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Strategy-Making Models: Is There An Ideal
Model for Developing Strategy?

A Monograph
by

Colonel Dennis K. Hill
Field Artillery

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ABSTRACT

This monograph seeks to answer the question "What is the best model to use in developing strategy?" Five strategy-making models are available for the military strategist to use: elite, rational, process, incremental, and estimate of the situation. The models are defined and discussed to enable the reader to understand how each model works.

To provide examples of these models, four American military strategies are examined, and retroactively, specific models are applied to analyze how the strategies were developed. These strategies include the Bay of Pigs invasion, the bombing of Pearl Harbor, the escalations of the Korean War, and the Vietnam War. These were chosen because they represent strategies that resulted in military misfortune.

The models are evaluated using five criteria: structure, simplicity, time, resources required, and quality of outcome. Advantages and disadvantages are determined; criteria are rank ordered for each model; criteria are weighted according to their importance; and the best strategy-making model selected. The process model is the recommended model followed closely by the estimate and rational models.

The significance of this monograph lies in its ability to provide an understanding of how strategy-making models work, to provide insights into four historical examples, and to offer the advantages and disadvantages of each model. The monograph guides the reader toward using the recommended model--the process model.

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INTRODUCTION

Two millennia ago Marcus Cicero recognized that an "army is of little value in the field unless there are wise councils at home." (20:52) Wise councils could as well refer to commanders and their staffs from antiquity, the Napoleonic era, World War I, World War II, and the most recent Panama invasion where concise and coherent military strategies were developed to secure the objectives of national policy. To understand this policy as well as military strategy in general, standard definitions must be established.

Many definitions of national policy and military strategy exist in the writings of Clausewitz, Moltke, Jomini, Liddell Hart, Montgomery, and Wavell, as well as in Joint Chiefs of Staff and United States Army War College publications. While there is considerable variance in the definitions, the focus for national policy is primarily on a plan to achieve national objectives. Those definitions describing military strategy generally focus on the means to secure national objectives.

For the purpose of this monograph, the following definitions of national policy and military strategy apply. National policy, as defined in Joint Chiefs of Staff Publication 1, is "a broad course of action or statements

of guidance adopted by the government at the national level in pursuit of national objectives." JCS Pub. 1 defines military strategy as "the art and science of employing the armed forces of a nation to secure the objectives of national policy by the application of force, or the threat of force." (30:232 & 244)

The formulation of military strategy starts with the determination of national interests by the National Command Authority. National goals and national objectives are determined from national interests in order to focus the efforts of the nation. The national goals and objectives are transformed into national strategy and policy, and then translated into national security strategy. The national security strategy has four separate components: political, diplomatic, economic, and military. The JCS uses the military component to develop the national military strategy that is used by the regional Commanders in Chief (CINCs). The CINCs develop theater military strategy and from this, campaign plans and major operations plans are written. (36)

How is military strategy developed by the JCS and the CINCs? Is a particular model used? Is the military strategy the result of wit, intuition, or "seat of the pants" decision? This monograph will focus on

strategy-making models and answer the question--What is the best conceptual model to use in developing military strategy?

I chose this topic because of the lack of military models available for use in developing military strategy. Sufficient military literature about "how to think about military strategy" exists, but the literature does not provide a model, structure, or a system to use as a framework to develop military strategy. My intent is to present several models from non-military thinkers and to guide the reader through the strengths and weaknesses of each model. The significance of this monograph lies in its ability to provide the strategist some structure, although somewhat a mechanical one, to follow when developing military strategies.

This monograph seeks to accomplish the following: define and discuss five strategy-making models; examine four illustrative American military strategies and the models employed in their development; evaluate different strategy-making models using criteria to determine advantages and disadvantages; and finally, recommend the the best strategy-making model for military strategists to use.

Three limitations exist in this study. One, the focus is on the structure of each model and not on the

strategic thought involved. This mechanical approach should give the strategist a framework to develop a strategy based on the situation. Second, I determined the model retrospectively (through my analysis) used in the four illustrative historical examples. A third limitation may exist if models from the non military writers do not have application in the military environment.

A model is defined either as a diagram, a flow chart outlining step-by-step procedures, a process, or a concept for developing a product. (28:913). The product, for the discussion in this monograph, is strategy.

For the purpose of this paper, models have five functions:

1. To simplify and clarify the thought process about strategy.
2. To identify important features of strategy.
3. To help communications among strategy makers by focusing on essential aspects of strategy.
4. To direct the efforts in developing strategy by suggesting what is important and what is not.
5. To suggest an explanation for strategy and predict its consequences. (9:19)

The next section will define and discuss the five models selected for this study.

DEFINING MODELS

The focus of this section is to introduce and define five strategy-making models--process, elite, rational, incremental, and estimate of the situation. Other models exist such as the institutional, group, game theory, and systems. However, I chose not to include these four since no new approaches or processes are offered, and because of their similarities to the five models presented. Strategists may use a particular model in one situation, use a different model in another situation, or combine aspects of several models when developing strategy. Is there a model which is universally the best or most appropriate?

This discussion will concentrate on the procedures, concepts, steps, features, and thought process of each model. All of the models produce an end product, called strategy, to solve a problem. The first four models in the discussion--process, elite, rational, and incremental--are the results of efforts from non military writers, theorists, and authors. These individuals have established their credentials as distinguished professors, consultants, analysts, or researchers. The fifth model is taken from a faculty member of the US Army War College.

Process Model

The process model concentrates on the format by which military strategy is developed. The process model involves

the pattern of activities that are followed in developing, implementing, and changing strategies. These activities include:

1. Identifying the problem: Initiated by demand for strategy, agenda setting, or an activity capturing the attention of strategy makers.
2. Formulating strategy proposals: Devising and selecting strategy options.
3. Legitimizing strategies: Developing support and approval or enacting it as law.
4. Implementing strategies: Creating structure, allocating resources and enforcing laws.
5. Evaluating strategies: Studying, evaluating, changing or adjusting strategies.
6. Strategy Termination: Solution, resolution or problem solved. (10:11-12 & 230-231)

The first activity or step in this model, identifying the problem, is fairly straightforward for the military strategist. The problem is either given or presented by the situation or environment. For example, the national objective may be the protection of American personnel or property in a foreign nation. From the given objective, the military strategist would then determine how to employ the armed forces to secure this objective. The second step, formulating proposals, has the user devise and select alternatives that may be used to secure the national objective.

Steps three and four, formulating strategy proposals and legitimizing strategies, develop the infrastructure necessary to support the alternatives. These two steps as presented in the literature are somewhat vague. However, I believe they are meant to allow the user to screen out

any alternative that does not solve the problem. This screening is accomplished by rejecting alternatives which are not politically, economically, socially, or militarily acceptable. An example may be an alternative which employs the first use of nuclear or chemical weapons.

Evaluating strategies, step five, directs the user to wargame the alternatives through study, evaluation and adjustment. This step enables the user to select the best alternative for solving the problem--the development of a military strategy. The last step, strategy termination, is for closure--the problem is solved (objective secured) and the strategy is terminated.

The process model influences the content of the strategy derived. The model allows for discussion, debate, openness and accessibility, choices, prudence, and the influence of interest groups. Examples of military strategies developed using the process model include Strategic Arms Limitation Talks (SALT) and Conventional Force Europe reduction talks (CFE). (9:26)

In sum, the process model, as presented in the literature, is very mechanical since the model's author does not suggest how to think when using the model. He merely provides a process whereby the user follows the steps similar to those of a recipe. However, it does provide a paradigm for strategists to follow in developing a strategy in any given situation.

Elite Model

The elite strategy-making model suggests that subordinates are passive, apathetic and ill-informed. Elites determine strategy based on their preferences, and their strategies roll down to subordinates. (1:all) The elite model is based on the following maxims:

1. People are divided into a few who have power and the many who do not. These few determine the courses for the people because the masses do not care.
2. The few who decide are not typical of the masses and are drawn disproportionately from the upper class of society or military institution.
3. The upward movement of the non-elites to elite positions is slow and continuous in order to maintain stability. Only non-elites who have accepted the basic elite consensus are admitted to the strategy-making circle.
4. Elites share consensus on behalf of the system and its preservation.
5. Strategy does not reflect the demands of the masses but rather the preferences of the elite. Change in strategy is evolutionary rather than revolutionary.
6. Elites influence masses more than masses influence elites. (27:16)

The elite model proposes that the responsibility for strategy-making rests on the elites' shoulders and not the masses'. The strategy developed by the elites is in the best interests of the masses and should not be against the well-being of the masses. However, history contains examples where elites devised strategies harmful or destructive for the masses. One example is Stalin's treaty with Hitler in 1939. Hitler was thus freed from a two-front war. The consequences of this strategy resulted in the death of over a million Russians. (35)

In developing strategy, the elites establish game rules

to maintain stability of their system. These rules allow for disagreement and competition among the elites, but focus on very narrow courses of action. Agreements are the rule and disagreements are the exception. (27:1,4-5, & 326)

My thoughts on elite strategies generated by the JCS and CINC's would be the strategies developed without the benefit of staff input from the services or component commanders. These strategies then flow downward for execution by the services and component commanders. This process looks like a triangle with the JCS/CINCs at the apex, the staffs in a narrow band near the apex, and the services and component commanders in the large base. Another way to view the process is the concept of concentric rings. In the center is the President, the next outer ring is the close presidential advisors, followed by DOD and other departments and agencies, then congress, and finally in the outer-most ring, the people. (18:201-202)

In sum, the elite strategy model as discussed in the literature does not give the user any step-by-step structure to follow. The model does offer a method for developing strategy that is expedient in both time and resources. The only requirement for using the model is to have a kind of preference. That preference enables the strategist to employ the armed forces to secure national objectives. The model lends itself to subjectivity not objectivity.

Rational Model

The rational strategy-making model is an input-output process designed to maximize net value achievement or efficiency. Net value achievement implies that values are known and any sacrifice in one value offsets the attainment of the other values. The model consists of six steps:

1. Establish the goals or end states.
2. Determine resources with their values.
3. Prepare alternatives.
4. Prepare consequences and prediction of each alternative as they relate to goals, resources and values.
5. Calculate net expectation of each alternative and the ratio of efficiency.
6. Select the most efficient or highest payoff alternative--strategy. (8:132)

Strategy developed using the rational model is considered most efficient when the ratio of the values it achieves, compared to the ratio of the values it sacrifices, is positive and higher than any other strategy alternative. Efficiency is measured not only in dollars, but in social, political, economic, and military terms. Additionally, the model assists in identifying barriers to rationality and efficiency. (9:33-34)

Efficiency barriers in using the rational strategy-making model include the following:

1. Consensus about societal values as well as the values of specific groups and individuals is often conflicting.
2. Weighting of values is difficult, especially those that are conflicting.
3. Strategy makers often attempt to maximize their own rewards--promotions and assignments--and not necessarily those of the nation.
4. Strategy makers do not attempt to maximize net goal achievement or efficiency, but merely seek a solution. They do not seek the best strategy and

terminate the model when they find an alternative that will work.

5. Many obstacles exist to hinder the collection of information necessary to evaluate fully each alternative. These include time, funds, and available data.
6. Predictive ability to understand the full range of consequences of each alternative is inadequate.
7. Tendencies exist for the strategy makers to develop a strategy similar to previous strategies to reduce the likelihood of opposition or unforeseen consequences.
8. Difficulty exists in coordinating the input of data from various specialists to influence the strategy.
(9:34-35)

The steps in the rational model provide the user with structure to organize thoughts and information in developing strategy. It does not assist the user in how to think about substance and content. For example, step three, prepare alternatives, is very elementary in nature. It does not stress the importance of this particular action and what alternatives should do. The eight barriers to efficiency seem to offer valid cautions. However, in my opinion, these barriers might steer the strategist to other models. For instance, the fourth barrier is a very broad generalization indicating that the user generally does not seek or arrive at the best strategy. This assertion raises the question of effectiveness of the model.

Overall, the model is strongly mechanical and mathematical in nature. The use of such terms as "calculate net efficiency" and "select the highest payoff alternative" seems to delete human judgment from the model. The model does offer an approach to strategy-making that combines

judgment and science by allowing the user to establish goals, assign value to resources, and prepare alternatives.

Incremental Model

The incremental strategy-making model develops a new strategy that is a variation of a previous strategy. Strategy makers do not review the whole range of existing or proposed strategies, goals (end states), advantages and disadvantages, preferences by rank order, or decision making based on relevant information. Instead, strategy makers incrementally increase, decrease, or modify an existing strategy. (2:64,90-92 & 114)

To conserve time, resources, and funds that would be necessary to explore alternatives, the incremental model develops a new strategy that is a continuation of the old one. Strategists using the incremental model seldom search for the best strategy and end their search once they find a strategy that will work. (1:all) Their search begins with a base that is incrementally modified. The search extends to other alternatives only when an unsatisfactory answer appears likely. (2:114-5&132)

Strategy developed using this model is similar to existing strategies, easier to implement because of the legitimacy of previous strategies and less likely to produce disagreements. It does not disregard the hefty resources which may already be associated with existing strategies. (1:all) The model limits analysis to the familiar, uses the

same grounds for acceptance as the base strategy, and is a rational deduction or choice based on the previous strategy. (2:10 & 142) An example of strategy developed using the incremental model would be taking the military strategy for a European theater and incrementally changing it to fit Southeast Asia. Another example would be incrementally changing the Southwest Asia military strategy to fit Latin America.

In the above two examples, the new strategy does not begin with a zero base and develop alternatives weighing the advantages and disadvantages of each. Instead, a base is used because the modification will satisfy the current situation. The testing for validity of a new idea or proposal is not necessary. (14:7)

Estimate of the Situation Model

The estimate of the situation strategy-making model is the last of five models discussed in this section and is the model taken from a military thinker. It follows closely the four paragraphs of the commander's estimate of the situation--mission, situation, courses of action and decision. The situation includes an analysis of the area of operation and the relative combat power of both friendly and enemy forces. Courses of action are determined, analyzed, and compared for friendly and enemy forces.

Using these four paragraphs, Arthur F. Lykke designed the estimate of the situation strategy-making model.

CDR's ESTIMATE of SITUATION

1. Mission

2. Situation

- a. Area of operation
- b. Relative combat power

3. Courses of Action

- a. Enemy
- b. Friendly
- c. Analysis and comparison

4. Decision

ESTIMATE STRATEGY MODEL

1. National Policy-WHY National interest and objectives

2. Region-WHERE

Military resources-WHO

3. Military objectives Military strat. concepts WHAT, HOW, and WHEN

4. Military strategy (20:10)

This model is appropriate for global and regional strategies, routine and crisis management situations; uses all the elements of national power; and applies at the strategic and operational levels of war. The final step in the model is the development of military plans to support the military strategy. Military strategy is the basis for planning and operations. Without a military strategy, plans may be worthless and operations may fail.

(20:11)

In summary, this section has introduced and defined four strategy-making models (process, elite, rational, and incremental) from non military writers. The fifth model, estimate, came from a military writer. Each model, except for the elite, is strong in prescribing step-by-step procedures for the user to follow in developing strategy.

None of the models offer guidelines on "how to think" when following these procedures. The models become mechanistic and are not oriented on substance and content. They should simplify or clarify the strategic thought process, identify important features of strategy, communicate essential aspects of strategy among strategy makers, direct the efforts in developing strategy by suggesting what is important and what is not, suggest an explanation for strategy, and predict consequences. (9:19)

This section should help in establishing the background knowledge of each model for analyzing historical examples presented in the next section. It should also lay the groundwork for determining the advantages and disadvantages of each model and for recommending the best model for strategists to use.

HISTORICAL USAGE OF MODELS

In this section, I will analyze four historical events and the associated military strategies. These events are the Bay of Pigs invasion, decisions to escalate the Korean War and the Vietnam War, and the Pearl Harbor bombing. I selected these four military strategies to represent strategy-making in which strategists failed to consider and examine the full range of alternatives, the desired objectives, and the information available. The analysis will focus on the particular models used by strategists in developing these historically, important strategies. I determined in retrospect the model used in each of these situations by analyzing the available information. These conclusions--the models used--are based on my understanding of the models and their application to the historical event.

The first military strategy examined is the Bay of Pigs incursion which has been described as a perfect failure and a skeleton in our nation's closet. (13:154 & 26:7). On April 17, 1961, a brigade of fourteen hundred American trained Cuban exiles invaded an area on the Cuban coast known as the Bay of Pigs--OPERATION PLUTO. (21:7) The odds for success, calculated after the fact, were 1 to 140--Cuban forces opposing the Cuban exile brigade numbered 200,000. (16:36) What strategy-making model led to this

gamble and disaster?

The model, in my opinion, used to determine the Bay of Pigs military strategy was the elite model--strategy developed as the result of the preferences of a small, select group at the top without input from below. The elites in the Bay of Pigs strategy were the advisors to President Kennedy. This group of advisors consisted of the Secretary of State, Secretary of Defense, Attorney General, Central Intelligence Agency Director, and Deputy Director for Plans, Special Assistant for National Affairs and the Joint Chiefs of Staff. The spokesman for this group was the CIA Deputy Director for Plans, (chief of all covert operations) Richard M. Bissel Jr.--who was an "elitist born," a persuasive briefer, a recognized expert, a take-charge type of leader, and a man who had complete freedom of action. (26:14-16)

These advisors failed in developing a successful military strategy because they adhered to the elite strategy-making model--used their preferences. The use of this model produced numerous flaws due to the preferences of the elites. These flaws consisted of faulty assumptions, failure to explore the full range of alternatives and consequences, inadequate contingency plans, and unrealistic end states (expectations). (16:15) All of these illustrate the elite model's shortcomings

suggested in our earlier analysis.

The faulty assumptions resulted from a failure of the President's advisors to search for available or better information concerning the Cuban air force effectiveness, capabilities of the invasion force, capabilities of Castro's army, effectiveness of the Cuban underground to support the invasion force, contingency plans, and the feasibility of the CIA cover story for diverting responsibility away from the United States. (16:19-26) The President's advisors felt obligated to each other and did not believe a need for additional information from their "ill-informed, apathetic, and passive staffers was necessary." (16:15)

The advisors established their own rules of the game and perhaps overplayed the need for secrecy. The estimates and assumptions in OPERATION PLUTO could have easily been verified or rectified using the facts and figures held by subordinates of the individual advisors. (21:104) Additionally, outside experts existed in the operations and intelligence directories of the various military services, in advisory committees, and in State Department Latin American sections. However, none were consulted and no independent checks were conducted. (21:104)

Perhaps the most serious mistake was the failure to develop, analyze, and compare a full range of alternatives.

The CIA developed the initial invasion plan and not the JCS; the JCS simply concurred with the plan and gave its stamp of approval after the fact because time was not available for an in-depth consideration. (21:7) This concurrence led the President and his advisors to believe the plan was militarily sound. However, the predominant reasons for accepting the invasion plan without searching for additional alternatives, wargaming the alternatives, and selecting the best alternative were the infallible reputation of the CIA from previous operations and the urging of former President Dwight Eisenhower, "the revered general," to conduct the invasion. (26:100)

Irving Janis, Trumbull Higgins, and Peter Wyder have carefully studied the Bay of Pigs invasion and have concluded the following. The Chairman of the JCS, the Director of the CIA, and other presidential advisors had a sense of euphoria that nothing could stop them from a successful Bay of Pigs invasion. (16:36) They considered themselves an intelligent and powerful group who would win. Additionally, they concluded the Cuban army could not repel a small invasion force because Castro was an unpopular, hysterical leader with an army ready to defect. (13:102-3 & 166) Since no one disagreed, at least vocally, the strategy developed by these elites went unchallenged without any thought of wargaming enemy and friendly

capabilities. (13:113) Any opposition was discounted because it came from "egghead thinkers"--the nonelites. (26:120)

While we can only interpret history, it seems that the Bay of Pigs invasion is a prime example of military strategy developed using the elite strategy-making model. The preferences of the elite were sufficient to develop strategy. This elitism led to the development and acceptance of only one strategy (course of action) without the benefit of searching, analyzing, and comparing the full range of alternatives. Elitism coupled with an illusion of invulnerability may have been the direct cause for the failure of the Bay of Pigs invasion, an embarrassing legacy for the United States of America. (21:7)

Approximately nine years before the Bay of Pigs invasion, the strategy for the escalation of the Korean War was developed by the Joint Chiefs of Staff (Generals Omar Bradley, Joseph Collins, and Hoyt Vandenburg, and Admiral Forrest Sherman) and by General Douglas MacArthur (Commander of United States and United Nations forces in Korea). In my opinion, the strategy for escalation of the Korean War was the result of using the incremental strategy-making model.

In the early morning hours of 25 June 1950, North

Koreans crossed the 38th parallel and invaded South Korea. This invasion surprised the South Korean and American forces, eventually forcing them to retreat and occupy a box of land 70x40 miles around the southern port of Pusan by the end of August. (6:166)

The Joint Chiefs of Staff and General MacArthur developed a strategy for the liberation of South Korea which included an amphibious landing at Inchon and the restoration of South Korea to the 38th parallel. Once accomplished, American and Korean forces had obtained the war aim (end state)--eviction of the North Korean Peoples' Army from South Korea and restoration of the status quo ante bellum. (3:325)

Upon achieving this objective, a new military strategy--cross the 38th parallel and escalate the Korean War--was implemented to achieve new end states. These end states were the destruction of the North Korean People's Army, unification of Korea, and the downfall of Kim Il Sung's communist regime. (3:325)

The previous strategy had focused on eviction of the enemy forces and restoration of South Korea to the 38th parallel. Military and political leaders as well as the general public had accepted this strategy as being legitimate and necessary to stop the spread of communism. The escalation strategy developed by the JCS and General

MacArthur was viewed as simply an incremental change of the previous strategy. Since it appeared to him to be a continuation and variation of the past strategy, it was assumed to be legitimate and expedient. (16:53-57)

Additionally, the planners believed that this new strategy did not require a heavy, extra investment of resources because forces and equipment were already committed. The major combat power (air and ground) of American forces already in Korea would easily overcome any resistance. (6:177)

This escalation resembles the incremental strategy-making model, which in this case produced serious defects. These included: failing to explore the full range of alternatives and their consequences and risks; failing to believe the warnings that Communist China would intervene if the 38th parallel were crossed; clinging to already heavy investments of manpower, equipment, and dollars spent to restore the 38th parallel; failing to recognize that the escalation strategy was a major shift from the past strategy; and believing that future victory would continue from past victories--earlier successes in Korean theater. (16:53-57) General MacArthur's previous victories and successes in the Southwest Pacific and at Inchon contributed to this sense of inevitable victory. (6:169-170) While there is no single cause, the strategy

was flawed by a combination of all the defects above. I believe that the strategy makers did not search for the one best strategy, but instead pursued only a strategy predicated on the successes of the previous strategies.

This incremental escalation strategy resulted in disaster, defeat, and retreat for the United Nations forces when the Chinese entered the war through a series of offensives. After successful counterattacks by United Nations forces, the front at the 38th parallel was restored by mid-July 1953 at nearly the same location as it was in October, 1950. The escalation of the Korean War across the 38th parallel cost the United States a high price in dead, wounded, and captured soldiers, and an even higher price for South Korea. (3:975) This was the worst defeat for American forces since the Battle of the Bulge. (6:169)

Ten years before the stalemate in Korea, the United States Pacific Fleet was almost destroyed at Pearl Harbor the morning of December 7, 1941. "Within two hours eight battleships had been sunk or badly damaged, nearly 2400 men had perished or received mortal wounds, and the opponent had escaped virtually untouched." (6:30) The military strategy developed by the Commander in Chief Pacific Fleet, Admiral Husband E. Kimmel, resulted in a failure to defend the American fortress in the Pacific. Admiral Kimmel may well have developed his strategy using the rational

strategy-making model. As stated earlier, the rational strategy-making model is designed to maximize net value achievement or efficiency. If the ratio between the values achieved and values sacrificed is positive or higher, the strategy alternative giving the higher efficiency is selected. (9:32) The model starts with inputs (resources and data), calculates net expectation/efficiency for each alternative, and produces an output (strategy) based on rationality.

Admiral Kimmel weighed the following considerations: a solid commitment to his mission to train his men and prepare his equipment for a long, hard war in the Pacific; the cost of interrupting ongoing training and the high priority of supplying personnel and equipment to American outposts close to Japan; and war warning signals from Washington and other agencies that Japan was preparing for imminent, major attacks against the United States.

(16:72,80-81) I believe that Admiral Kimmel and his staff organized these inputs into alternatives and began the rational process to develop a strategy that maximized net value achievement of each alternative. The naval forces in Hawaii had the resources (personnel and equipment) to support the alternatives. (6:49)

Admiral Kimmel, through the rational model, probably determined that the best strategy to adopt was to continue

the training and supply mission without interruptions. This strategy maximized net value achievement. He rejected alternatives which included 100% alertness, long range reconnaissance, limited alert and readiness, and other precautionary alternatives because of their net value achievement. These alternatives consumed high volumes of fuel, repair parts, supplies and time; all of which interfered with the perceived mission and resulted in a negative and lower net value achievement. (16:75) These conclusions were not only those of Admiral Kimmel, but also of the Navy staff in Hawaii. The "business as usual" strategy of Admiral Kimmel resulted in a complete surprise attack by the Japanese on Pearl Harbor on the morning of December 7.

I believe Admiral Kimmel correctly used the mechanics of the rational strategy-making model. He erred by developing a rationale that "it can't happen here" and by failing to heed the warning signals. He also seemed to exhibit an attitude of invulnerability that could be typical of elites--the exception being that he analyzed net value achievement of each alternative (a characteristic of the rational model). This reasoning probably affected the preparation of alternatives and predictions, calculation of net expectation for each alternative, and comparison of net expectations. The identification of the alternative with

the highest net expectation became the selected strategy.

About twenty-four years later, the United States was involved in another war in the Pacific, this time in South Vietnam. The escalation of the Vietnam War is the military strategy to be examined, and the model used by JCS to develop this strategy seems to be a combination of both the elite and incremental models.

As stated earlier, the elite strategy-making model uses the preferences of elites in developing strategy. The incremental strategy-making model uses the existing strategy as a base and incrementally modifies the base to develop a new strategy. First, I will use the incremental model to analyze strategy-making in Vietnam.

The Vietnam War for the United States began with a small advisory team effort in the mid 1950's, and terminated in 1973 with the final withdrawal of the last units of an Army that reached a strength of over 600,000 troops at the peak of the war. The initial military strategy for Vietnam called for the elimination of the insurgency through counterinsurgency actions using advisory teams to the South Vietnam military. This initial strategy was incrementally changed over the years with stronger political commitments, increased military pressure, enlarged war effort, and added more troops. While the strategy changed since the conflict began, these changes

were consistent with the JCS and General Westmoreland's long range strategy. Their strategies consisted of four actions: gain the initiative, search and destroy, mop up, and achieve victory--supported by intensive bombing and pacification programs. (19:388-9 & 435) The war was escalated in the spring and summer of 1965 when the JCS instituted a strategy (an incremental change of the previous strategy) calling for massive air strikes, carpet bombing, huge increases in ground units, and reprisal attacks to win quickly the decisive victory. (19:402 & 415 and 16:104)

The above strategies evolved over time suggesting the use of the incremental model. The base strategy, elimination of the insurgency through the efforts of advisory teams, was incrementally increased into new strategies of ever increasing commitments. Then at the peak of the American commitment, new strategies were developed by incremental decreases of the existing strategy. Each new strategy had the advantage of ease of implementation because of the legitimacy of the previous strategy. There was less likelihood of producing disagreements, and already committed resources associated with existing strategies were considered.

The Vietnam strategy makers seemed to avoid exploring a full range of alternatives, determining advantages and

disadvantages, and selecting the best alternative. They selected an alternative that would work and satisfy the current situation. Stanley Karnov stated in his book Vietnam: A History that President Lyndon Johnson did not seek other alternatives--only war. (19:396)

President Johnson's seeking of only one alternative, war, can also be viewed as using the elite strategy-making model. The elites in the escalation of the Vietnam War would be President Johnson and his "Tuesday Cabinet." The Tuesday Cabinet consisted of the JCS (chaired by General Earl Wheeler who was advised from Vietnam by General Westmoreland), Secretaries of State and Defense, Director of CIA, Special White House Assistant and the Press Secretary. The "Tuesday Cabinet" would meet every Tuesday to discuss purely military matters in regard to Vietnam. (16:99)

The discussions at these meetings covered a wide range of subjects. The JCS would favor surgical air strikes, more combat units, mobilization, higher body counts, and victory within a year. The other presidential advisors discussed whether or not intensive bombings would cripple Communist military operations, and the risks associated with bombing targets over North Vietnam with the possibilities of hitting a neutral country's ships in the harbor. (23:139-142 & 16:102-122) President Johnson would

also be advised "don't become the first President to lose a war; this is not the year to allow a red flag to rise over Saigon; and communists and orientals are inferior." (15:3 & 137 and 16:103 & 107-8) During all the Tuesday meetings, the President and his advisors failed to analyze the full range of alternatives, only superficially assessed the advantages and disadvantages, and focused on near term progress and not on long term consequences. (16:98) In my opinion, President Johnson and his advisors relied only on their preferences--their perceived national objectives--to develop military strategy which they thought was in the best interest of the American people.

The Vietnam War strategists seemed to alternate between using the elite and incremental models. Perhaps they used the incremental model to gain the support of the politicians and the military, and the elite model in seeking a solution. Whichever model used, resulted in military misfortune.

This review of historical examples of strategy-making has focused intentionally on strategies that contained flaws, errors, and ill-conceived notions. Retrospectively, I have attempted to fit my models to the strategies used. I did not use a historical example of the estimate model since my primary focus was on models developed by non-military writers. These examples should make future strategists cognizant of the possible shortcomings of

various models when developing future military strategies.

Future strategists should also remember that:

A strong element of every curriculum should be historical studies which frankly analyze unsuccessful American military efforts. It should not be a head hunting expedition or invidious to any individual, but it should involve an objective discussion of what we did, what went wrong, and why. This single action would do more to establish credibility for our instruction than any other known. (6:38)

ANALYSIS

In this section, I will analyze strategy-making models using five criteria to determine strengths and weaknesses (advantages and disadvantages) and recommend the best model for military strategists to employ. My criteria for this analysis are structure, simplicity, time, resources, and quality of outcome. I selected these criteria because of their usefulness in understanding the workings of a model from a strategist's point of view. The criteria are defined as the following.

Structure is the model's ability to direct inquiry and research. Does the model explore alternatives, consequences, risks, available data, and direct analysis? Simplicity refers to orderliness of the model and the strategist's ability to understand and use it. The third criterion is time--How much time is required by the model to develop a strategy? A model must be effective in all situations especially those where time is a critical factor such as in crisis action planning. A model requiring sequential steps instead of simultaneous actions consumes additional time. The amount of resources is the fourth criterion. An inordinate amount of money, manpower, facilities or equipment may dictate that certain models are unacceptable, especially in today's austere environment.

The last criterion, quality of outcome, is defined as the model's ability to discern the best strategy from available alternatives.

This analysis will use the five models--elite, process, estimate of the situation, incremental, and rational as alternatives or courses of action and evaluate them using the criteria. The analysis will only highlight the advantages and disadvantages of each model.

My analysis begins with the elite model and adopts the evidence of the model's usage from the Bay of Pigs invasion. The advantages of the elite strategy-making model are realized because strategy is being developed on the preferences of the elites. These advantages are simplicity, time required and resources utilized. Simplicity results from the orderliness and the ease in understanding and using the model. The model's simplicity requires the user only to apply his preferences. Time is not a limiting factor using the model whether in a deliberate or crisis action mode since only an individual's preference is needed. The model does not require any special equipment, facilities, funds, or manpower--just preferences. These advantages were exploited by the elites surrounding President Kennedy during the development of the strategy for the Bay of Pigs invasion.

The elite model has two disadvantages--structure and less predictable quality of outcome. Since the model focuses only on preferences, it does not have structure to direct inquiry or research for additional information. Similarly, the quality of outcome--strategy--is more difficult to appraise since it is the result of very narrow preferences without analysis and comparison. If alternatives are considered, there is not an in-depth study. The strategy developed using the elite model may work, but it is not necessarily the best strategy. I believe the above disadvantages are clearly evident in the failure of the Bay of Pigs invasion.

The process strategy-making model has three advantages and two disadvantages. The advantages are its structure, simplicity, and quality of outcome. The structure of the model (its six steps) directs inquiry and research allowing for discussion, debate, choices, reasonableness, and openness in the formulation of alternatives. The model is simplistic in its use and understanding based on its six step procedural design. The user starts with step one and progresses through step six. The last advantage is the quality of outcome. The model seeks and selects the best strategy through the development, analysis, and evaluation of alternatives with a built in mechanism for changes in the environment. The quality of outcome should be better

than other models since consequences and risks have been thoroughly evaluated.

The disadvantages of the process model are time and resources required. The model consumes time through its deliberate, structural step-by-step approach causing the user to gather and digest a wealth of data. This approach can also be resource intensive requiring large expenditures of funds, manpower, and equipment to gather and digest the data for each alternative. These disadvantages can be overcome in the deliberate strategy-making mode, but perhaps not in crisis action environments.

The next model analyzed is the estimate of the situation. The model's advantages are structure, simplicity, and quality of outcome. Structurally, the model directs research and inquiry into all the elements of national power (social, military, economic, and political) and develops courses of action for both friendly and enemy forces. A key point and difference in the estimate model is the consideration of the enemy action. Simplicity is obtained through the four paragraph (step) approach enabling the user to understand and apply the model. Quality of outcome is enhanced through analysis and comparison of a full range of alternatives selecting the best strategy as compared to models which do not.

Disadvantages of the estimate model are time and

resources required. Time is consumed by requiring the user to follow procedures in searching for and analyzing information. The resources (manpower, funds, and equipment) required to gather information can be extensive in developing alternatives. These disadvantages can be overcome in the deliberate strategy-making mode, but difficult in crisis action.

The estimate model is perhaps the only one of the five models that military strategists are familiar with. The model has its foundation in the commander's estimate and staff estimates of the situation. The estimate and incremental models share commonality in the criterion of simplicity.

The incremental strategy-making model's advantages are simplicity, time, and resources required. Simplicity is achieved through the model's implied legitimacy, expediency, and the use of the previous strategy as a base. The model conserves time since the start point is not a zero base. Incrementally changing an existing strategy may work well in crisis action where time is crucial. Additionally, the model conserves resources because it utilizes the existing resources (sunk costs) of the existing strategy and does not require additional investment of manpower, funds, facilities, or equipment.

The disadvantages of the incremental model are

structure and a questionable quality of outcome. The model's structure does not direct inquiry and research for additional information, risks and consequences, and alternatives. The quality of outcome for the model focuses on a new strategy that is a variation of the past and not the result of developing a full range of new alternatives with analysis and comparison. In short, the model produces a strategy that might work, but may not be the best strategy. Both the Korean and Vietnam war escalations serve to represent how the incremental model can produce misfortune.

The advantages of the rational strategy-making model are structure, simplicity, and an enhanced quality of outcome. The model's structure directs inquiry and research through the development of goals/end states and the preparation of alternatives and consequences. Simplicity is obtained through the six step procedures which facilitate the model's use and understanding. Quality of outcome is improved by the calculation of net value achievement and the selection of the most efficient strategy.

The model's disadvantages are time and resources required. Calculations of net value achievement and efficiency are both time and resource intensive. This results from the model's tendency to be mathematical with

calculation of ratios and correlations of efficiency. Time is consumed in doing these calculations and rechecking the results. These disadvantages almost rule out the model in crisis action scenarios. These calculations of efficiency seem to put more importance on numbers than developing military strategy.

In sum, this section has evaluated five strategy-making models (elite, process, estimate, incremental, and rational) using five criteria (structure, simplicity, time resources, and quality outcome). The following chart summarizes the advantages and disadvantages with criteria being equal in importance and weight to each other.

	<u>STR</u>	<u>SIM</u>	<u>TIM</u>	<u>RES</u>	<u>QUAL</u>	<u>TOT</u>
<u>ELITE</u>	DIS	AD	AD	AD	DIS	2A/3D
<u>PROCESS</u>	AD	AD	DIS	DIS	AD	3A/2D
<u>ESTIMATE</u>	AD	AD	DIS	DIS	AD	3A/2D
<u>INCREM'L</u>	DIS	AD	AD	AD	DIS	3A/2D
<u>RATIONAL</u>	AD	AD	DIS	DIS	AD	3A/2D

V CONCLUSIONS AND IMPLICATIONS

Military strategy is the "employment of the armed forces to secure the objectives of national policy."

(30:232) The strategy produced from using a particular model must be effective because war is "a struggle of life and death" for a nation. Military strategy is the starting point from which campaigns and major operations are developed. This vital linkage is a must in war and in peace. Ends, ways, and means are the essence of war. The way equates to strategy. Therefore, strategy emulating from the "top" must be the best possible for the NCA, JCS or the CINC.

In this section, I will determine the best strategy-making model by rank ordering the criteria for each model, assigning weights to each criterion, and then evaluating each model according to how it rates against the criteria. The results from this process will assist in determining the best model by presenting the analysis and comparison in tabular form instead of a narrative. My intent is not to rely on a quantitative scheme of judgment, but to use it as an aid. I use this method to allow the reader to follow the logic of my analysis and to establish a framework for answering the research question.

The first step is to rank order the criteria for each

model. This subjective or judgmental rank ordering establishes how the model rates against each of the criteria. I do not view the criteria as being equal in weight to each other. Some criteria are more important and favored over others. For this reason, I have subjectively weighted the criteria. I chose a low number (one) to represent best and a high number (five) to represent the worst.

Quality of outcome is the most important criterion because the best course of action, alternative, or strategy is needed to solve the problem or crisis that confronts the NCA, JCS, or a CINC. This criterion should be the primary goal of any model. The second most important criterion is structure since it directs research and inquiry into possible strategies, consequences, risks, and conducts analysis. Lack of structure leads the user to a random approach. Simplicity is third in importance for it enables the user to follow the procedures of a particular model. Simplicity allows the user to progress logically from one step to the next. Time and resources were the least important criteria since they can be compensated for or offset in the deliberate planning mode. To maintain consistency, I used a computer program to determine the values of the weights based on how I judged one criterion over the other. The following chart depicts the rank

ordering of each model for the unweighted criteria.

	<u>STR</u>	<u>SIM</u>	<u>TIM</u>	<u>RES</u>	<u>QUAL</u>	<u>OUTCOME</u>
<u>ELITE</u>	4	1.5*	1.5	3	5	
<u>PROCESS</u>	1.5	3	5	4	1.5	
<u>ESTIMATE</u>	1	3	5	4	2	
<u>INC'MTAL</u>	4	3	1.5	1.5	5	
<u>RATIONAL</u>	1	3	4	5	2	

Note: Criteria were tied for first place

Next, the computer program determined the values of the criteria based on how I judged one criterion over another. Quality of outcome was favored over structure, slightly favored over simplicity, and strongly favored over time and resources required; a value of 4.0 was given.. Structure was favored over simplicity and slightly favored over time and resources required; a value of 2.9 was assigned. Simplicity was slightly favored over time and resources required and given a value of 1.7. Time and resources required were equal in importance and given a value of 1.0. Using this thought process the computer program gave a consistency ratio of 98%.

Having established the importance of criteria and assigning weighted values, the following chart depicts how each model rates with the others.

	<u>STR</u>	<u>SIM</u>	<u>TIM</u>	<u>RES</u>	<u>QUAL</u>	<u>TOTAL</u>
<u>ELITE</u>	11.6	2.5	1.5	3.0	20	40.6
<u>PROC'S</u>	4.3	5.1	5	4	6	24.4
<u>ESTIM</u>	2.9	5.1	5	4	8	25.0
<u>INCRM</u>	11.6	5.1	1.5	1.5	20	40.7
<u>RAT'L</u>	2.9	5.1	4	5	8	25.0

Note: The above numbers are derived by multiplying the ranking of the criteria for each model by the assigned weighted value.

Applying the earlier stated premise that lower numbers are better, the process strategy-making model (with a score of 24.4) ranks as the best model for strategists to use. From the above chart, one can readily conclude that three models (process, estimate, and rational) are approximately equal to each other by their weighted totals. These three models are quantitatively and qualitatively different from the elite and incremental models.

Using the numerical results of the two previous charts to assist, not to make the decision, I conclude that the process strategy-making model is the best model for strategists to use. The estimate of situation model is recommended second and the rational model is third. These recommendations are primarily based on how the models are evaluated against the two most important criteria--quality of outcome and structure. The elite and incremental strategy-making models are not recommended for the same reasoning.

Having determined that the process model is the recommended model, the final portion of this monograph will focus on implications and answer the "so what" question.

Additionally, this portion summarizes my monograph.

The purpose in discussing the four illustrative United States military strategies in Section II was to give the reader an appreciation of how military strategists, both high ranking military and civilian personnel, can err. These errors were: failure to examine the full range of alternatives, consequences, and risks; identification of incorrect end states; invalid assumptions; and failure to seek additional and available information. Future strategists ought to be cognizant of these strategies and understand how they were developed.

The analysis, comparison, and selection of the best strategy-making model highlight the advantages and disadvantages of each model. This gives the strategists an insight into the workings of each model and offers further explanation as to the advantages and disadvantages of each model.

As strategists begin the task of developing strategy, they should be aware of the shortcomings of the incremental and elite models. These models have a strong tendency to select a strategy that might work, but may not be the best strategy.

In summary, the recommended strategy-making model is the process model. Identify the problem, formulate alternative strategies, evaluate alternative strategies,

select the best strategy, implement the chosen strategy, and finally, use feedback to modify the strategy as the situation or environment changes. The process model is not only recommended for military strategies, but for all elements of the national security strategy--political, social, and economic.

This analysis may be interpreted as conjecture, especially if there is disagreement with the kind of criteria and weightings applied. But attempting to quantify what may be unquantifiable, I hope to have provided at least a methodology for further examination of this complex problem. In subsequent study, analysts would be advised to heed the caveat offered by Clausewitz: "...theory is meant to educate the minds of future commanders, or more accurately, to guide him in his self education, not to accompany him to the battlefield; just as a wise teacher guides and stimulates a young man's intellectual development, but is careful not to lead him by the hand for the rest of his life". (5:141)

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