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Approaches to Force Planning

Henry C. Bartlett

Force planning can be defined as “the process of establishing military requirements based on an appraisal of the security needs of the nation, and selecting military forces to meet those requirements within fiscal limitations.”¹ Administratively, force planning is carried out annually as part of the Department of Defense planning, programming, and budgeting system (PPBS). Although this system provides structure and discipline for completing force planning tasks in the short term, it does not provide complete insight into alternative approaches or focuses which force planners use over the longer term to help them determine the level and mix of required forces.

The purpose of this paper is to consider some of the more common approaches and their merits and limitations. Different planning focuses tend to lead to alternative solutions and choices. Prospective force planners should be aware of the various focuses in order to develop and evaluate force choice alternatives skillfully. A list of common approaches appears in the table below.

Force Planning Approaches

Approach	Primary Focus	Other Emphasis
Top Down	Objectives	Longer Term
Bottom Up	Current Capability	Shorter Term
Scenario	Circumstances	Opportunities and Vulnerabilities
Threat	Opponent Capability	Net Assessment
Mission	Mission Area Priority	Mission Area Balance
Hedging	Uncertainty	Flexibility
Technology	Technological Superiority	Technological Optimism
Fiscal	Budget	Dollar Constrained

Top Down

Objectives drive the *Top Down* force planning approach. The first step is to determine what the decision maker wants to accomplish. The second is to

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develop a strategy or game plan which specifies how the objective or objectives will be achieved. Both the objectives and strategy are defined before force choices are made. Forces to implement the strategy are then determined.² The purpose of this approach is to minimize the risk associated with military threats to vital national interests.

The *Top Down* approach proceeds downward through several levels of objectives and strategy. At each level constraints or guidelines are applied which tend to channel and define military force choices.

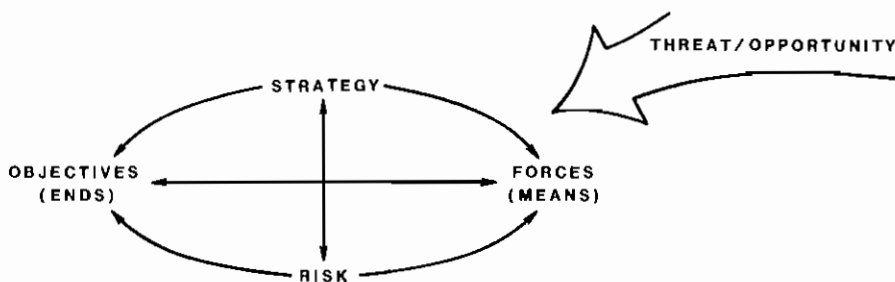
At the highest level of national security decisionmaking, broad objectives and grand strategies are developed to further or protect overall national interests such as defense of the homeland, economic well-being, a favorable world order or promotion of American values abroad.³ As an example, a broad US national objective has been to contain Soviet ideological and geographical expansion. To achieve that objective, a coalition or collective security strategy was selected which includes political, economic and military dimensions. As a result, our military force structure and that of our allies has been influenced, and the influence is different from that exerted by alternative objectives or strategies.

At a lower level, separate objectives and strategies have been developed which support higher level decisions. Continuing with the military dimension, a US objective is to deter Soviet conventional attacks against our allies. This objective is supported by a US military strategy of forward defense using sea, air, land and space forces deployed on or near the Eurasian continent. At this level, the selection of the forward defense strategy further defined and channeled forces, and the channeling effect was different from that of an alternative strategy. To illustrate, suppose that the strategy was based on the concept of a central reserve of US general purpose forces located in the United States and postured for rapid deployment in support of allies.⁴ The desired force in this case would probably include highly mobile, light units and the strategic lift to deploy them quickly overseas. The choice of such a military positioning strategy will therefore shape and define the level and mix of military forces.

At an even lower level, theater objectives and strategies will continue to shape force choices. As an example, the Nato alliance is committed to an operational strategy which includes the concept of a conventional linear defense at the inter-German border.⁵ However, there are alternatives to this politically driven forward defense strategy which might decrease the risk of early Warsaw Pact breakthroughs. One is the concept of stronger and deeper forward forces backed up by armored reserves capable of countering penetrations.⁶ Another is a more forward-oriented concept emphasizing in-depth attacks against Warsaw Pact forces and counteroffensive operations.⁷ Either of these alternatives, at this level of objectives and strategy, will tend to lead to different force choices.

There are several advantages to a *Top Down* approach. First, it helps force planners to concentrate on ends. Second, it provides a systematic way to think through force requirements starting from the broad or “macro” perspective. Third, the approach includes an implied time line. At the highest level, objectives and strategy tend to be longer term. At lower levels, the focus is shorter range. Understanding the implied time line helps to balance expectations about the short and long term. Fourth, the components of a clearly defined strategy can serve as useful criteria for evaluating, judging, and choosing among alternative force choices. This is particularly useful when a higher level national security objective is difficult to quantify in terms of measures of effectiveness or cost. An example is the objective of deterrence. Once a deterrent game plan is developed, force choice alternatives can be compared for efficiency and effectiveness against the more precise and measurable components of the game plan.

A final advantage is that the *Top Down* approach can be condensed into a relatively simple model. For any threat or opportunity, the primary variables for consideration are objectives, strategy, forces and risk. The variables can be visualized as illustrated.



As an example, when desired objectives exceed existing forces, force planners perceive an ends-means mismatch which results in increased risk. Often in this case, the tendency is to focus exclusively on increasing the means. However, alternative solutions may exist in the form of more clearly defined or limited objectives, a different strategy, or the explicit acceptance of the risk resulting from the objective-force mismatch. If the decision is to accept the risk, the action should be based on a careful assessment of such factors as probabilities of occurrence and estimates of damage in relation to the objective, strategy and forces. In other words, the acceptance of risk should be based on a conscious acceptance of the potential consequences.

There are certain pitfalls associated with the *Top Down* approach. One is a tendency to be captured by future-oriented concepts and programs at the expense of current capability. A second is to ignore constraints too long during conceptualization. Consequently, when dollar, technology or other

limits are applied, the distance between desired and constrained is so great that major adjustments must be made among the ends and means being considered. A third concerns the level at which a force planner enters the *Top Down* framework. If a problem or opportunity is approached from the highest level down, nothing is taken for granted. This tends to stimulate creativity. However, when planning is initiated at a lower level, there is a tendency to view all higher level objectives and strategy as unchangeable and unchallengeable. Therefore, there is a tendency to ignore them, when in fact they should be reconsidered. A final pitfall concerns public awareness of the strategy. In the *Top Down* approach, the conceptual game plan is a key element in force choices. Since strategy will be debated openly during the budget process, a question of security may arise.

The beginning of the Kennedy administration provides a historical example of the *Top Down* approach following a presidential election. Given the overall objectives of containing the Soviet Union and deterring nuclear and conventional war, former Secretary of Defense McNamara worked to reshape US military strategy and supporting forces in light of emerging threats and perceived imbalances. One such imbalance concerned the ability of US and allied forces to deal with limited wars at the conventional level without resorting to the use of tactical nuclear weapons. As he commented to Congress in 1961, “. . . the decision to employ tactical nuclear weapons in limited conflicts should not be forced upon us simply because we have no other means to cope with them.”⁸ Emerging threats included Krushchev’s reemphasis on Soviet support for wars of national liberation.⁹

The result of this *Top Down* approach was the acceptance of flexible response as an important concept in contrast to massive retaliation.¹⁰ Since flexible response called for forces which could respond selectively and effectively throughout the spectrum of conflict from wars of national liberation to strategic nuclear exchange, complementary forces were planned and acquired to meet identified shortfalls. Examples included the build-up of special purpose forces such as the Army Green Berets, and the overall level of conventional forces.¹¹

Bottom Up

Current military capability drives the *Bottom Up* approach. Consequently, it is related to operational planning, and the matrix on the following page is provided to clarify how force and operational planning differ:¹²

The *Bottom Up* approach tends to emphasize current capabilities and threats, and to key off of operational issues. A major advantage of the *Bottom Up* approach is that it emphasizes the “real” world. Force planners are compelled to focus on how adversaries can be handled with existing forces.

Force Planning Compared to Operational Planning

Item	Force Planning	Operational Planning
Purpose	Structuring Forces	Fighting Forces
Orientation	Global/Regional	Theater/Local
Input	Future: Forces Threats Objectives Strategies Risk	Existing: Forces Threats Objectives Strategies Risk
Output	Planned and Programmed Forces	Contingency War Plans
Biases	Development Modernization Force Structure	Deployment Employment Readiness Sustainability

This tends to counter a mind-set which dwells excessively on the contribution of future capability. Focusing on current forces can also lead to improved strategies and war plans which can further help to refine force requirements. On the other hand, too much emphasis on a *Bottom Up* approach can result in neglect of the future and compromised long-term goals. Another pitfall of the *Bottom Up* focus is a tendency to lose sight of the “big picture.” As an example, local or theater considerations may tend to dominate when an integrated global view is required.

The following quotation provides an example of this approach and involves force planning in the US Navy during the PPBS cycle. Although the *Bottom Up* emphasis is apparent, it is important to point out that other focuses such as *Top Down* and mission area analysis are molded into the process. Also, throughout the process the dominant variable is maritime strategy.¹³

“This, in a nutshell, is the first part of our homework. We get the information from the CinCs. We go through a maritime strategy analysis. Given the number of battle groups we have, given the number of airplanes we have, given the amount of sustainability, the amount of fuel we have in the water today, how would you fight a force? A lot of things come out of that, things that people outside the Navy would, perhaps, not have thought of. We go through all of the analysis and we end up with the CNO’s Programming and Fiscal Guidance.”¹⁴

Scenario

The *Scenario* approach in force planning is situationally driven. The force planner starts with a well-defined set of circumstances at the national, theater, regional or global level. The threat is usually specified in terms of warning and mobilization time, force level, and attack plan assumptions. The force structure required is that which will achieve the military aims called for in the scenario used.

The *Scenario* approach has three clear strengths. The first is specific and tangible focus. If the scenario is a Warsaw Pact conventional attack against Nato, fairly precise planning can be undertaken once major assumptions are established. If simultaneous scenarios are anticipated, such as Korea and Nato, even more specific planning can result. A further advantage is that the *Scenario* approach encourages priorities. National interests dictate that some regions, theaters or nations are more important than others. This is particularly true in a global war context against a major adversary like the Soviet Union. A third strength is the dynamic nature of a scenario which handles time well. Events are sequential and results are cumulative. The next action in the scenario depends on the outcome of the last event, and in that way the focus tends to be more narrowly refined as events unfold.

However, there are limitations to this approach. The world rarely conforms to chosen and planned circumstances. Scenarios also tend to take on a life of their own. After all the work involved in planning, there is a natural reluctance to challenge the basic rationale of the scenario. As an example, key assumptions such as warning and mobilization times become absolutes, and hypothesized enemy doctrine becomes a fact. Finally, scenarios tend to be threat reactive. This is natural for a defensively oriented country such as the United States, but force planners should be alert to opportunities to take the initiative.

An example of the scenario approach is included below from the Joint Chiefs of Staff military posture statement for FY 1982. During the 1970s, the growth of Soviet strategic nuclear forces suggested that serious post-attack residual force imbalances might develop in the future. The following insights influenced the US strategic modernization programs of the 1980s through scenario depiction.

"In each scenario, targeting goals for each side are assumed to be the same: first, attacking all of the opponent's ICBM silos and shelters with nuclear weapons; and then, using 'moderate damage' to a specified percentage of the remainder of the opponent's target system. Perfect C³ is assumed for both sides. By assuming identical targeting goals and perfect C³, it is possible to provide a common basis for comparing the opposing arsenals over time and to obtain results that may lead to better understanding of the strategic balance. Because of the assumptions involved, the results do not indicate absolute capabilities for either side. Rather, they are intended only to portray trends in relative US and Soviet capabilities. In reality, US targeting goals likely will differ from Soviet

goals, and both may change from year to year. The target data bases used in the analysis reflect differences between US and Soviet target systems in size and vulnerability to nuclear effects."¹⁵

Threat

The *Threat* emphasis is driven by opponent capability. Net assessments of the relative balance of forces between major adversaries, such as the US and the Soviet Union, or Nato and the Warsaw Pact, are the points of departure. Such assessments tend to focus on different segments of capability such as strategic nuclear delivery systems and warheads, army divisions, tactical aircraft or submarines.

A focus on the overall balance of forces is important from several points of view. The first involves perceptions and the impact of perceived relative strength on day-to-day relations between nations. Although precise relationships are difficult to establish, and different circumstances result in different perceptions, the relative military strength between nations does impact on political leverage and available options. The Cuban missile crisis in 1962 was a notable example of the influence of US nuclear and naval superiority at that time. Secondly, numbers count in warfare. Leadership, training, and morale are important; but an approximate two-to-one ratio of Warsaw Pact-to-Nato armored division equivalents at the Nato central front suggests a serious correlation of force imbalance if a conventional war were to occur. Finally, the *Threat* emphasis does keep the focus on the threat at both the macro level of overall balances and the micro level on individual weapon systems. Detailed knowledge of enemy capability has always been important for perceptions of balance, to prevent technological surprise, to adjust doctrine, or to exploit opportunities.

There are a number of pitfalls associated with the *Threat* focus. One is a tendency to array forces too simplistically in a tank-versus-tank (side-by-side) or tank-versus-antitank (head-to-head) comparison. These can be misleading in terms of overall unit or weapon system combat power. However, combat power can be approximated by various judgmental and weighting techniques to develop standardized measures for comparison, such as armored division equivalents.¹⁶ Another is a bias towards quantitative data such as types and numbers of weapon systems. This bias may result in overlooking or underrating important qualitative factors such as experience, leadership, morale, doctrine or the need to consider more than one front. A further pitfall is to use balances as justification for force choices out of context with objectives, strategies, and scenarios.

Mission

The *Mission* focus is functionally driven. The force planner starts with broad

categories of wartime mission activities such as strategic surveillance, strategic deterrence, force projection and sea control. These categories in turn can be broken down into subsets of more specific activities such as antisubmarine warfare or defense suppression. This approach provides a way of looking at capability across general categories of wartime activity.

This emphasis incorporates two strong points which are worth considering. It is an excellent way to assess the balance of capability across warfighting functions, either unilaterally or in relation to a specific threat. It also provides a systematic way of developing priorities for the allocation of scarce resources.

The primary drawback of the *Mission* focus is the possibility of disconnecting force choices from objectives and strategies. Different objectives and strategies tend to call for different mixes among functional capabilities. Consequently, functional balance or optimization should not become an end in itself. Another pitfall associated with this emphasis concerns the threat. Defined functional activities can become too threat-oriented. Terms such as antisubmarine warfare reinforce this tendency.

All services, to some degree, use the mission approach in force planning.¹⁷ The example below shows how the *Mission* approach is integrated with doctrine to help in force planning.

“To develop the detailed analysis of the Army’s ability to execute its wartime missions, the battlefield is viewed in terms of 13 specific mission areas. These mission areas serve as the framework for measuring the capabilities of an FY87 US Corps to fight a successful battle against a projected FY92 threat. The Army Training and Doctrine Command’s Mission Area Analysis process is based on the fundamental assumption that the Army will modernize according to development and procurement schedules set forth in the Army POM. Using the Army’s programmed force, the projected threat, the AirLand Battle Doctrine, each mission area proponent examines battlefield tasks to be accomplished, assesses the capability to accomplish the tasks, and develops a list of deficiencies in the areas of doctrine, training, organization, and material systems. From this analysis, the mission area proponent develops a series of corrective actions to eliminate deficiencies.”¹⁸

Hedging

The *Hedging* focus in force planning is driven by uncertainty. Overemphasis on specific adversaries, objectives, strategies or scenarios is viewed with skepticism. Even in the short term, the world is viewed as too volatile to permit tailored force structuring.

The *Hedging* emphasis has merit in that it explicitly deals with uncertainty in the future. History provides a number of examples of tailored forces overcome by unforeseen events. Consequently, balance and flexibility are

key concepts. Modernization, force structure, research and development, readiness and sustainability are balanced to reduce the uncertainty represented by such factors as technological surprise or incorrect assumptions about the duration of hostilities. Likewise, resources are balanced across the continuum of warfare with forces to deal with a range of activity from terrorism up through strategic nuclear warfare. An effort is also made to balance forces across warfighting capabilities such as naval, air, land and space forces.

The *Hedging* emphasis also has merit when the results of being wrong could be catastrophic. An example is strategic nuclear warfare and the emphasis on multiple land and sea-based delivery systems to ensure their ability to survive and retaliate if required.

The major drawback of a *Hedging* emphasis is that it leads toward worst case and least cost-effective force choices. This tends to escalate defense expenditures. A second drawback is a tendency to be reactive instead of active. This often occurs when inadequate attention is given to systematically thinking through objectives and strategy.

In 1977 Secretary of Defense Harold Brown provided the following example of a *Hedging* emphasis while explaining a strategic nuclear force choice decision:

“We already rely heavily on our submarine-launched ballistic missile (SLBM) force. If we do not improve our bomber or intercontinental ballistic missile (ICBM) forces, particularly as our ICBM silos become increasingly vulnerable to the growing number and accuracy of the Soviet ICBM force, that relative reliance will continue to grow, with SLBMs providing perhaps five out of every six penetrating weapons by 1986. We must, therefore, pay attention to the ways in which our SLBMs might be defeated. One possibility is an anti-submarine warfare (ASW) breakthrough; another is a more effective anti-ballistic missile (ABM) development followed by clandestine or rapid deployment. The possibility that such unexpected evolutions could happen in a very short time, in terms of development and massive deployment, is small. However, we cannot exclude it absolutely, and the consequences would be so serious that we cannot ignore it.

“In order to hedge against unexpected breakthroughs in defensive technology, we maintain three separate strategic forces:

- SLBMs,
- ICBMs, and
- Air-breathing systems.

Together they make up the Triad.”¹⁹

Technology

The *Technology* emphasis is driven by technological optimism. Force

planners seek high technology concepts and systems which have potential as force multipliers. Examples include the Manhattan project of World War II and the surveillance, targeting, delivery systems and “smart” munitions being developed to support in-depth attack concepts within AirLand Battle doctrine and Nato’s Follow-on Force Attack (FOFA).²⁰ A more recent example is the thrust toward a ballistic missile defense capability:

“In an historic speech to the American people on March 23, 1983, President Reagan offered the hope of a world made safe from the threat of nuclear-armed ballistic missiles. The president stated, ‘Our ultimate goal . . . [is] eliminating the threat posed by strategic nuclear missiles,’ and ‘our only purpose . . . is to search for ways to reduce the danger of nuclear war.’

“Following the speech, the president directed intensive studies of the technical feasibility and policy and strategy implications of this new direction. The studies were conducted by some of the most knowledgeable scientists, engineers, and planners in the United States during the latter half of 1983.

“They demonstrated that, despite uncertainties, new technologies held great promise for achieving the president’s goal of eliminating the threat of missiles to ourselves and our allies. They further concluded that strategic defenses, evolving towards increasing effectiveness, could protect the United States—and its allies—from the threat of nuclear war by enhancing deterrence and eliminating the military utility of nuclear attack. Moreover, increasingly effective defenses would provide a measure of insurance and protection from irrational or accidental nuclear attack.

“Based on these conclusions, the president established the Strategic Defense Initiative to develop those technologies which show promise for effective ballistic missile defense. In March 1984, the Strategic Defense Initiative Organization was established.”²¹

Advantages of the *Technology* approach are the emphasis on initiative, focusing on an area of comparative strength, and an open mind toward change or innovation. Two pitfalls include a tendency to pay too much for the last five percent of capability, and a trend toward fewer and more valuable aim points. Another pitfall is the problem of channeling too great a proportion of defense resources into too few specialized programs at the expense of a more balanced and flexible force structure with greater numbers.

Fiscal

The *Fiscal* approach to force planning is budget driven. Overall dollar constraints are established at the outset based on a criterion such as a percentage of gross national product or the Federal budget. Within the dollar limits, other planning approaches are integrated to make the most of what is available.

The primary strength of the *Fiscal* emphasis is that resources for defense are placed in context with the overall state of the economy and the political emphasis of the public at large. A second advantage is that additional focus is placed on efficiency and effectiveness. Since the cost-of-ownership of current forces will constrain the amount of resources remaining for research and modernization, there is considerable incentive to operate efficiently.²²

A primary weakness of the *Fiscal* approach is that it may not be realistically related to the threat—particularly over the long run. Closely associated with this point is the issue of cycles. The size of the Department of Defense argues against frequent or severe changes in direction. Rapid growth cycles can be just as difficult to manage as sharp down cycles. Policies and guidance may change rapidly, but short-term shifts are difficult to implement efficiently in such a large organization. A predictable, steady and long-term growth path should be used in dealing with a steadily growing long-term adversary. A final pitfall of the *Fiscal* approach is the additional emphasis placed on service rivalry at the expense of the best way to handle threats or opportunities. Service rivalry is always present in the planning process, and within reasonable bounds it forms an important part of the checks and balances which characterize our representative form of government. However, when planning starts with a fiscal emphasis, the focus tends to be on the apportionment of overall resources instead of the optimal combined arms solution to common problems.

The purpose of this paper was to consider some of the more common approaches to force planning. Each was taken in isolation to provide an understanding of its respective merits and limitations. However, during an actual force planning cycle, some or all of the approaches will be used and melded together to arrive at decisions. The one that dominates will depend on circumstances such as a change of administration or a technological breakthrough.

There are three sound reasons for understanding these approaches. First, it is useful for students, practitioners and critics to recognize that there is more than one approach to force planning. Secondly, understanding the strengths, weaknesses and biases of each approach can result in better decisions. Finally, it is important to understand that different approaches tend to lead to alternative solutions.

Notes

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