertoire of policymakers, I mean that a chief executive or an executive committee sometimes will use one type of approach for arriving at a policy decision and sometimes the other, without necessarily making a deliberate or self-conscious choice in each instance. The second assumption is that the poorer the quality of the decision-making procedures used in arriving at a policy decision, as manifested by symptoms indicative of failures to engage in vigilant problem solving, the greater the likelihood of unfavorable outcomes of the decision.

Are the two assumptions warranted in light of the existing evidence?

A Jaundiced View of Policymaking

Does it really make any difference whether policymakers show few or many symptoms of defective decisionmaking? There are some social scientists who think that it does not. It seems quite fashionable

these days, especially among leading theorists in management studies and political science, to take a very jaundiced view of the prospects of improving policymaking in government, corporations, and other large organizations. For example, William Starbuck argues in favor of three pessimistic generalizations about policymaking on the basis of his own studies of business organizations and his surmises from other research in the fields of public administration and political science, drawing especially upon the critique of analytic problem solving by Charles E. Lindblom:

1. Major policy decisions made by most organizations frequently fail, with the result that an extremely high percentage of all organizations replace their leaders or die because of being unable to surmount the acute crises and disasters brought on by those failures.
2. Top-level policymakers very seldom engage in "reflective" (vigilant) problem solving, even though the executives may pay lip service to the value of this approach and even though they may retrospectively try to make it look as if they had been conforming to it.
3. The "reflective" (vigilant) problem-solving approach would not be effective even if it were often used by policymakers because organizational problems are usually too complicated to solve and, besides, that approach leads to strong rationalizations that make for more inflexibility in response to policy failures than when executives take action without thinking carefully about the consequences of alternatives.

In support of the first generalization, Starbuck presents data on the relatively high percentage of organizations that do not survive, which were summarized in Chapter 1 of this book. It is the second and third of Starbuck's generalizations that are especially relevant for my theoretical assumptions about policymaking processes and their outcomes. Starbuck cites numerous studies of business firms to support these two generalizations, but the evidence is very weak and inconsistent.[1]

Although they do not take as extreme a pessimistic view as Starbuck, a number of other social scientists are skeptical about the effectiveness of vigilant problem solving in attaining better outcomes than relying on satisficing, incrementalism, or other relatively nonanalytic approaches. One of the major considerations frequently mentioned by the skeptics is that even the most sophisticated and

skilled policy analysts who use the best available procedures are likely to be seriously mistaken about some of the crucial facts and about some of the main inferences they draw from the apparent facts on the basis of their stereotypes of opponents, operational-code beliefs, and ideological preconceptions. These conceptual errors result in faulty framing of the problem from the very outset and gross miscalculations concerning the expected consequences of alternatives.

I certainly agree that conceptual errors occur frequently at the outset of policymaking and fairly often remain uncorrected. But I do not agree with the skeptics who believe that these errors are practically never corrected in response to the new information the policymakers obtain when they conscientiously go through the successive steps of vigilant problem solving (as described in Figure 5–1 on page 91). In the preceding chapter I gave examples of such corrections in foreign policy decisionmaking by national leaders in the Truman, Nixon, and Johnson administrations. It remains an empirical question as to whether or not residual errors are so pervasive even when policymakers carefully go through the procedures necessary to carry out vigilant problem solving that by and large it makes no essential difference to the outcome whether they use those procedures or not. In contrast to the pessimists and the skeptics, I believe that it does make a highly significant difference. This opposing position concerning the effects of vigilant problem solving on outcomes is in line with the views of a number of sociologists, political scientists, management researchers, and historians who have studied policymaking.

The specific hypothesis that I propose as an alternative to the views of the pessimists and the skeptics is this: *For consequential decisions that implicate vital interests of the organization or nation, deliberate use of a problem-solving approach, with judicious information search and analysis (within the constraints usually imposed by limited organizational resources), will generally result in fewer miscalculations and therefore better outcomes than any other approach.* To put it another way, in terms of the components shown in Figure 5–1: *The fewer the steps of vigilant problem solving that are carried out adequately—as manifested by symptoms of defective policymaking—the higher the probability of undesirable outcomes from the standpoint of the organization's or nation's goals and values.*

It is an important theoretical as well as practical question whether there is no significant relationship between process and outcome, as would be expected from the views of Lindblom, Starbuck, and a number of other social scientists, or whether the above hypothesis is

closer to the truth most of the time for most policymaking. In the sections that follow, this crucial question will be carefully examined.

If my hypothesis is valid, it carries the implication that Starbuck's first two generalizations are causally related. Insofar as his second generalization holds true (executives in large organizations rarely use vigilant problem solving), his first generalization would follow (organizational policies often tend to work out so badly that most leaders or their organizations fail to survive). New evidence will be presented that bears directly on whether vigilant problem solving is used often, seldom, or not at all by government policymakers, as well as on the relationship between the use of vigilant problem solving and outcome.

Evidence Bearing on Quality of the Decisionmaking Process

Even among the social scientists who acknowledge that policymakers are capable at times of using a "rational" approach, many are skeptical about whether that capability is used often enough to make any difference. In the absence of dependable evidence, it remains an open question as to how often policymakers use a problem-solving approach that can be characterized as a high-quality process, manifested by the absence of symptoms of defective policymaking. Ultimately, the answer to this question probably will turn out to differ for policymakers in different types of organizations, for different personalities, and for different types of policy problems. At present, however, the main issue is whether vigilant problem solving is used so seldom by policymakers that it is practically a null category. If so, it would be unwarranted to include a vigilant problem-solving approach and deviations from it as central features of a descriptive model of policymaking.

Although the evidence now at hand is too fragmentary to provide any definitive answer for any major groups of policymakers, it is sufficient to counteract the view of the extreme skeptics who believe that simplified strategies of decisionmaking are so widely used in arriving at policies that the steps of vigilant problem solving are practically never carried out.

There is some *indirect* evidence from a number of studies that have found that decisionmakers sometimes choose courses of action that are good solutions in that they take account of the requirements for satisfying their objectives and values, which can be interpreted as implying that the policymakers have gone through at least a few of

the essential steps of vigilant problem solving. But the evidence is equivocal because the investigators did not make any observations of the decisionmaking process and the findings could be accounted for in other ways.[2]

More direct evidence of the use of a vigilant problem-solving approach is provided in a systematic study by Herek, Janis, and Huth. The main purpose of our study was to determine the extent to which favorable outcomes in international crises affecting the United States are related to the quality of policymaking by the nation's leaders. In order to investigate the relationship between quality of decisionmaking processes and outcome of policy decisions, we assessed the U.S. government's management of each of 19 international crises by making detailed ratings of the presence or absence of each of the seven symptoms of defective policymaking listed in the fourth column of Figure 5–1. We imported into this research on international relations some of the methodological refinements that have been developed in systematic research in the field of social psychology—including special procedures designed to prevent contaminated judgments and to control for other artifacts that can give rise to spurious results.

The study involved four major steps. First, on the basis of independent ratings by three outside experts on international conflicts, a sample of 19 major crises since World War II was selected. Second, bibliographic sources describing the decisionmaking process in each crisis were collected and the adequacy of these sources was rated by the experts. Third, the source materials judged to be of high quality were used to score the decisionmaking procedures during each crisis in terms of the seven symptoms of defective policymaking. Fourth, independent ratings of the crisis outcomes were obtained from two outside experts who remained "blind" to the decisionmaking process scores and to the hypotheses under investigation.[3]

One of the main methodological problems of comparative case studies of this type has to do with the selection of cases. If investigators were to pick the cases themselves, they could easily rig the selection—consciously or unconsciously—in such a way that the comparative study would yield the results that are expected. In order to avoid any such bias, we deliberately arranged to have the sample of cases selected for investigation by outside experts who were unaware of the purpose of the study. The major crises were selected on the basis of independent ratings of their importance with regard to the threat of war with the Soviet Union or China by three leading social scientists who had studied international crises. The final sample selected from their ratings consisted of 19 major crises that occurred

during five administrations since the end of World War II (Truman, Eisenhower, Kennedy, Johnson, and Nixon).[4] (The names and dates of each of the 19 crises are listed in the left-hand column of Table 6–1.)

A preliminary list of bibliographic sources for each crisis was compiled from Richard Dean Burns' guide to the literature on American foreign policy and other guides. Because participants in crises are likely to give biased accounts, memoirs and autobiographies were not included. Instead, analysis of the decisionmaking process was based on scholarly accounts by political scientists and historians (who cited and critically analyzed primary sources in describing crisis events).

The bibliography was submitted to the same three experts who had initially ranked the severity and importance of the crises. They were asked to rate the scholarship of each bibliographic source with which they were familiar as high in quality, adequate, or low in quality. Only sources rated as high or satisfactory in quality (or as written by high-rated scholars) were used in this study. The coding of the decisionmaking process, therefore, was based on published accounts and analyses by leading social science scholars, mainly political scientists and historians, who have studied the major international crises involving the U.S. government since World War II, and whose accounts of these crises are generally regarded as being among the very best. (For a list of all 59 of the sources we used, many of which described more than one of the 19 crises, see Herek, Janis, and Huth, pp. 224–26.)

In order to rate the quality of the policymaking process during each crisis, we developed detailed definitions together with coding instructions for ascertaining whether or not each of the seven symptoms of defective policymaking was to be rated as present or absent, along the lines of the general definitions presented earlier (pp. 32–33). On the basis of careful examination of all the selected bibliographic sources, each of the 19 crises was rated for the presence or absence of each symptom by the third author (Paul Huth), who at that time was "blind" to the research hypotheses. A reliability check on three of the crises with the first author (Greg Herek) indicated complete agreement on all 21 of their independent ratings.

Each crisis was assigned a composite score for defective decisionmaking, consisting of the total number of symptoms present in the policymaking process during the crisis.[5]

Examination of the "Total Symptoms" column in Table 6–1 reveals that contrary to the assertions of Starbuck (1983, 1985), policy-

TABLE 6–1 Process and Outcome Scores for 19 Major International Crises (From Herek, Janis, and Huth, 1987)

Crisis	Quality of Process: Total Symptoms of Defective Policymaking	Outcome: Internat'l Conflict	Outcome: U.S. Interests
Indochina (1954)	0	+1	+1
Quemoy-Matsu II (1958)	0	+1	+1
Laos (1961)	0 — 16%	+1	0
Greek Civil War (1947)	1	−1	+1
Quemoy-Matsu I (1954–55)	1	+1	+1
Berlin Wall (1961)	1	0	0
Cuban Missile Crisis (1962)	1 — 26%	+1	+1
Yom Kippur War (1973)	1	+1	+1
Invasion of South Korea (1950)	2	0	+1
Suez War (1956)	2	+1	−1
Jordan Civil War (1970)	2 — 16%	+1	+1
Berlin Blockade (1948–49)	3 — 5%	−1	+1
Tonkin Gulf Incidents (1964)	4	−1	0
Vietnam Ground War (1965)	4 — 10%	−1	−1
Vietnam Air War (1964–65)	5	0	−1
Arab-Israeli War (1967)	5	0	0
Cambodian Incursions (1970)	5 — 16%	0	−1
Korean War Escalation (1950)	6 — 5%	−1	−1
Indo-Pakistani War (1971)	7 — 5%	0	0

The cases are ordered according to total number of symptoms of defective decisionmaking displayed by the President and other top-level leaders of the United States government. Outcome scores of −1 indicate both outside experts agreed that the crisis outcome was unfavorable, +1 indicates agreement that the outcome was not unfavorable, and 0 indicates disagreement. Table 3 in Herek, Janis, and Huth (1987) is the source for the outcome ratings shown in this table, but a number of typographical errors in the former table have been corrected in accordance with the corrected table, which was published in the December 1987 issue of the *Journal of Conflict Resolution* (Vol. 31, p. 672) under the heading of *Erratum*.

makers use fairly high-quality procedures in making a substantial percentage of their decisions: For eight of the nineteen crises (42%) there were either no symptoms at all or only one symptom, indicating that the policymakers who managed those crises met in a minimal way (or better) at least six of the seven criteria of high-quality decisionmaking described by Janis and Mann (1977). Evidently the vigilant problem-solving strategy was in the repertoire of the crisis managers in the White House who dealt with the eight major crises, which occurred during the administrations of four different presidents.

Considerable variability is apparent in the quality of the policymaking process. In contrast to the eight crises (42%) characterized by relatively high-quality decisionmaking, four crises (21%) were of medium quality (two or three symptoms) and seven crises (37%) were of low quality (four or more symptoms).

The variability in number of symptoms displayed by the crisis managers is consistent with the assumption that policymakers are likely to use a vigilant problem-solving strategy in making crisis decisions under some circumstances but not under other circumstances. (The central question concerning the circumstances that are most likely and least likely to evoke a vigilant problem-solving approach will be discussed in detail in Chapter 7.)

One of the implications of the observed variability is that policymakers who demonstrate that they have the capability for vigilant decisionmaking do not always use it. For example, the decision of the top-level policymakers in the Truman administration in 1947 to send military and economic aid to the anti-Communist government during the Greek Civil War was of high quality, but their later decision in 1950 to ignore warnings from the People's Republic of China and invade North Korea failed to meet most of the seven criteria. Similarly, the policymakers in the Nixon administration displayed all seven symptoms in the Indo-Pakistani War crisis, while they displayed few symptoms in two other crises. Policymakers in the Eisenhower and Kennedy administrations displayed the fewest symptoms. But it is well known from studies of presidential decisions that they did not always engage in vigilant problem solving. For example, their handling of two moderately important crises not included in our sample of major crises—the U-2 incident (Eisenhower) and the Bay of Pigs invasion (Kennedy)—have been characterized as extremely defective. Thus, it appears that while there are variations arising from individual differences in the decisionmaking capabilities of different groups of policymakers (such as those occurring in different presidential administrations), the same President and his group of policymakers, as expected, show considerable variation in the quality of their decisionmaking from one policy decision to another.

Relationship Between Process and Outcome

We turn next to the main hypothesis investigated in the Herek, Janis, and Huth (1987) study, namely that the symptoms of defective

decisionmaking, which reflect failures to carry out the essential steps of vigilant problem solving, are predictive of unfavorable outcomes.

Ratings for the outcome of each crisis were obtained from two outside experts who have conducted extensive research on international crises. Taking account of the possibility that outcome ratings might be influenced by personal political ideology, we deliberately chose experts from opposite ends of the conservative-liberal continuum in their personal views about the cold war. As in earlier stages of the research, the experts remained "blind" to the research hypotheses. Neither was informed of the process ratings for any of the 19 crises. The experts provided ratings on the outcome variables for the effectiveness of crisis management by U.S. policymakers for each crisis. First, they rated the crisis outcome's effect on U.S. vital interests: whether they were advanced, hindered, or unaffected during the days and weeks following the crisis. Second, the experts rated the level of international conflict during the days and weeks following the end of the crisis: whether there was an increase, decrease, or no change in tension, stability, hostility, or the likelihood of war between the United States and the Soviet Union or China. The two experts' ratings were combined to yield a score of -1 if both agreed that the crisis outcome was negative, $+1$ if both agreed that it was not negative, and 0 if they disagreed. When we compared the ratings on outcomes obtained from the two experts, we found a fairly high degree of agreement, indicating a satisfactory degree of interanalyst reliability.[6]

The results in Table 6–1 show a strong relationship between quality of decisionmaking as manifested by number of symptoms of defective decisionmaking (rated by the investigators) and unfavorable outcomes (based on the average ratings of the two outside experts). The relationships between the process and outcome scores, which are displayed graphically in Figure 6–1, were sizable and in the predicted direction. Quantitative correlational data show that higher symptom scores are significantly related to more unfavorable outcomes for U.S. vital interests ($r = .64$, $p = .002$), and to more unfavorable outcomes for international conflict ($r = .62$, $p = .002$). These results clearly indicate that crisis outcomes tended to have more adverse effects on U.S. interests and were more likely to increase international conflict when the policymaking process was characterized by a large number of symptoms. The findings are consistent with the expectation that when policymakers use vigilant problem-solving procedures they tend to make decisions that are likely to meet their goals. Con-

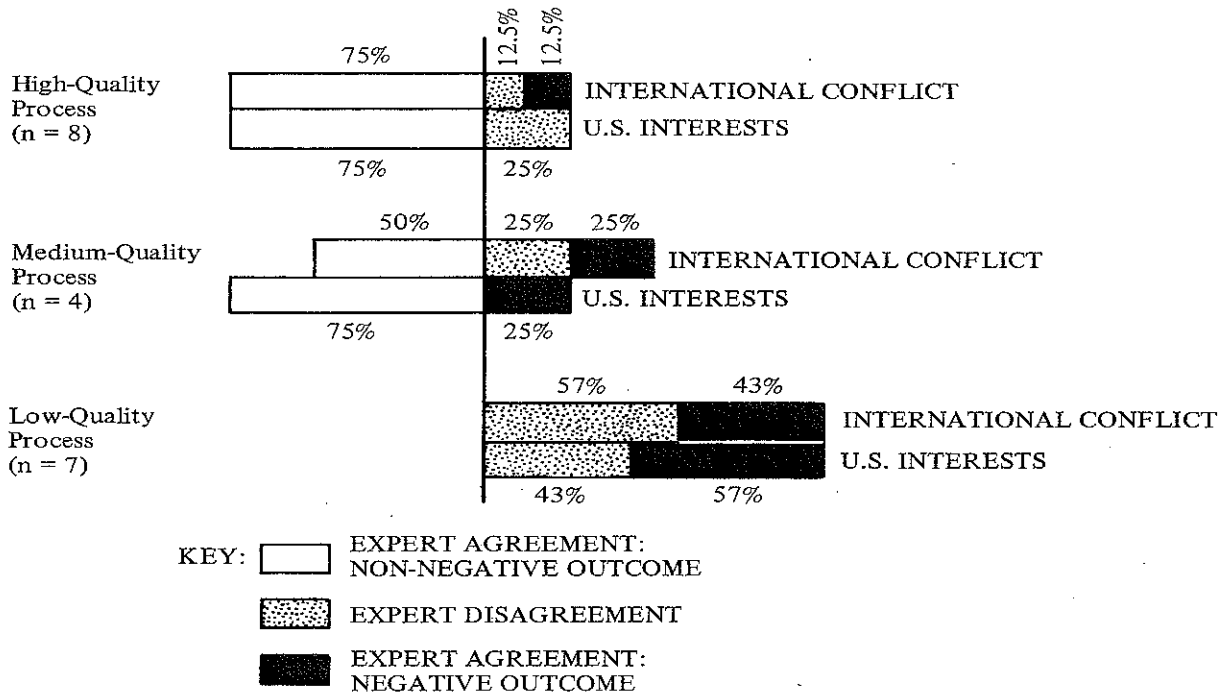

FIGURE 6-1 Relationship Between Decisionmaking Quality and Crisis Outcomes

Note: This figure reproduces Figure 1 in Herek, Janis, and Huth (1987) with one slight change to correct the minor error listed under *Erratum* in the December 1987 issue of the *Journal of Conflict Resolution* (vol. 31, p. 672).

Adapted from "Decisionmaking During International Crises: Is Quality of Process Related to Outcome?" by G. Herek, I. L. Janis, and P. Huth, 1987, *Journal of Conflict Resolution, 30,* p. 517. Copyright 1987 by Journal of Conflict Resolution. Used by permission of SAGE Publications, Inc.

trary to the generalization asserted by pessimists like Starbuck (1983, 1985) and contrary to the expectations of numerous skeptics, the quality of the decisionmaking process *is* related to the policy decision's outcome.

While the correlations between process and outcome support the hypothesis that low-quality decisionmaking leads to unfavorable outcomes, they do not prove this causal relationship. One type of alternative explanation is that the significant correlations result from the influence of a third (unobserved) variable. It is possible, for example, that more serious crises are usually associated with more defective decisionmaking and with less favorable outcomes because more serious crises are more stressful and involve more difficult deci-

sions with higher stakes than do less serious crises. In order to check on this possible type of third-factor explanation, we obtained ratings from two additional experts on seriousness of the crises and difficulty of the decisionmaking. To test the extent to which the correlations between process and outcome were affected by these variables, we constructed stepwise regression equations for each of the two outcome variables (U.S. vital interests and international conflict). This method can be used to control statistically for the effects of any third factor for which ratings are available. The results of this statistical analysis indicated that the substantial correlations we obtained between process and outcome could not be accounted for by a third factor of the type we examined—seriousness or difficulty of the crisis.

Additional alternative explanations for the results also need to be considered. The most obvious such alternative is that the correlations between process and outcome are spurious, the result of faulty methodology. Perhaps, it might be argued, the assessments of the decisionmaking process were not completely independent of outcome ratings. Several precautionary procedures were followed, however, to prevent such contamination. Outside experts who were unaware of the study's hypotheses were enlisted to select the sample of crises, to select the bibliographic sources, and to rate the crisis outcomes. Despite these safeguards, it could be argued that contamination might still occur in subtle ways. For example, the principal rater for the independent (process) variables might have been unconsciously influenced by his prior knowledge of some of the crisis outcomes, even though he was not aware of the hypotheses of the research at the time when he made his ratings. This seems unlikely, however, because interanalyst reliability checks on the process ratings reveal complete agreement between his ratings and the ratings made independently by a second analyst who was unfamiliar with many of the crisis outcomes when he rated their process. Hence, it does not seem probable that the process ratings were biased to any significant degree by the rater's personal judgments about outcomes.

Contamination might also have been introduced unconsciously by the outside experts: their knowledge of how the crisis decisions were reached might conceivably have influenced their outcome ratings. This seems a fairly remote possibility, however, especially because the experts were so completely occupied with discussing outcomes during the rating interviews that they had little chance to think about

process; they said nothing at all about the decisionmaking process for any of the 19 crises.

A third possible source of contamination is the bibliographic materials themselves. We avoided crisis participants' memoirs and autobiographies because they might contain self-serving justifications and distortions; we relied entirely on the best available scholarly sources. But perhaps even these scholars' knowledge of crisis outcomes unconsciously influenced their accounts of the decisionmaking process. Our principal safeguard here is our reliance on the standards of sound scholarship. We assume that highly competent historians and political scientists who meet those standards are less likely than others to distort facts to fit their expectations. We also relied on multiple scholarly sources whenever possible, thereby protecting the results from undue influence by any single (potentially biased) source.

Although we were able to rule out seriousness of the crisis and difficulty of decisionmaking as hidden third variables responsible for the results, there is always the possibility that other hidden factors we did not look into could be responsible for the observed correlations. Because our data are correlational, we cannot conclude that the quality of decisionmaking processes, as indicated by the number of symptoms of defective decisionmaking, plays a causal role in producing the policy decision outcomes. It is a plausible interpretation, however, not contradicted or disconfirmed by any of the results.

The findings of the present study thus bear out the surmises of those social scientists who have concluded that poor-quality procedures used in arriving at a policy decision give rise to avoidable errors that increase the likelihood of obtaining an unsatisfactory outcome. Stein and Tanter, for example, assert an equivalent proposition in terms of favorable outcomes in their analysis of policy decisions made during international crises. "Other things being equal," they state, "'good' procedures are more likely to produce 'good' outcomes." Their account of "good" procedures includes the key components of vigilant problem solving: The decisionmakers identify their options, estimate the likely consequences of the options, consider the trade-offs as they examine expected costs and benefits prior to making their selection of "that option which promises the greatest gain or the smallest loss" and then work out detailed implementation and contingency plans. Stein and Tanter add, however, that an *imperfect* positive correlation is to be expected between quality of pro-

cedures and outcome: "Those who recommend systematic procedures recognize, of course, that they cannot assure good outcomes in each case."

Why might a large number of symptoms of defective decisionmaking procedures lead to somewhat worse outcomes? To answer this question requires articulating the various determinants of unsuccessful outcomes. It seems likely that when a national government faces international crises, the outcomes result from a combination of the leaders' decisionmaking and implementation and from the actions taken by adversaries together with other uncontrollable events, including chance factors (see pp. 3–4). If the nation's leaders use a nonvigilant approach, they tend to ignore important warnings, facts, and contingencies. A frequent result is avoidable losses and failure to achieve their objectives. A vigilant approach obviously does not guarantee success, since uncontrollable external and chance factors still influence outcomes. The generalization that fewer *avoidable* errors are to be expected from a vigilant problem-solving approach than from any other approach does not overlook the well-known reasons why the best-laid plans can go awry. For example, Richard K. Betts has argued that failures in making estimates from intelligence data are inevitable due to the inherent ambiguity of the available information. And, as I pointed out in the preceding chapter, even when policymakers adopt a vigilant problem-solving strategy and obtain adequate information that is unambiguous and valid, they still might make avoidable miscalculations. For example, their ideological biases may sometimes prevent them from interpreting the implications of discrepant information correctly. As a result, they may fail to realize that the new evidence calls into question a major preconception underlying their strong preference for a particular course of action that is more likely to fail than other viable alternatives.

When policymakers regularly use a vigilant problem-solving strategy, some *unavoidable* errors are bound to occur from time to time as a result of "unresolvable ignorance" as well as unforeseeable accidents and other chance occurrences commonly referred to as "bad luck." Such errors, which can lead to unsuccessful outcomes, are always to be expected; their probability of occurrence will not be affected in any way by the type of decisionmaking strategy used. The absolute level of unavoidable errors depends upon the culture's level of ignorance concerning the consequences of alternative courses of

action and other factors, some of which are not yet well understood. But, as general knowledge about consequences increases, some hitherto unavoidable errors will become avoidable.

Because of chronic limitations on the human mind in dealing with the complexities of policy issues, some unsuccessful outcomes resulting from avoidable as well as unavoidable errors in decisionmaking are to be expected no matter how carefully the policymakers carry out all the steps of vigilant problem solving and no matter how creatively and intelligently they make use of decision rules and guiding principles in combination with critical thinking. But vigilant problem solving, which requires the fullest use of available information and judgmental resources, increases the likelihood that the course of action chosen will anticipate the consequences as well as possible and that contingency plans will be ready for counteracting or minimizing setbacks and threats of serious losses when they occur.

Obviously, a vigilant problem-solving approach is not an all-or-none affair. Sometimes the decisionmaker conscientiously carries out some steps, but deals with the tasks required by other steps in a superficial manner or not at all. In such instances, the decisionmaker's procedures are likely to be of intermediate quality, not as good as when all of the steps are taken, but not as poor as when no steps are taken at all. Our results suggest that policy decisions of intermediate quality will tend to have outcomes that are correspondingly intermediate between good and poor.

There are undoubtedly certain types of decisions for which the failure to use a vigilant problem-solving strategy is not related to poor outcomes. For example, James March describes a variety of pseudo-decisions that are made for ceremonial purposes, as social rituals that reinforce "the myth of organizational choice" or fulfill "role-expectations, duties, or earlier commitments." The organization's leaders may act as though they were making a genuine policy decision and talk about various objectives, such as increasing organizational efficiency, eliminating health hazards, or improving relationships with adversaries. But they actually do nothing to implement the decision "after having devoted much time, energy, and enthusiasm to making it." The apparent quality of the decision-making process in such instances would obviously have no effect on the outcome insofar as the alleged objectives are concerned.

There are other pseudo-decisions which differ from the purely ceremonial ones in that they may be partially implemented. Included in

this category are policy decisions designed for hidden public relations purposes rather than the objectives that are publicly proclaimed—such as to reduce air pollution or to eliminate discrimination against women or against minority ethnic groups. There is no real intention among the dominant policymakers to implement the new policy except in a token manner to make the organization look good in the eyes of those pressure groups and constituencies that want the policy change. In such instances, the quality of the decisionmaking process would be expected to affect the hidden objective but not the alleged objectives. There would be the same expectation whenever policymakers are deceitful about the purposes of any policy decision that may be fully implemented—as when a government sends a military force to a client state allegedly to protect its citizens but actually with the intention of bringing about political changes at minimal cost, or when a business conglomerate takes over a firm on the verge of bankruptcy allegedly to turn it around and make a profit, but actually with the objective of gaining a tax write-off. (A number of other specific types of decisions that require additional provisos with regard to the expected relationship between quality of process and outcome will be discussed in Chapter 8, when I call attention to limitations of the integrated model of policymaking.)

Further research is required, of course, to test the generality of the positive relationship between process and outcome, which will help to define the limiting conditions under which that relationship can be expected to be observable. Studies similar to the one I have been describing are needed to observe the relationship between process measures and outcome ratings in a variety of decisionmaking contexts—for example, for domestic policy decisions by national, state, and local governments, and for strategic decisions by national committees that influence policies in science, education, medicine, law, or other professions, by business corporations, and by human service organizations—in many different countries.

Earlier I mentioned that a dominant trend in present-day discussions of management science and political science is to take a very dim view of the prospects for changing policymaking processes in government or in other large organizations. This view leads to the expectation that little or no improvement in crisis prevention or crisis management can be expected from introducing systematic methods of problem solving and other aids to effective decisionmaking. The significant relationships between process and outcome in interna-

tional crises observed in the Herek, Janis, and Huth study support a different view of the policymaking process. The findings reinforce the expectation that international conflict management could be improved by introducing appropriate problem-solving procedures into the policymaking process. Such procedures could make for more successful outcomes, reducing the severity of international conflict while furthering the policymakers' national security objectives and other vital interests.

If subsequent studies in diverse types of organizations confirm the relationship between decisionmaking processes and outcome, the results will also imply that policy decisions can be improved by providing a special type of training for executives in decisionmaking roles—training that focuses on vigilant problem-solving skills and leadership practices that promote vigilance. (For specific hypotheses that indicate how leadership practices might be improved, see Chapter 10). Insofar as the observed relationship holds true, training oriented toward avoiding the seven symptoms of defective decisionmaking can be expected to result in more effective policymaking that will be evidenced by more successful outcomes.

Tentative Conclusions

Although the evidence I have reviewed is not definitive, there appears to be a sufficient empirical basis for regarding as plausible the two major assumptions stated at the beginning of this chapter. The evidence shows that a small but substantial percentage of the policy decisions that have been investigated were of fairly high quality, as manifested by no symptoms or only one symptom of defective decisionmaking. This finding is consistent with the assumption that many, if not all, policymakers are capable of using a vigilant problem-solving approach, even though for the majority of policy decisions they may use it only partially or not at all. The second assumption is that failures to carry out the steps of vigilant problem solving, as manifested by symptoms of defective policymaking, are predictive of unfavorable outcomes. As I have repeatedly emphasized, however, this assumption does not imply that failure to use the high-quality procedures of vigilant problem solving is the only cause of unfavorable outcomes. Use of the vigilant problem-solving strategy must be considered as only one of the major determinants of successful versus unsuccessful consequences of policy decisions—

but one worthy of special emphasis because, unlike almost all the other determinants, it is largely *under the control of the policymakers themselves.*

Since the two key theoretical assumptions appear to be warranted in light of the empirical evidence now at hand, the next step in our inquiry will be to examine the major question posed earlier: *Under what conditions are policymakers most likely to adopt a vigilant problem-solving approach rather than resorting to a simplistic approach (or using a mixed approach) when confronted with the necessity of making a policy decision?* By directing our inquiry toward answering this question, we should learn more about major sources of avoidable errors in policymaking, because it requires us to specify the circumstances least conducive and most conducive to engaging in a decisionmaking process dominated by reliance on simple decision rules, instead of carrying out the essential steps of vigilant problem solving. The preliminary theoretical model presented in the next chapter attempts to answer this key question, taking account of prior research bearing mainly on situational factors that inhibit or promote vigilant problem solving.