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INTELLIGENCE AND DECISIONMAKING:

Precautions Against Misperception

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PREFACE

The opportunity to write this paper was one of the principal reasons for my interest in attending the Executive Seminar in National and International Affairs. I have been interested for some time in the relationship between the intelligence community and the decision makers that it supports. As I examined the literature on this topic, I found more pertinence than I expected. The introduction of the findings of cognitive psychology into the theory of the decision maker in international politics has fascinating possibilities for intelligence. This paper is the result of that discovery.

To those who have given me that opportunity, including the management of the Intelligence Community Staff and of the Executive Seminar, I express my heartfelt thanks.

EXECUTIVE SUMMARY

Two areas of study in international politics apply to concerns about misperception in intelligence and decision making based upon it. One focuses on the way decisions are made and the other examines misperceptions to which decision making is predisposed because of the nature of human perception.

The familiar analytic mode is, by design, highly sensitive to new information and is therefore quite vulnerable to misperception. The alternative mode is called cybernetic decision making. It is a simpler process that is most appropriate for highly structured situations where monitoring a few key variables is sufficient to ensure that decisions are made correctly and when they are needed.

Because of the relative simplicity of the cybernetic mode compared to the analytic mode, the cybernetic mode is often used in circumstances where it is an inappropriately simplified approach. In these circumstances or when a situation for which it was appropriate has changed, the cybernetic approach is strikingly subject to misperception; furthermore, because of its limited receptivity to new information, the cybernetic mode must be presented new information very thoughtfully. Some suggested approaches are to present the new information in terms of the variables that the cybernetic decision maker has deemed to be critical or to show that those variables are inappropriate.

The work that has been done in applying the findings of cognitive psychology to decision making in international politics has many implications for intelligence as well. The misperceptions that threaten the effective operation of the intelligence community are:

- Excessive Consistency:
  The tendency to presume unjustified similarities in the course of trying to organize and understand new information.

- Cognitive Dissonance:
  The mental conflict due to difficult value trade-offs that, after the decision is finally made, leads the decision maker to revise his values to become more comfortable with the decision, but perhaps less wise.

- Differences in Evoked Set:
  The tendency for perception to be influenced by the information and concerns on your mind can be especially mischievious in the way it affects the communication of intelligence, because of differences this can make in interpreting ambiguity.

- Prematurely Formed Views:
  A view adopted too early can narrow the perspective of a person sufficiently that new information is forced to fit into that approach.

- Presumption That Support for One Hypothesis Disconfirms Others:
  When support for a person's view is found, there is a natural tendency not to look for support for other views in the same evidence.

- Inappropriate Analogies:
  These are often selected on the basis of irrelevant criteria that are significant to the individual such as a momentous personal or national event.

- Superficial Lessons From History:
  Historical comparisons are often made on the basis of the similarity of the events rather than on the basis of the similarity of the causal relationships.

- Presumption of Unitary Action by Organizations:
  There is a tendency to attribute more planning, coordination and centralization to other organizations than is true for them. Others make this mistake as well when assessing the decision maker's actions. This can also lead the decision maker to presume that the actions of others were taken in reaction to him rather than to forces, including accidents, of which he is not aware.

- Conservatism in Probability Estimation:
  Very high or very low probability estimates are avoided because of the dramatic risk in the rare case when the prediction is wrong.

- Undersized Confidence Intervals in Subjective Probability Estimates:
  Significantly more of these estimates are wrong than the estimators believe.

All of these misperceptions can lead to finely graduated degrees of resistance to attitude change that can introduce inertia into decision making.The implications of each of these misperceptions are examined for three activities in the intelligence community:

- Communication With the Decision Maker.

- The Collection and Production of Intelligence.

- Community Management.

The literature in international politics applies most directly to communicating with the decision maker. It suggests that explicit recognition of his mode of decision making and of the misperceptions to which he is subject is necessary to gain the most efficient use of intelligence.

In the analytic mode, the decision maker is most vulnerable to excessive consistency, cognitive dissonance and the presumption that support for one hypothesis disconfirms others. All three misperceptions can significantly affect his ability to use intelligence to make decisions. The precautions that should be taken are:

- Emphasize key inconsistencies to minimize the tendency to presume excessive consistency.

- If additional information will be available soon, the decision maker should be encouraged to postpone the decision if that is possible to avoid the retrospective revision of values associated with decision making under cognitive dissonance.

- All contending hypotheses should be addressed in any analysis presented to a decision maker to deter the tendency to conclude that the unaddressed hypotheses have been disconfirmed.

The cybernetic decision maker is most vulnerable to being mislead by superficial lessons from history and by prematurely formed views. These misperceptions are most likely to occur when a set of standard operating procedures are being established or are being modified because they have become unworkable. The precautions that should be taken are:

- Obvious historical parallels to the issue under discussion should be addressed in the course of the analysis, and those that are illogical to use should be explicitly identified, especially those superficial comparisons already known to be in use.

- When understanding of the problem under consideration is very incomplete, then that incompleteness and the inadequacy of the available information should be emphasized not only to avoid adopting views prematurely, but also to keep those views from influencing the design of standard operating procedures.

The collection and production of intelligence is an essentially analytic activity that is likely to be most affected by the misperception of excessive consistency. The precaution that should be adopted to prevent this misperception is to approach the analysis of the problem in two stages. The first stage is an open-minded and creative one that must

precede the second which is a skeptical review. If it is possible to avoid the misperception, then insight into an alternative viewpoint will reorient the perceptual process which will then rapidly identify any other details that fit the new pattern.

The collection and production of intelligence is also likely to be influenced by the tendency to avoid perceiving extremely high or low probabilities. As a precaution, additional evidence should be sought for very likely or unlikely events to give the analyst the added confidence to make the prediction and to assist the decision maker, who will also have difficulty accepting extreme probability estimates.

Because of the interaction of the program managers in the community, many of the misperceptions that would ordinarily occur can be avoided so long as the interaction is frequent and inclusive. That being the case, the greatest vulverabilities of decision makers in intelligence are to cognitive dissonance and prematurely formed views. Under conditions of reduced interaction they are more likely to presume that other organizations in the community are more centralized, planned and coordinated than is actually the case. The indicated precautions are:

- Participants in a decision with substantial value conflict should be encouraged to view the selected choice as a contingent approach to be attempted on a trial basis in order. This will help them to avoid the restructuring of values to substantiate the choice that would otherwise occur.

- It should always be acceptable to conclude that a community problem cannot be solved at present in order to avoid the premature formation of views by program managers (and their affs)and the consequent narrowing of perspective that is likely to follow.

PART ONE: THE THEORY

CHAPTER 1

INTRODUCTION

PURPOSE:

This paper seeks to apply the findings of studies of misperception in international politics to the Intelligence Community. These studies of misperception have made extensive use of the findings of cognitive psychology. Since the process of collecting and producing intelligence is very closely related to perception and one of the primary uses of intelligence is for decision making about issues in international politics, this literature has proven to be very apt.

The vulnerabilities of decision makers and analysts to misperception are of particular interest. The activities of community management and the collection and reporting of intelligence will be considered as well. The vulnerabilities of each of these activities will be identified and appropriate precautions recommended.

APPROACH:

Chapter 2 describes how intelligence supports the two principal modes of decision making--the analytic and the cybernetic modes. Chapter 3 identifies the misperceptions that research in cognitive psychology and international politics suggests will affect decision making in intelligence.

In Part Two, Chapters 4 through 6 discuss the implications of those misperceptions that seem most threatening to the principal activities in the Intelligence Community. In each case the precautions that should be taken against each misperception will be discussed as well.

Historical examples of the affect of misperception on intelligence or of successful resistance to it will be systematically sought in a subsequent extension to the paper. The implications of this literature for protecting against deception will examined as well.

For compactness, I use the personal pronoun 'his' to mean 'his' or 'her' when referring to an individual. My apologies to anyone that this offends.

CHAPTER 2

MODES OF DECISION MAKING

The opportunity that intelligence and its nemesis, misperception, have to influence decision making depends strongly on how those decisions are made. The analytic mode is the style that is most familiar and it is the one most often presumed when the role of intelligence is being examined. The cybernetic mode, while less well known, is more commonly used by decision makers, especially for routine or well understood decision problems. In considering the influence of misperception, both modes will be considered.

THE ANALYTIC MODE OF DECISION MAKING:

This mode of decision making is so well known that rather than discussing it extensively, the more interesting approach of describing how it is influenced by intelligence will be adopted. Such an approach characterizes the analytic mode adequately for the purposes of this paper.

Like any other additional information, intelligence is not essential to decision making; a knowlegeable decision maker can often make a decision without any additional information. Hence, the influence of intelligence is best seen as improving the decision maker's ability to choose.

Intelligence adds to the decision maker's understanding of the decision by either refining his understanding of the choices that can be made or by refining his understanding of the context of the problem.

Refinement of understanding of the choice is accomplished by confirming or changing the:

- Number of alternatives.
- Consequences of the alternatives.
- Timing of the consequences.
- Confidence that the number of alternatives and their consequences and timing is correctly understood.

The number of alternatives can be increased by intelligence that reveals a

new possibility or decreased by intelligence that reveals that one of the alternatives under consideration is either infeasible or obviously unattractive.

The estimated consequences of the alternatives can be revised on the basis of intelligence. Indeed this is the classic view of the role of intelligence although that view focuses too often on the narrowest view of consequences. The consequences of choosing an alternative include the expected outcome (as well as any other possibilities), the liklihood of each of the possible outcomes, their nature and their timing. Timing is identified seperately because of its importance in intelligence support to decision making.

The timing of the consequences of an alternative often determine how quickly the decision must be made. If an attractive alternative must be selected quickly in order for its consequences to be realized, then the decision must be made quickly. Implicit in that decision is an assessment of the potential contribution that the additional information that would be gained by waiting would have.

Implicit also is the pressure for prompt support that this places on the intelligence community. This requirement for timely support is often also inherent in the nature of the decision cycle itself. The planning of sorties by aircraft for example is done on a daily basis. To influence the current sortie planning cycle, intelligence must arrive early enough in that cycle to be of use in the decisions to be made that day. This is hours in advance of the commencement of the mission. Thus, intelligence in support of that mission is on a 24 hour cycle as well.

Another timing consideration that affects intelligence is perishability. Some information loses a part of its value quickly, and must, therefore, be used quickly. Most transient events such as exercises, tests or transport would fall into this category. While the information to be gained from examining in retrospect the implications of the event can be gained long after the event, any value that such information might have in permitting some action to be taken during or prior to the event can only be obtained if the intelligence is promptly provided.

Finally, in refining the decision maker's understanding, intelligence can affect the confidence with which any of the aspects of the decision are known. This can include information that came from sources other than intelligence. If, as is presumed in this discussion, the intelligence is accurate, then diminishing a decision maker's confidence about any aspect of the decision that he is confronting is as valuable as increasing his confidence about that same aspect. Needless to say, this is not the decision maker's view! Since he did not know that he was overconfident until the intelligence arrived, the reduction in confidence is understandably seen as a loss, but he is genuinely better off correctly

understanding the degree of uncertainty that he faces.

There are three categories of uncertainty:

- Categorical uncertainty is actually better called certainty since it presumes that relations are deterministic (an action will always lead to the same result). This is the view of uncertainty that the mind prefers.

- Known probabilities is the second kind and is the favorite of game theorists.

- The third category of uncertainty is that where even the probability of an event occurring must be estimated. Unfortunately for the mind's preferences, this is the category that is characteristic of most reality.

Refinement of understanding of the context of the problem is accomplished by confirming or changing the:

- Nature of the problem.

- Formulation of the decision.

- Confidence that the nature and formulation are correctly understood.

This context is what enables the decision maker to judge that the problem is correctly cast. The first step in making this judgement is to determine that the chain of events and contributing circumstances do in fact substantiate the importance of the problem and lead one to believe that the problem being addressed is the right one. It is in this step that confidence that the nature of the problem is understood is most important.

The next step is to examine the formulation of the decision to determine that the action that needs to be taken will result from the alternatives that are presented. Confidence that the decision is correctly formulated is largely derived from the understanding of the nature of the problem and from the analysis of the decision alternatives.

Intelligence can contribute to or undermine the decision maker's confidence that the nature of the problem is understood and the formulation of the decision is correct. Either case is a service of equal value to the decision maker though undermining will not be viewed so. Obviously, any intelligence that changes the nature of the decision or the formulation of the problem will also affect the confidence levels associated with those matters; however, it is also possible for intelligence to change the confidence levels without affecting the understanding of the nature and

formulation. Most commonly, this occurs when an important inconsistency is discovered that raises doubts without resolving them. There seems to be an asymmetry here; discovering reassuring consistencies is never as persuasive as the discovery of vexing inconsistencies is troubling.

Analytic Learning:

By design, the introduction of new information into an analytic model is traumatic and complex in its effects. Analysts try to design their hypotheses so that they are affected by new information. In the language of analysts, their hypotheses can be disproved. A hypothesis that cannot be disproved is suspect and unpersuasive because it cannot be tested empirically. This is an admirable vulnerability on the part of the analyst and has much to do with the rapid progress of science. But it is a considerable inconvenience to the decision maker to have the underpinnings of current and past decisions abruptly changed by new information. Little sympathy can be had from the analyst since he knows that vulnerability to new information is precisely what a good analytic model must have. Hence, the analysis must be revised as much as necessary to fully incorporate new information. This is particularly true for the conclusions.

It must be noted that the process of learning described above is an ideal one. The work of Thomas Kuhn[1] has demonstrated that scientific minds are not always as open as the description above implies. This has mixed implications for the decision makers who must rely upon them--stability is increase but so is error.

Difficulties in Using the Analytic Mode:

This mode requires value integration by the decision maker. It is complex and time-consuming to perform and requires intellectual acuity. The devoted user lacks continuity in his decision making if the problems that are being addressed are fluid, ambiguous and incompletely known.

Yet, the analytic mode is far more effective than the cybernetic mode for problems that are both complex and ambiguous. The interaction of complexity and ambiguity greatly increases the cumbersomeness of the analytic mode. The decision maker needs to simplify. Analysis can only provide this simplicty if it is given ample resources, including ample time. Eventually analysis can often enable the decision maker to focus on the few most salient variables and can characterize the extent to which the relationship among those variables is straightforward and stable. Finally, the analytic mode can
identify which of the remaining multitude of uncertainties really make a difference to the decision, how they could affect the decision and the liklihood that the decision will actually be affected.

The extravagance of resources required to do this well limits the number of problems that will be decided in this way. Other, more frugal, approaches are needed as well.

CYBERNETIC MODE OF DECISION MAKING:

The cybernetic process of decision making bases decisions on a few key variables for which there is information feedback.[2] An elementary example of the cybernetic mode is a heater's thermostat which turns a heater on full blast if the room temperature falls below a predetermined level and keeps the heat on until the room temperature reaches a higher level that is also predetermined.

Despite the simple-mindedness of the approach described above, this mode is powerful, effective and widely used. Much of the policy making process can be viewed as a search for a few simple rules (standard operating procedures) that respond sufficiently well to the environment (information feedback on a few key variables) that the decision making can be left to subordinates.

More broadly, the cybernetic mode provides a means of:

- Removing or avoiding uncertainty to reduce the burdens of processing information.

- Dividing problems into segments to avoid organizational conflict.

As a consequence:

- Values are disaggregated by segmenting the problem and thus trade-offs among values can be avoided.

- Information is used selectively--a great advantage where it is incomplete, ambiguous or erratic in its availability or where continuity is more highly valued than other considerations.

- Outcome calculations are not made--a tremendous simplification, but one which can lead the decision maker far astray since the cybernetic mode ignores what can be the most critical input to his decision.[3]

Cybernetic Learning:

In the cybernetic mode, learning is instrumental. Successful programs (sequences of actions or standard operating procedures) are retained and unsuccessful ones are dropped. Cybernetic learning is induced by changes

in behavior rather than changes in outcome calculation that are relied upon in the analytic mode.

This learning is initiated when currently programmed sequence of actions is insufficient to maintain the critical variables within tolerances. The program is modified or a different one is borrowed from another, possibly dissimilar, process and is tried out. This modification continues until all of the critical variables are within tolerance.[4]

Intelligence Support to Cybernetic Decision Making:

To support decision making in the cybernetic mode, intelligence must recognize and either accomodate or challenge the narrowness of the cybernetic approach to a decision problem. In accomodating cybernetic decision making, intelligence must restrict its support to either providing feedback on the critical variables that have already been accepted or discover the means to provide feedback on variables that would be acceptable if the information were available.

If the current program has failed to keep the critical variables within tolerance, then intelligence can be of assistance by shortening or otherwise improving the cybernetic learning process. Assisting in the development of a new program or identifying a workable variable to use in lieu of an unmanagable one are ways in which the learning process could be shortened. Demonstrating that the tolerances are inapproriately tight and that the current program is adequate would be another way of assisting.

It is necessary to challenge the appropriateness of the decision process in order to direct attention to intelligence that cannot be provided using the above approaches which work within the cybernetic process. To challenge a such a process as inadequate, intelligence must either directly demonstrate that the approach is inadequate or that it must be modified. Either of these approaches will require substantial evidence that is presented in terms that are understandable to a cybernetic decision maker, especially if the process has no critical variables out of tolerance.

CHAPTER 3

TYPES OF MISPERCEPTIONS

Perception is automatic and not under conscious control.[5] The interest of this paper is not in motivated distortions of reality (i.e., defense mechanisms), but in that misperception caused by the nature of the cognitive factors that are intrinsic to perception. As will be evident from the citations, the two principal sources for this chapter are Robert Jervis and John D. Steinbruner.

The danger of misperception is not just that it misdirects individual decisions. Misperception also leads to constrained learning. New information and new decision problems are forced to fit into already established conceptual structures without causing any general adjustment of the structure. The formation of new ideas, new inferences and new perceptions occurs at a lower level of generality resulting in a more stable but also a more partial understanding than would occur without misperception. Stability and consistency is preserved at the expense of learning.[6]

COGNITIVE THEORY:

The following is a brief summary of the theory of perception. In the succeeding section the misperceptions that result from the way the mind perceives are discussed.

The main pattern of operation of the mind in cognitive theory is to struggle constantly to impose clear, coherent meaning on events. As a part of this struggle, the mind tends to simplify by using categorical rather than probabilistic judgements. As a consequence, it attempts to identify a single outcome as certain to occur rather than to assign probabilities to a range of outcomes. This tendency is stronger under complexity.

Three Propositions about the Cognitive Process:[7]

Proposition 1. Perceptual mechanisms use stored information to organize incoming data in order to build the stable, integrated, meaningful content of conscious perception. This process proceeds without awareness or conscious direction.

Memory seems to operate similarly. Even vividly recalled, concrete experiences are synthesized from fragments of information.

Proposition 2. Even in the simplest of operations, such as the perception of speech, the full (all basic functions) mental apparatus is brought to bear. Hence, memory capacity and the capacity to perform inductive inference are required for perception.

Proposition 3. There are regularities of the structure as opposed to the content of cognitive operations:

- Inferential memory.
- The use of consistency to organize perception.
- The reality principle.
- The economy principles: simplicity and stability.

Inferential Memory: Rather than remembering whole events, the events are remembered and organized heirarchically and laterally. In the heirarchy, overall concepts are remembered better than details. Lateral relationsips are established between the heirarchically organized concepts.

The Use of Consistency to Organize Perception: The inconsistency of new information with stored information and with current attitudes is minimized. Because value trade-offs require the recognition of inconsistency, they violate this principle. As complexity increases, cognitive inference mechanisms tend to organize information in ways that eliminate trade-offs from a belief system.

Reality Principle: Many features of the environment are clearly enough perceived so that virtually any given individual will perceive them in the same way.

Economy Principle: Simplicity and Stability: Some things of importance are remembered, a great deal is forgotten and much is never noted. The parallel of this aspect of perception with the collection of intelligence is very close. The search for simplicity results in the structure of belief being kept as simple as possible. The search for stability results in cognitive inference mechanisms that resist change in the core structure of beliefs. The mind's reliance upon consistency to organize perception and its search for simplicity and stability is important in understanding resistance to attitude change.

Three Cognitive Mechanisms for the Subjective Resolution of Uncertainty:[8]

1. Reinforcement: The strength of a belief is a function of past rewards;

however, in the absence of contradictory evidence, an occasional reward is sufficient to induce retention of the belief. If a decision maker attaches very general beliefs to the information that he receives in the decision process, intermittent success with specific decisions will tend to give strength to the general beliefs, quite apart from the validity of the connection in strict logical terms. In the same sense attitude change is a function of the proportion of the new information to the old. This is due in part to the accumulated reinforcement of the old information, but also to the frequency of use of the old information as an organizing principle.

2. Inconsistency management: The strength of some beliefs is derived from the inferential logic connecting them to other established beliefs. These beliefs can play critical roles in maintaining the coherence of existing patterns of belief in memory, and draw their strength from this role. Uncertainty makes the decision maker's goal of establishing a stable pattern of beliefs more difficult. Under uncertainty, decision makers are prone to inconsistency and a proliferation of complexity in their beliefs to match the complexity of the environment. Four mechanisms exist to maintain the principles of consistency, simplicity and stability within the memory:

- Images and arguments from analogy: Using a structure well established in some simpler situation to anchor and clarify complex ideas. The strength of such beliefs is independent of direct evidence and is derived from the strength and stability of the inference structure that they embody and the role that they play in organizing a great deal of ambiguous information.

- Inferences of transformation (wishful thinking): The reality constraint is weakened under conditions of uncertainty. Wishful thinking affects only the present and immediate future. The most significant example of wishful thinking is to presume that the inconsistent information will succumb to a favorable trend over time.

- Inferences of impossibility:This approach is especially likely for problems that are logically open (neither the number of alternatives nor the assurance that all of the critical components of the situation can be known for sure). Under circumstances where new information can add whole new dimensions to a problem a radical revision of previous calculations is possible. To ward off sharp changes in belief, a simple argument of impossibility is used. A single negative is sought that can destroy an argument that is based on considerable positive evidence. Thus allowing obvious simplifications of belief structure. (e.g., radio waves cannot be transmitted across the Atlantic; Pearl Harbor is beyond the range of Japanese planes.)

- Negative images: If a decision maker is committed to one of the alternatives in a decision problem, then arguments in favor of a competing alternative will generate inconsistency and this pressure for a change in belief structure. This pressure can be relieved if a strongly negative consequence of the competing alternative can be inferred. The uncertainty of the problem allows the logical leeway for such inferences to be made plausible. (Kennedy's expectation of impeachment for inaction in the Cuban Missile Crisis may be an example; as may J.F. Dulles' expectation of world war from North Korea's invasion of South Korea.)

3. Small Group Interactions: Social corroboration, the bolstering of judgements by the concurring opinions of others, is attractive under conditions of uncertainty. In anticipation of this bolstering, people often conform to the erroneous but uniform judgements of a group of peers. This social support is also important in resisting changes in belief structure under strong pressure of inconsistency. Agreement is sought on salient beliefs within the group and apostates are purged.

DANGEROUS MISPERCEPTIONS:

The following discussion focuses on those misperceptions most likely to threaten the effective operation of the intelligence community. Wishful thinking is not included even though it is commonly presumed to be a problem, because research in cognitive psychology has not found it to be a significant source of misperception. Expectations are the most powerful force in forming misperceptions, and when expectations are not consistent with wishes, it is expectations that dominate.[10]

Excessive Consistency:

There is a strong tendency for people to see what they expect to see and to assimilate incoming information in a way that makes the new information consistent with pre-exisiting images. Rational ways of interpreting evidence (equivalent to the scientific method) are only a loose constraint on ambiguous situations or data that often do not lead to a unique conclusion. Other methods of achieving consistency are often irrational (in the sense of violating the scientific method) and would be rejected by the decision maker if he were aware of employing them.[11]

An extreme degree of excessive consistency occurs when a person adopts a number of beliefs, each of which would be sufficient by itself to justify his preference. The belief that the choice that the person has made is supported by many logically independent reasons is irrational when the multitude of reasons is not needed to justify the choice. When the goal is

agreed upon, all that is logically needed to affirm a strategy is the belief that it is most likely to work at lowest cost.[12] Dean Acheson's description of Senator Vandenburg is an excellent example of this degree of excessive consistency: "He declared the end unattainable, the means harebrained, and the cost staggering."[13]

Cognitive Dissonance:

Unlike the extreme degree of excessive consistency discussed above, where the efforts to add justification seemed unnecessary, cognitive dissonance springs from the need to minimize conflict between values held by the individual. The resulting affect on behavior is similar since cognitive dissonance leads to inertia, because after a decision is made, the individual revises his value structure to make the relative weights of the values more consistent with the choice that was selected. As a consequence of this revision, the decision maker feels more confident that his choice was the right one; hence, the decision is difficult to reverse. The fewer the alternative justifications to force the decision maker to decide for a particular alternative, the greater the need to revise the value structure will be. This is because the compulsion to make the decision reduces the dissonance caused by the value conflict. Hence, the absence of compulsion or other strong motivation preserves dissonance and leads to a more strongly entrenched attitude subsequent to the decision. This effect appears to be most powerful in the decision maker's personal staff.[14]

Differences in Evoked Set:

Perception is influenced by what is on your mind.[15] If circumstances or prior experience have stimulated different information and concerns (evoked sets) to be on the mind of two people, they will have difficulty communicating since their interpretations of ambiguous information or communications will be different.

When General Short, the Army commander in Hawaii in 1941, was warned of "hostile action", he thought the warning referred to sabotage since that had been the subject of earlier communiques. Those writing the warning in Washington, D.C. were referring to attack from without and had on their mind the ongoing negotiations with the Japanese as well as the intercepted diplomatic communications of the Japanese that formed the basis for the warning.[16] Since differences in classified access can also lead to differences in evoked sets, this misperception is even more likely to be a problem for the intelligence community than most organizations.

Actors thus overestimate the extent to which each understands what the other is trying to say. They rarely take into account the degree to which the other may be concerned with different tasks and problems.[17]

Prematurely Formed Views:

This springs from a desire for simplicity and stability. When facing a new problem, a person often finds an idea that seems to put him on the right track. Subsequently he organizes his approach around modifying and testing that hypothesis. The net effect may be to lead him to adopt a view which is difficult to change. If this occurs, even giving the person a hint about how to solve a problem will have little impact, because he will merely assimilate the new information into the approach that he has already adopted.[18]

Presumption That Support for One Hypothesis Disconfirms Others:

Evidence that is consistent with one's pre-existing beliefs is likely to be taken as disconfirming other views.[19] This is both a subtle and common error, but it is easily overcome. Such a misperception is fostered by discussing a view in isolation from competitive views. When the alternative hypotheses are explicitly included in the discussion, this misperception is readily evident.

Inappropriate Analogies:

People seize on certain past events as analogies because of characteristics of those events that are, from a rational standpoint, irrelevant. For example, the person or his nation participated in them, the event occurred at a time when the person was first forming his political ideas or the event had important consequences. Analogies chosen on the basis of irrelevant criteria are more likely to be inappropriate than useful.[20]

Superficial Lessons from History:

Too often for decision makers the search for causes is quick and oversimplified. The most salient features of the pre-existing situation and the actor's strategies are seen as causing the most obvious characteristics of the short-run outcome, and no careful examination is made of the links that are supposed by him to be present. Few attempts are made to make the comparisons that are necessary to render a judgement on the causal efficacy of the variables. Although the quality of the analysis that precedes the decision can often be faulted, it is almost always much better than that involved in the attempts to understand the causes of past events. Neither immediately after an event nor later, when they use the event as an analogy, do decision makers engage in a thorough reconstruction and self-conscious effort to examine critically the proposed causes. And

when the decision maker thinks he knows the cause of a previous outcome, he rarely takes the next step of looking for other cases in which this variable was present to determine its influence in other situations or of trying to locate additional instances of the same outcome to see whether other causes could produce the same result.[21]

People pay more attention to what happened than why. They often mistake things that are highly specific and situation-bound for more general characteristics. Since ephemeral context is not stripped away, causality is not properly understood and the crucial characteristics of the situation (and the patterns that are likely to recur in the future) are not grasped. This leads decision makers to apply an analogy from history to many disparate cases where the kind of situation is not similar. It has been found that the more general and abstract the previous learning, the more help and the less barrier the learning is likely to be in future problems. Otherwise, rigidity results.[22] Nothing fails like success. A policy that has brought notable success is likely to be applied to an excessively large range of later situations.[23]

Presumption of Unitary Actions by Organizations:

The behavior of others is seen by the decision maker as more planned, centralized and coordinated than it is. This is the result of an attempt by the mind to simplify and to seek for causes even though some of the actions being explained are accidental or affect him unintentionally.

The decision maker is likely to fail to recognize that others will see the him as more centralized, planned and coordinated than he is. This misperception is a variation of the unitary actor misperception, but it is the failure to recognize that others are subject to misperception also.

The decision maker is likely to overestimate his importance as a source of influence or as a target. The need to simplify again misleads. If every action is to be explained, an excessive number of the actions of others will be attributed to the decision maker since many of the reasons for an action will not be evident to him, including accidents and actions taken without thought of the decision maker at all. Those actions caused by acidents are very difficult to tell from the rest. It is easier to identify those that are intended to affect someone other than the decision maker once that possibility has been recognized.

Conservatism in Probability Estimation:

Due to the desire to avoid the risk associated with extremely confident predictions there is a tendency to avoid estimating extremely high or

extremely low probabilities. Events that are very likely to occur (for example a probability above ninety-five percent) or very likely to not occur (a probability of occurring that is below five percent for example) are treated as less predictable than they actually are.[24]

Undersized Confidence Intervals for Subjective Probability Estimates:

Tests have been conducted where individuals are asked to estimate a statistic that are very unlikely to know and then they are to bracket the estimate with a range outside of whose upper bound the true answer would only be found twenty percent of the time. When the ranges specified by a number of different respondents to a number of different questions are examined, the true answers were found to be outside the range significantly more than the twenty percent that the procedure should have produced if people were unbiased in estimating their uncertainty about an estimate. The implication is that the range is routinely undersized or, stated another way, people are overconfident about their subjective estimates.

RESISTANCE TO ATTITUDE CHANGE:

The cognitive processes and the misperceptions discussed above all contribute to attitude preservation. There are nine distinct steps or gradations that can be observed in an individual's attempts to protect against attitude change. These steps are likely to occur in association with any of the misperceptions discussed above. These are listed below in the order in which they would be most likely to be taken.

1. Deny that the information is discrepant with the attitude.

2. Challenge the validity of the discrepant information.

3. Discredit the source of the discrepant information.

4. Admit that the discrepant information is valid, but do not incorporate its implications into the attitude. Characterize the discrepancy as puzzling or as a mystery.

5. Develop new data and arguments to support the existing attitude. Referred to as bolstering, this step also includes rearrangement of attitudes to minimize the impact of the discrepant information.

6. Develop new data and arguments to attack the discrepant information. This is referred to as undermining. Attacking the source also contributes to undermining, but occurs earlier in the sequence.

7. Split the attitude that is causing attitude conflict in a way that minimizes the amount of change. This is referred to as differentiation.

8. Combine rather than split up elements of the attitude being protected into larger units on a superordinate level. This is referred to as transendance.

9. If the attitude must be changed, then change those elements that are least central to the attitude first. This is referred to as centralization.[25]

PART TWO: THE PRECAUTIONS

DECLASSIFIED

CHAPTER 4

COMMUNICATING WITH THE DECISION MAKER

It is a truism to say that the decision makers who use intelligence are busy and have little time to consider all of the ramifications of what they read, whether it is intelligence or other material. But they still have a need for understanding many of the aspects and details of their area of responsibility. Some of these aspects will be evident to the intelligence analyst and others will not. As a result of their need for broad understanding and the little time that they have for reflection, they are particularly vulnerable to misperception. The thrust of this chapter is to identify precautions and approaches that can be used by the analyst to assist the decision maker in avoiding misperception in order to enhance the effectiveness of the use of intelligence.

The problem of communicating decision makers using intelligence seems to have two aspects. First, the way the intelligence is presented should not foster misperception. An example of this from the discussion below would be to provide evidence supporting the decision maker's view that falsely gives the impression that others views are disconfirmed. Second, the presentation of intelligence should anticipate existing misperceptions or decision making modes by presenting the intelligence in a way that maximizes the liklihood that the information will be used most effectively by the decision maker. For example, a cybernetic decision maker will find it easiest to accept information that is cast in terms of the critical variables that he is monitoring. If that is a feasible option, it should be elected.

To the extent that it affects the success of communicating intelligence, differences between middle and upper level decision makers should be noted. Middle level users of intelligence require the detailed information and formal analysis that is characteristic of the bulk of the intelligence product. High level decision makers may lack such expertise and have neither the time nor the inclination to develop it. Even if they possess the expertise, they may not have the time to use it.

What they seek from intelligence is insight into the decision that they must make shortly and information that is relevant to it but unavailable from other sources. The insights that they need are of the following sorts:

- Why are these things happening? Two examples of this need for insight would be an Iranian attack on an Arab tanker or Soviet influence in the Federal Republic of Germany elections.

- They also seek intelligence that identifies a problem while it is still pending. A major difference between current intelligence and the press is that intelligence can provide earlier warning.

- They are especially interested in insights into the solution to a problem. Two examples of this interest from the Carter administration also illustrate the difficulties of providing this kind of insight. Understanding of the decision process in the Khomeni's government in Iran would have assisted the President and his assistants to understand that nothing that they could do would lead to the release of the hostages. This, of course, was not the insight that the administration sought. A second example that continues to be of current interest is insight into internal politics of El Salvador.

Another need that high level decision maker's seek to satisfy from intelligence is support for a decision that has already been made.[26] This must be kept in mind when communicating with them on issues where this need is strong since the need can affect both their expectations and their resistance to attitude change.

Because of their lack of background, they are more receptive than those of the middle level to new concepts and information. However, their need for brevity, pertinence and timeliness is much greater. The result of these special needs is often a communication that is specifically directed to them. In an individual communication it is much easier to implement the precautions discussed below.

The rest of this chapter is devoted to a discussion of those misperceptions most likely to affect the decision maker's reception to the intelligence. Both analytic and cybernetic decision making modes are considered.

EXCESSIVE CONSISTENCY:

Much of the additional information that the decision maker needs to know is likely to be incorporated into his understanding by presuming excessive consistency. If this tendency is recognized as the intelligence product is written, many potential errors of understanding can be anticipated and perhaps avoided.

The Analytic Decision Maker:

Of the two types of decision makers, the one using the analytic mode is the more vulnerable to excessive consistency because he relies more on a greater variety of information and has a much more complex decision making process.

There are two aspects of the understanding of a decision maker who is thinking analytically in which he will tend to presume excessive consistency. One aspect is the way in which complex, but strongly categorized, information is recalled and the other is the extension of the arguments in the report to other, related matters.

The decision maker is likely to systematically simplify the complexity by presuming consistency within categories and to remember with greater detail the relationships between the categories. A hypothetical example would be a report that discussed Soviet decision making in great detail. Distinctions between the decision making of the Soviet Army and the civilian leadership can be expected to be recalled more accurately and with a better understanding of fine distinctions than can distinctions within those categories.

Precaution: Explicitly avoid supporting the decision maker's tendency to impose excessive consistency on his understanding of the categories. Where this misperception is likely, the lack of such consistency should be pointed out. This is probably best done by emphasizing the key inconsistencies.

The second aspect is the tendency of the decision maker to presume that undiscussed but closely related topics will prove to be consistent with the categories that are discussed in the report. To use the hypothetical example above again, a decision maker reading this report who was more concerned about the Soviet Navy might presume that what was reported for the Army would also apply, at least in its general respects, to the Navy.

There is certainly a limit to the extent to which the intelligence analyst is responsible for preventing careless thinking by decision makers, but a reasonable precaution in this case would be to identify specifically related topics and briefly discuss the extent to which they are parallel with the topics covered in the report.

If the extent is unknown, it would be valuable to say so. If space is a concern, as it almost always is, then it would be better to list inconsistencies or to caution the reader about which parallels are not supported than to include the standard recitations of what topics are not covered. If even this cannot be included, then a brief warning about dangerous extensions of the findings should still be included, even if this

runs the risk of offending the reader.

The Cybernetic Decision Maker:

The presumption of excessive consistency may underly the original choice of the cybernetic approach over the analytic. If so and if the decision maker considers all of the critical variables to be within tolerance, then it may become necessary to challenge the decision mode itself.

Precaution: An approach that will usually be more successful is to propose adding another critical variable or to otherwise argue within the confines of the decision maker's decision mode. This avoids adding the burden of changing the decision making style to that of communicating with him.

COGNITIVE DISSONANCE:

This is one of the most dangerous of misperceptions. To assist the decision maker in avoiding it requires knowledge of, or accurate surmise about, his value structure. Because of its importance, the precautions noted below should be taken whenever there is a reasonable liklihood that this misperception may be fostered by the intelligence product.

The Analytic Decision Maker:

Difficult choices that require the resolution of conflict between important values are characteristic of the analytic decision maker. In order for such a decision maker to make a decision the value conflict must be resolved. Once that occurs the tendency will be very strong to revise the relative valuation of the values to strengthen the decision maker's confidence that he did, indeed, make the right decision. Since the resolution of value conflict is the very essence of the decision maker's responsibility in this mode of decision making, it cannot, and should not, be avoided.

Precaution: If an opportunity exists to postpone the decision until further information will become available or some event or process will assist the decision maker to choose, it should be noted in the intelligence product. His subsequent reaction may be to revise his value structure in a way that rational consideration would not. Once made, decisions with difficult value conflict are very hard to reverse. Additional evidence should be provided if such a reversal is required. There is no guarantee that additional evidence will be sufficient to achieve a reversal because the relative weights of his values have been changed to be consistent with the decision as it was first made.

The Cybernetic Decision Maker:

A strength, in this instance, of the cybernetic mode is that it attempts to avoid value trade-offs by the decision maker. If such a trade-off cannot be avoided the general reaction will be the same as that of the analytic mode.

DIFFERENCES IN EVOKED SET:

The relationship between the intelligence officer and the decision makers who rely on his intelligence have pronounced differences in their concerns and knowledge. Often the temperaments of analysts and decision makers differ as well. These differences can become a significant impediment to communication if the unlike interpretations of meaning that they provoke are not somehow anticipated in writing the intelligence product or remedied in subsequent personal interactions.

Precaution: One approach is to try to anticipate the decision maker's knowledgeability and frame of mind. Knowing whether the decision maker is analytic or cybernetic is important in anticipating what is likely to be on his mind. The possibilities will be more limited but more difficult to change for the cybernetic one.

It is probably better and certainly easier to evoke the appropriate set by including the pertinent information and identifying the relevant concerns in the intelligence product. This latter approach is the only feasible way to avoid misperception due to differences set when a product is being written for a large number of users.

PREMATURELY FORMED VIEWS:

This is another very dangerous misperception since its result is the very antithesis of the purpose of intelligence. If a decision maker is presented with an incompletely defined problem, there is always a danger that he will adopt an approach or view that he will be reluctant to give up when additional evidence that is inconsistent with the preliminary view arrives. While the analytic decision maker is more likely to engage in activities that may lead to this misperception. He is also more likely to recognize the need to review additional evidence. Both types of decision maker's are vulnerable; however, the consequences are greater for the cybernetic decision maker. The precautions are different for the two modes.

The Analytic Decision Maker:

Precaution: Though more likely to explore issues prematurely, the analytic decision maker is also more likely than the cybernetic one to successfully respond to additional information as it becomes available. To preclude premature formation of views, it may suffice to identify the other likely possibilities.

The Cybernetic Decision Maker:

Precaution: Because he is less exploratory, the cybernetic decision maker is less likely to engage in preliminary attempts to solve a problem that is insufficiently defined. But, if he does so and then incorporates that view into his decision making procedure, then additional information may not even seem relevant if it does not affect the newly created set of critical variables. Emphasis on the preliminary nature of current understanding and the inadequacy of the available information.

PRESUMPTION THAT SUPPORT FOR ONE HYPOTHESIS DISCONFIRMS OTHERS:

There is nothing about the decision making procedures of either the analytic or cybernetic modes that predisposes one more than the other to this misperception; however, the analytic decision maker is more likely to be influenced in his decision making. This presumption is primarily caused by the way information is presented. It is a fundamental responsibility of the intelligence community to avoid misleading consumers in this way.

Precaution: All contending hypotheses should be addressed in any analysis provided to the analytic decision maker. Since presenting a single hypothesis alone will lead to implicitly overstating evidence for its support more than one should always be presented.

INAPPROPRIATE ANALOGIES:

Both the analytic and the cybernetic decision maker are susceptible to the adoption of inappropriate analogies. It is very difficult to anticipate the experiences of an individual that might lead him to use inappropriate criteria for selecting an analogy, though it may be posssible to discover that the criteria are inappropriate after the fact for the more senior decision makers. It is quite likely that other inappropriate analogies can be anticipated. Situations that have a superficial similarity to significant national experiences such as the landing of a man on the moon or the Cuban missile crisis are logical candidates.

Precaution: Obviously similar significant national experiences should be included in the analysis if it seems that they are likely to be used as

analogous situations. Points of similarity and difference should be discussed. If an inappropriate analogy is known to be in wide use, it should be identified and dismissed in the analysis.

SUPERFICIAL LESSONS FROM HISTORY:

Both modes of decision making are vulnerable to this misperception, but the consequences for each are very different. The analytic decision maker is misled about individual decisions; however, if the cybernetic decision maker relies on a superficial interpretation of history in selecting the critical variables or in establishing his procedures, then the misperception may ultimately affect many of his decisions. In the case of this misperception the precaution is similar for the two modes, but the timing is different.

Precaution: If obvious historical parallels exist, then the analyst should investigate them and address them in the course of presenting the intelligence. This is particularly important when the parallels are either poorly understood by the decision maker or not actually parallel in their causal relationships. Emphasis should be on the cybernetic decision maker since his decision making is much more sensitive to the effects of this misperception. In the case where the cybernetic decision maker is known to be using the parallel as a basis for the design of a decision making procedure, then the necessary time and space should be devoted in the intelligence product to eradicating this misperception.

PRESUMPTION OF UNITARY ACTION BY ORGANIZATIONS:

This is an extremely common presumption. It is in fact being used in this paper since it is more convenient to refer to decision makers as individuals than as groups, particularly when examining psychological conditions that can only occur on the level of the individual. For this reason it is quite common to speak of individual action when the subject may be a group or even a collection of groups that are acting together. Because of this practice, this is a common misperception, affecting analytic and cybernetic decision makers alike. Its three aspects are discussed below along with precautions against each.

Behavior of Others Seen As More Planned, Centralized and Coordinated Than It Is:

Precaution: Any evidence to the contrary should be presented. The assumption that others are better organized than is justified by previous observation should be explicitly ruled out when it is likely to be presumed.

Failing to Recognize That Others Will See the Decision Maker As More Centralized, Planned and Coordinated Than Is So:

Precaution: Decision maker should be warned of this possibility in assessments that include a discussion of the likely reaction of others to our initiatives.

Overestimating One's Importance As Influence or Target:

Precaution: Alternative influences, especially accident and the target's own initiative, should always be brought to the decision maker's attention as likely possibilities for explaining the target's actions unless they are unlikely.

CONSERVATISM IN PROBABILITY ESTIMATION:

The tendency towards 50% in estimating probabilities leads the decision maker to be more uncertain than need be. The analytic decision maker is most affected by this misperception, because his decisions are more precisely attuned to the information that he is provided. The cybernetic decision maker is not likely to be affected by a modest reduction of a very high probability or the modest increase of very low one.

Precaution: Where justified, confidence in extremely low or extremely high probabilities should be given additional emphasis. The decision maker's own reluctance to accept or act on these high probabilities should be anticipated and met with additional evidence.

UNDERSIZED CONFIDENCE INTERVALS FOR SUBJECTIVE PROBABILITY ESTIMATES:

An analytic decision maker is more likely to be affected by excessive confidence about a subjective probability than is a cybernetic decision maker. However, both can be misled, because the errors associated with this process can range much further. Where conservatism in probability estimation can be thought of as shaving the probabilities toward 50%, this process is guessing about the accuracy of guessing and can occasionally result in large errors.

Precaution: Always attempt to make such judgements through the use of a formal procedure such as the Delphi or some other device in preference to leaving the estimate to the decision maker. Even the more formal procedures are subject to overestimating their accuracy, but over time it is possible to assess the performance of formal procedures and thereby more accurately size the confidence intervals assigned to their estimates.

CHAPTER 5

THE COLLECTION AND PRODUCTION OF INTELLIGENCE

This process ordinarily operates in the analytic mode when making decisions. Analysis is very important in both collection and production. Collection includes the analysis that occurs throughout that part of the process up to and including the dissemination of single source reports. Production includes all-source analysis and the dissemination of intelligence in addition to the production of intelligence products (e.g., National Intelligence Estimates, current intelligence, etc.). Because the analytic mode dominates in intelligence decision making, the cybernetic mode will not be addressed in this chapter.

EXCESSIVE CONSISTENCY:

Excessive consistency is a real danger in intelligence production. It can introduce subtle biases, especially in warning where recognition of patterns of behavior is important. The remedy in highly structured warning situations such as military attack is to understand the circumstances that are to be warned about so well that there will be as little delay as possible in the leap of recognition associated with recognizing the warning situation.

Where warning is of less structured events such as a third world crisis or a new initiative by the Soviet Union, then excessive consistency poses a significant perception problem to the analyst. As with the problems this presents to strategic planners, the problem for the warning analyst is recognizing surprising futures. Because he is concerned about the near future, the warning analyst does not have to anticipate the degree of surprise that the strategic planner does, but the press of time makes the difficulty of anticipating the future at least as great for the warning analyst as for the planner.

Precaution: While the planner's problems are different from the warning analyst's in a number of respects, the solution to the perceptual aspect of the problem is similar: creative, accepting imagination disciplined subsequently by a thorough and much more skeptical review. It is important that the critical stage follow rather than occur at the same time as the creative, ideational stage. Once the insight has been gained, the mind's predisposition to seek simplicity and consistency, which up to this point

has been an impediment, will rapidly identify any other details that fit the new pattern.

Collection is subject to this same problem. Recognition is just as essential to the collection process. Any information consistent only with an unanticipated viewpoint will be thrown away in the processing stage unless it is recognized to be of value. The collection analyst has an additional problem. One source of insight for him is the all-source analyst. It is a truism in intelligence that interaction among analysts, especially among collection and production analysts, is a good thing. An exception to this may be the case where a production analyst presents a idea sufficiently persuasively to a collection analyst that it sets his expectations very strongly and thus narrows his vision.

Precaution: The solution to the problem posed above is not to restrict interactions among analysts, but to foster flexible but structured expectations on the part of each analyst. Excessive consistency can be avoided as well by designing collection strategies that will discover and report inconsistency.

COGNITIVE DISSONANCE:

A difficult decision involving wrenching value conflicts can precipitate a revision of the individual's value structure to make the relative importance that he assigns the values more consistent with the decision subsequent to making it. The impact of this misperception is on the value structure and on subsequent expectations. Since the value revision is one that makes the close decision seem more right in retrospect than it seemed at the time, the effect is almost always to narrow expectations. Hence, it is very important to avoid.

Precaution: Postponing a commitment to a decision or a viewpoint is very important in avoiding cognitive dissonance. The tendency to retrospectively revise values to strengthen commitment to a difficult decision is reduced if the decision is made in response to external circumstances such as a deadline or other need to make the decision.

DIFFERENCES IN EVOKED SET:

It is important for analysts to know of the concerns (especially dissimilar ones) of decision makers in order to discover relevant information. Differences in evoked set among analysts can impede communication and foster unproductive dispute. Other than this, differences in viewpoint among analysts are not harmful.

Precaution: Since expectations affect perceptions very powerfully, they

must be lightly held or very inclusive.

PREMATURELY FORMED VIEWS:

Adopting an hypothesis early in a problem's formulation and adhering to it inflexibly is a far more serious problem for an intelligence analyst. New information, the sine qua non of intelligence, is used very ineffectively under these circumstances. As a consequence, those that intelligence is intended to support are poorly served, possibly even misled.

This is particularly a problem for the analyst when timeliness or perishability is important. Those users of intelligence who are looking for insight into a crisis or other urgent situation are particularly ill-served when views are formed prematurely by the analyst and held to too slavishly.

Precaution: Encourage analysts to entertain multiple hypotheses and ask them to specify events that would surprising in the light of what they believe to be happening. Then, when a surprising event does occur, they will be less inclined to brush aside or incorporate the new information into their existing hypotheses.

PRESUMPTION THAT SUPPORT FOR ONE HYPOTHESIS DISCONFIRMS OTHERS:

This misperception, while it may be commonly experienced, is less troublesome than a prematurely formed view if supporters of the alternative hypotheses are involved in the analysis. These others will recognize that the evidence also supports one or more of their hypotheses if that is the case.

Precaution: The analyst should be encouraged to entertain multiple hypotheses, even after one seems dominant so that additional information will be fully meaningful. Review by an experienced supervisor who has greater breadth than the analyst should also ameliorate this misperception. The best precaution is to ensure that several analysts with a variety of viewpoints are involved in the analysis of important intelligence problems. Peer review of intelligence products is often an effective way to subject an intelligence problem to a variety of points of view without going to the extreme of the Team A/Team B approach.

INAPPROPRIATE ANALOGIES:

Avoiding analogies based on irrelevent criteria is one of the major responsibilities of analysts. An analyst should never accept an argument from analogy as proof of a proposition. Analogies serve best when they stimulate the imagination by suggesting new approaches or additional uses

for information.

Precaution: The analyst should be particularly suspicious of an analogy that is proposed by an individual because the circumstances surrounding the event or idea being used for comparison have significance to him personally, to his organization or to his country.

SUPERFICIAL LESSONS FROM HISTORY:

This is more likely to be a problem in organizations with a high turnover rate or short assignments. The most likely form of a superficial comparison is an argument that finds similarity in the events rather than the causal relationships of the two situations being compared.

Precaution: Peer review by specialists in relevant topics is the best remedy. Suspicion of those historical comparisons that are not presented in terms of causality is also indicated.

PRESUMPTION OF UNITARY ACTION BY ORGANIZATIONS

There is ample evidence available to substantiate this misperception as a common one that is important to protect against.[27] Since it hinders analysis, makes poor use of information and may lead to incorrect conclusions; considerable efforts to avoid its occurance are justified. The presumption of unitary action is more likely to be a misperception by non-specialists since the specialist is likely to see and understand the problem in greater detail than others.

Precaution: Analysts should be encouraged to specifically search for evidence that the organization is not unitary in its actions or internal operation. The possibility that an action is accidental should always be considered as well.
In assessing the actions of organizations, the possibility that they will see the U.S. as more centralized, planned and coordinated than is so must be considered also.

CONSERVATIVE PROBABILITY ESTIMATION:

The tendency to avoid perceiving extremely high or extremely low probabilities is a challenge to the analyst. In addition to overcoming his own natural propensities, the analyst must risk being very wrong on rare occasions. If he works in an organization that punishes those that are dramatically wrong, then it is probably not even rational for him to take the risks associated with accurately characterizing extreme probabilities.

Precaution: The analyst should develop additional evidence to support or improve the confidence of extremely high or low probability estimates. This will give him the added confidence needed to take the risks associated with such predictions. It will also assist the user of intelligence, who is subject to this same misperception, to accept and act upon the estimates. Otherwise, full advantage will not be taken of opportunities and resources will be wasted.[28] As a further precaution, the institution should protect its analysts from retribution when they are wrong for good reason. Otherwise, it is likely that these and other, similar risks will not be taken by the analysts.

EXCESSIVE CONFIDENCE ABOUT SUBJECTIVE PROBABILITY ESTIMATES:

When an informed guess is required, it is likely that the subsequent guess about the potential error of the initial guess will be too confident. Knowing this is the first step to avoiding the misperception. Subjective probability estimates will always be necessary on occasion, and they should always be identified for what they are. It turns out that even the humility that the audience usually demands about these estimates is not enough.

Precaution: Widen confidence intervals beyond the estimated range when forced to estimate for unfamiliar topics. If possible, it is also desirable to use a formal procedure that can be repeated and, ultimately, validated.

RESISTANCE TO ATTITUDE CHANGE:

Though not a misperception so much as a consequence of misperception, resistance to attitude change is included in this chapter because it is difficult for analysts to avoid since it mimics healthy skepticism. The appropriate precaution is to take a second look at the issue or information with disbelief suspended. It also helps if the analyst knows the stages of resistance well enough to recognize them in himself.

CHAPTER 6

COMMUNITY MANAGEMENT

The emphasis in this chapter is an inward one, focusing on the interactions among the agencies in the Intelligence Community rather than the outward focus on international affairs of the previous chapters in Part Two. While the emphasis will be on ensuring that the members of the community work together, the activities of resource allocation and strategic planning will also be considered when appropriate.

EXCESSIVE CONSISTENCY:

The special case of this error where agencies are viewed as monolithic is discussed below as the error of assuming that organizations are unitary actors. That case is mentioned here to distinguish it from the other major error of excessive consistency: assuming that agencies will always take positions on issues that are consistent with their own self-interest.

This assumption is misleading, but it has the added danger of becoming a self-fulfilling prophecy since it may suppress altruistic behavior on the part of the community agencies by stimulating them to reconsider following their own interests. There are also likely to be occasions when the members are willing to be led to actions that are in the interests of the community as whole but not in the individual interests of some of them. The opportunity that such an occasion offers will automatically be lost, often undetected, if they are only viewed as acting in their own interest.

Precaution: Be open to, and ready to encourage, any signs of willingness of agencies to act in ways contrary to their own self-interest, especially in the initial rounds of discussing an issue. Although this precaution seems obvious and superficial, additional efforts should be made, at least on a trial basis, since indications of such willingness are suppressed along with the response if not encouraged.

Excessive consistency is even more difficult to avoid in strategic planning. It is difficult to be imaginative enough to anticipate how the world will change in ways that lead to inconsistencies because consistency with current trends and the logical consequences of expected events are the means used to forecast the future. The mind's predilection for simplicity

and stability is particularly perverse here. Yet, failure to overcome this misperception leads to the very surprises that strategic planning is intended to avoid.

Precaution: In planning look for unlikely contingencies to overcome the tendency towards excessive consistency. An example would be to consider unexpected opposition from allies or unexpected help from opponents.

Ironically, in the budget process where excessive consistency is used as a strategy in reviewing a budget, this ordinarily will not affect the program being reviewed adversely, because those under review recognize the need to prevent excessive consistency from jeopardizing their program. However, there is no incentive on their part to protect the budget reviewer from errors of the opposite kind: those that favor the program.

Precaution: To be effective the reviewer himself must be alert to this latter possibility.An example of the type of excess consistency in the budget review that is important to avoid would be to presume that good management of one program indicates good management of others.

COGNITIVE DISSONANCE:

Decisions that require difficult value trade-offs should not be made any sooner than necessary. The key participants in a wrenching decision will revise their values in retrospect to be more consistent with the choice that was finally made. This is a particular danger to the community. Many of the decisions that must be made about relationships within the community require difficult trade-offs by the program managers of very dissimilar values and activities under ambiguous circumstances and with poor knowledge of the likely consequences.

Even worse from a cognitive point of view, there is often no circumstance forcing the decision to be made that could relieve the internal conflict of the decision maker by allowing him to believe that he was forced to come to a decision. The benefit of his feeling that he was compelled to make the decision is that it reduces his subsequent commitment to the choice that he made, and thereby protects his value structure from the irrational revision that would make him feel confident that he had made the right decision.

Precaution: A standard symptom of the retrospective revision of values is enhanced confidence that the decision was well made along with amazement on the decision maker's part that it was ever seen as difficult. If a decision must be made, the more reversible of the choices should be favored in the absence of any other compelling considerations. Participants in the decision should be encouraged to view it as a contingent approach to be attempted on a trial basis. The difficulty of reaching the decision should be explicitly recognized to relieve the need of the program managers from

having to justify their choice to themselves. The consequence should be to reduce the incidence of unexplainable changes in views or flexibility of the program managers or their subordinates.

Precaution: In resource allocation use the deadlines inherent in the budget process to compel a difficult decision in order to leave the participants in the decision mentally flexible. Marginal programs that were difficult to approve are otherwise likely to obtain disproportionate loyalty as a consequence of the difficulty in deciding about them.

Precaution: In strategic planning, flexible thinking and reversability is maintained by avoiding commitment to difficult choices. Preserving ambiguity by avoiding the choice is better than fostering irrational commitment.

This can be done by planning for more than one possibility. There is obviously a limit to the number of possibilities that can be considered, but the most difficult choices should be treated as contingencies rather than accepted as choices. For example, if the loss of an important source of information is seen as likely but difficult to predict (i.e., the probability of loss is about 50%), then rather than choosing which to use in planning, both possibilities should be included.

The choice should be postponed until the plan is implemented. Typically, this occurs when important procurements must be made. Choosing prior to that point builds commitment in the community for the course chosen. Prematurely choosing to develop alternative sources may lead to the unnecessary abandonment of (or excessively reduced reliance upon) an important source. If the opposite course is chosen too early, then the community is poorly prepared for the loss because they are inclined to expect its continuation.

DIFFERENCES IN EVOKED SET:

The possibility that different agencies have different evoked sets is always very high. This is due to the very different responsibilities, and thus concerns, that each program manager has. Because each program manager is closer to some intelligence sources than are the others and because the intelligence analysts of each have different specialties, the viewpoint of each program manager is very different as well.

Precaution: In strategic planning it is important to ensure that the decision makers whose support is necessary to the sucess of the plan share the vision of the future that is presumed in the plan. Appropriate means such as briefings or joint reviews of the most likely future should be conducted to ensure that agreement on this important element exists prior to considering the planning completed.

Precaution: In resource analysis congruence of evoked sets is needed to understand justifications and communicate decisions. Agreement about concerns is not likely to occur about budget issues, but successfully recognizing the differences in concerns among the program managers and between those managers and the DCI is essential to the smooth running of the budget process. This recognition of differences is an essential step in the defense of the National Foreign Intelligence Program (NFIP) before the Congress. Failure to recognize differences in evoked sets will lead to appeals to the Congress for the recognition for their concerns and support that would otherwise not occur. The insight that the psychology of misperception has to offer is that a fair hearing is not enough if that hearing does not recognize differences in evoked sets of the participants.

PREMATURELY FORMED VIEWS:

The decision maker should be encouraged to postpone even developing a viewpoint about problems for which there is insufficient information or understanding. The danger of doing so is that, once formed, the viewpoint will impede his understanding as additional information and insight become available. This danger is somewhat better understood for intelligence problems than it is for problems associated with the management of the intelligence community. It is recognized, even expected, that some intelligence problems will be too ill-defined to understand with the information currently available. Community management problems do not benefit from this presumption even though some are probably as ill-defined as the more understandable of the intelligence problems that the community is willing to leave unresoved.

For example, significantly enhancing analysis may be a problem of this type, but the community does not feel free to postpone attempts to improve analysis even though such efforts may impede later, better informed efforts. This reluctance is based in part on the recognition that, unlike intelligence problems, no systematic collection and analysis is being conducted by the community to unearth additional information and develop a better understanding of this problem. Thus, the price of not investigating this or any other ill-defined community problem is the premature formation of views that may impede understanding later when better information is available.

Precaution: Community concerns about ill-defined problems should be managed by organizing a systematic investigation of the problem with the understanding that it is acceptable to conclude that the problem can't be solved at present. Leaving the problems uninvestigated will only lead those who are concerned about the problem to form views prematurely

PRESUMPTION THAT SUPPORT FOR ONE HYPOTHESIS DISCONFIRMS OTHERS:

This misperception is a less serious one for community management than for intelligence analysis, because the various participants in the community's decision process are alert for evidence that supports their views. So long as the process is fully representative of all of the views in the community, those for which the evidence is supportive will ensure that the support for their view is recognized.

Precaution: In managing the community, discussions should always include as many competing views as possible so that the full range of views supported by the evidence will be discovered.

The implication for strategic planning is much more significant. As evidence for the expected future unfolds, belief in its likely occurrance will strengthen more than the evidence warrants. The fact that the evidence is also consistent with other futures will not be easily recognized, especially for those futures whose possibility was not formally addressed.

Precaution: The only feasible way to prevent a bias towards the expected, "official" future is to regularly review new evidence for support for alternative futures. Though difficult, it is particularly important to search for unanticipated futures.

Precaution: In resource allocation the arguments for funding a proposal should be considered together with arguments for alternative uses in order to compare the cases in a way that makes fully informed use of the evidence.

INAPPROPRIATE ANALOGIES:

Difference in viewpoints along with a common history make this a prevalent, but not serious, problem in managing the community. An inappropriate analogy is a potential problem for a community management issue only if the community's participation is incomplete in some way that turns out ot be significant or if the analogy is accepted by the whole community.

This is a particular difficulty in strategic planning because of a pronounced tendency to think about the future in terms of analogies and it is much easier for the community as a whole to accept an inappropriate analogy about the future than about the present. Such analogies are very difficult to identify and root out due to the speculative nature of planning and the limited role that evidence plays in laying out the future.

Precaution: Comparisons with the past, particularly to significant failures or successes, should be suspect until they can be established as

appropriate.

SUPERFICIAL LESSONS FROM HISTORY:

Typically the events of history are better understood than the causes of the events. However, this is ordinarily a less egregious sourc of error than inappropriate analogies since the basis for comparison is less personal. Careful use of historical comparisons can be quite fruitful since much is learned from reviewing the comparison for appropriateness even if the comparison is ultimately rejected.

Precaution: Arguments using historical parallels should be examined by attempting to confirm that the causal relationships are correctly stated and well understood. An argument for appropriateness of the comparison should never be accepted when it is based only on the similarity of the events.

PRESUMPTION OF UNITARY ACTION BY ORGANIZATIONS

There is a real danger that agencies in the community will presume that inadvertant or unrepresentative actions by one or more subelements of an agency acting without coordination with other subelements will be viewed by other agencies in the community as a centralized, planned and coordinated action on the part of the initiating agency.

Precaution: It is important to allow for unexplainable or inadvertant behavior in the relations among members of the Intelligence Community. While this precaution seems obvious in an abstract discussion, it is quite common, especially at the working level, for minor actions by an agency to be closely examined, given excessive significance and attributed to an overall plan.

Precaution: In resource analysis this misperception is most evident when a misstep in a presentation is given significance as an indication that the presenter is making a misleading presentation.

Being Perceived as a Unitary Actor by Others:

It is also important to recognize that other agencies are attributing excessive centralization, coordination and planning to the managers of the community as well. Hence an event may be seen as calculated when it is not. This misperception can be an advantage, for example when a budget reviewer discovers an error and is credited with insight into the presentation due to the knowledgability of the institution he represents that leads to the admissions of additional error.

The presumption by others that planning and coordination are occurring when they are in fact absent can reduce or supplant the pressure from the community for strategic planning in particular. However, this same misperception will lead the community to expect planning and to be chagrined if it does not occur.

Precaution: The need for strategic planning must be recognized to exist even when support for it appears to be absent.

Overestimation of One's Own Importance:

The related tendency to overestimate one's own importance as an influence or a target can lead individual agencies to overreact or act inappropriately to an action or decision that may be intended for some other agency but which involves them peripherally.

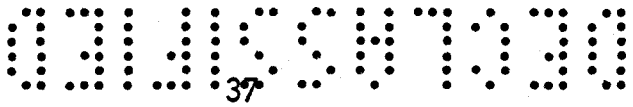
Precaution: Coordination and consultation should be undertaken even when the need for it seems flimsy at best. Even more productive would be a review prior to publicizing the decision which scrutinizes the pending action or decision for any possibility that unexpected reactions may be stimulated. This is particularly important, and difficult, to do during the conclusion of the budget process when a cascade of decisions that seem to only affect single programs are being made and disseminated to those considered to be directly involved.

CONSERVATIVE PROBABILITY ESTIMATION:

Pessimism in assessing probabilities may lead the community to miss opportunities because they did not accept the high liklihood of an event occurring, and thus did not adequately prepare. It can also waste resources by by inducing the community to prepare for events that are extremely unlikely to occur, because no one was willing to bear the risk of being dramatically wrong if the event occurred. The resource management implications of this misperception are the underfunding of high probability events and the diversion of funds to unnecessary back-ups.

EXCESSIVE CONFIDENCE ABOUT SUBJECTIVE PROBABILITY ESTIMATES:

The analytic decision maker is most vulnerable to this misperception, not because he is more disposed to make the error, but because he is more sensitive to it. Precise probability estimates do not affect the cybernetic decision maker because he makes less use of information while the analytic decision maker deliberately designs his decision process to be sensitive to new information. This is done to make maximum use of



information, but it also permits the validation of his analytic model.

Precaution: Statements about the confidence levels of subjective judgements should be explicitly made along with the judgement and the level of confidence should be systematically understated. Research should be initiated by the community to discover if there are formal remedies for this bias.

RESISTANCE TO ATTITUDE CHANGE:

The stages of resistance to attitude change should be anticipated in the implementation planning for any new institutional arrangement or community procedure. Resistance to attitude change can dramatically reduce the lead time usually gained from planning ahead.

Precaution: Begin planning and implementation earlier than otherwise indicated if significant attitude changes must occur.

Precaution: The skepticism necessary in resource allocation decision making reinforces resistance to attitude change. This bias is probably best met by adopting an attitude of sympathetic understanding during the learning phase of budget review even though that will make the reviewer vulnerable to being co-opted. The explicit adoption of a more skeptical attitude in the later stages of the review may offset the earlier vulnerability.

NOTES

Chapter 2

[1]Thomas Kuhn, The Structure of Scientific Revolutions (Chicago: University of Chicago Press, 1962; 2nd ed. 1970), p. 52.

[2]John D. Steinbruner, The Cybernetic Theory of Decision: New Dimensions of Political Analysis (Princeton: Princeton University Press, 1974), p. 86.

[3]Ibid., p. 78.

[4]Ibid.

Chapter 3

[5]Robert Jervis, Perception and Misperception in International Politics (Princeton: Princeton University Press, 1976), p. 10.

[6]Ibid., pp. 137-138.

[7]Steinbruner, Cybernetic Theory, pp. 93-105.

[8]Ibid., p. 113.

[9]Taken from an interview with former Secretary of State Dean Rusk on 20 May, 1984 during which he emphasized the importance of the missing consideration in affecting decision making. As an example he cited the selection of the 38th parallel as the location selected by the U.S. in Korea to meet with the Soviet Union to discuss the removal of Soviet Forces from Korea. Representatives of the U.S. were unaware that the Soviets and Japanese had dicussed using this parallel to divide their spheres of influence in Korea in the 19th century. The Soviets interpreted the selection of the meeting site as a recognition of the legitimacy of their

influence in North Korea by the U.S.

[10]Jervis, Perception and Misperception, p. 361.

[11]Ibid., p. 119.

[12]Ibid., pp. 130-131.

[13]Ibid., p. 128.

[14]Ibid., pp. 387-403.

[15]Ibid., pp. 206-211.

[16]Ibid., p. 209.

[17]Ibid., p. 218.

[18]Ibid., p. 190.

[19]Ibid., p. 423.

[20]Ibid.

[21]Ibid., p. 229.

[22]Ibid., p. 228.

[23]Ibid., p. 278.

[24]Ibid., p. 378.

[25]Ibid., pp. 291-300.

Chapter 4

[26]The preceding points about high level decision making were made by Mr. David L. Aaron, former Deputy Assitant to the President for National Security Affairs, on 18 May, 1984 to the Executive Seminar in National and International Affairs at the State Department's Foreign Service Institute. They are included with the permission of Mr. Aaron.

[27]Graham Allison, Essence of a Decision (Boston: Little Brown & Co.), 1971.

[28]See the discussion under this heading in Chapter 6 for a more detailed explanation of this point.

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