

C H A P T E R

6

Yardsticks of Sufficiency

Approaches to the Question

In April 1963, Secretary McNamara spoke to the American Society of Newspaper Editors, assembled at the Statler-Hilton Hotel in Washington, D.C., about how the Department of Defense was answering the timeless question, "How much is enough?"

What I have been suggesting . . . is that the question of how to spend our defense dollars and how much to spend is a good deal more complicated than is often assumed. It cannot be assumed that a new weapon would really add to our national security, no matter how attractive the weapon can be made to seem, looked at by itself. Anyone who has been exposed to so-called "brochuremanship" knows that even the most outlandish notions can be dressed up to look superficially attractive. You have to consider a very wide range of issues—the missions our forces must be prepared to perform, the effects of a proposed system on the stability of the military situation in the world, the alternatives open to us for performing the missions required.

You cannot make decisions simply by asking yourself whether something might be nice to have. You have to make a judgment on how much is enough.

I emphasize judgment because you can't even be sure yourself, much

less prove to others, that your decision was precisely right to the last dollar—even to the last billion dollars. But the decision has to be made.

There is an important difference between the way we make these tough decisions today, and the way they used to be made. Formerly, an arbitrary budget ceiling was fixed for national defense, and funds were then apportioned among the Services. Today we examine all our military needs, and then decide at what point our military strength is in balance with the requirements of our foreign policy.

There are, of course, sharp differences of opinion on where we should spend our marginal defense dollars. And here is where the responsibility most clearly falls on the Secretary of Defense, because here is where it must fall not only constitutionally but under any rational system. For these decisions can only be made from the point of view of the defense establishment as a whole, not from the point of view of the individual Services. Indeed the very biggest decisions—such as the basic kinds of forces we need, and the occasions on which we might want to commit those forces—must be made at an even higher level; for they involve basic questions of national policy which transcend the interest of the Defense Department, or the State Department, or indeed any part of the government, and must be made at the Presidential level. . . .<sup>1</sup>

The approach to determining military requirements as outlined by McNamara is in sharp contrast to that prevailing in DoD before 1961. One of General Maxwell D. Taylor's main complaints about the Defense Department in the late 1950's was the lack of quantitative standards of adequacy for measuring defense programs. No such standards existed because many of the Department's leaders believed that they could not be determined. As General Taylor described the situation:

Another set of basic issues which have to be decided concern the required size and composition of the so-called functional forces—the atomic retaliatory force, continental air defense, overseas deployments, limited-war forces, and the like. How much of these forces is enough? As early as 1956 I urged Mr. Wilson to require the Joint Chiefs of Staff to come up with practical yardsticks to tell us how much we should buy of these operational forces. Admiral Radford, Mr. Quarles, and others opposed such a procedure, arguing that these military matters cannot be submitted to scientific or engineering analysis. There are too many imponderables. These objections were accepted and to this day there are no approved goals for the size and composition of the functional forces. Thus the

Department of Defense builds the defense structure of the nation without blueprints, design models, or agreed factors of safety. It will never be possible for the JCS to produce an agreed tabulation of the forces needed for our security without first settling the basic question of how much is enough in the various operational categories. These yardsticks of sufficiency are the building blocks necessary to provide a solid foundation for defense planning.<sup>2</sup>

The belief that these matters cannot be analyzed—that “yardsticks of sufficiency” cannot be developed—has continued to plague the defense planning effort. It is this belief that underlies many of the charges of “downgrading military judgment” and “shortages” and “not meeting our military requirements.” It persists despite the increasing evidence that military requirements not only can but must be analyzed, if we are to meet our national security needs and urgent domestic needs at the same time.

Why are questions of requirements so difficult to answer? Conceptually, the problem of determining requirements would appear to be straightforward:

- Get a clear statement of policy goals.
- Determine what military capabilities are needed, in what circumstances, to meet these goals.
- Figure out what forces are needed to provide these capabilities.

This seemingly simple process is beset with difficulties, however. It is not easy to get a statement of national policy that can be directly translated into military strategy. In some areas—strategic nuclear policy, for example—this has been done. Deterrence has been translated into assured destruction, and assured destruction into quantitative statements of adequacy. In other areas this has proven much more difficult. For instance, while nobody questions that the freedom of Western Europe is vital to U.S. interests, many alternative strategies have been proposed for defending that freedom, ranging all the way from the immediate use of nuclear weapons in the event of any aggression, however small, to massive nonnuclear defense at the border. Judgments as to which strategy is appropriate are not primarily military matters, but rather political and economic ones.

There is also the problem of translating a general strategy—for example, a forward nonnuclear defense of Western Europe against a

major Warsaw Pact attack—into a sufficiently detailed set of specifications to be of use in estimating force needs. In this case, what do “forward” and “major” mean? What about giving up some territory temporarily? What if a nonnuclear defense fails? And so forth. Here again, fleshing out the details of a general strategy is a joint political-economic-military exercise; and here again there can be, and usually are, broad disagreements on how the major lines of strategy should be implemented in detail.

Even after these two problems are solved, the force planner is not out of the woods; far from it. Now he has to estimate exactly what U.S. forces will be needed to do the desired job, typically taking into account expected help from allies and the problem of burden sharing. This leads into another set of difficulties. We don't know with much precision what the enemy's forces and capabilities will be, no matter what we spend on intelligence. While the traditional military approach to this problem has been conservative, the resulting overestimates of enemy forces have—as shown earlier—frequently done more harm than good. And the dangers of underestimating the enemy go without saying. What is needed is realistic estimates of enemy forces. Without them it is impossible to have a sensible strategy and force plan.

This problem aside, war still turns out to be a highly uncertain business, even if we know *exactly* what forces the enemy has and the precise state of equipment, training, and logistic support. Moreover, *proving* that a given amount of force is enough is an impossible task, especially in light of the wide range of war outcomes relative to force ratios. A well-led, smaller unit has been known to defeat a much larger, less well-led unit. The technological advance represented by the English longbow at the Battle of Crécy, during the Hundred Years' War, was far more important than the fact that the English were badly outnumbered. (Pitted against the longbow, over 1,500 French knights on horseback fell, compared with a few dozen English archers.) Tactical skill and surprise can also be decisive. World War II history shows, for example, that in tank-versus-tank engagements, the result is not much affected by the opposing forces' relative sizes; victory typically went to the side that shot first, because its tanks were usually well concealed and protected. Similarly, well-trained pilots in qualitatively inferior aircraft have repeatedly won dogfights against less well-trained pilots in superior aircraft. Supposedly, an offensive

campaign requires a significant numerical superiority, but the Israelis conducted a very successful offensive campaign against the Arabs in 1967 with numerically inferior forces. The point is that force planning is not only a terribly uncertain and imprecise business, even with excellent intelligence, but also a business in which, because of the necessity for starting with national interests and goals, the military has no clear claim to special wisdom—although military expertise is one essential contribution.

Besides these inherent conceptual difficulties, many people—both critics of the military and some military leaders themselves—believe that military requirements are essentially open-ended anyway. Every year since the end of World War II, the original budget requests of the Services have been 25 to 35 percent greater than the budget judged to be adequate by the President and the Congress. This pattern has prompted some cynics to remark that “a military requirement is 30 percent more than what we’ve got now, whatever we have now.” In fact, there is, in far too many cases, a sort of Parkinson’s law of military requirements: they will always expand to use up the supply estimated to be available. As one of the authors once remarked to a four-star officer deeply involved in Vietnam requirements: “You know, your requirements always seem to grow until they have used up the available forces.” “That’s right,” he answered, “I’ll ask for all I think I can get.”

Despite what often appears to be the case, real military requirements—that is, what it makes sense for the United States to buy—are not open-ended. It is not true that more is always better than less, or that the nation could always use more. The United States could have ten times as many strategic offensive forces as the Soviets and still not have enough, or one-tenth as many and have too much. Nor is it true that the nation is forever doomed to perpetual military “shortages”—a variation on the theory that requirements are open-ended. So long as the idea of open-ended requirements persists, however, there will be claims of “shortages.”

### *Appeals to Authority*

If military requirements are *not* open-ended, how can they be determined? Various approaches have been proposed, each with its vigorous and outspoken supporters. Many people believe that the

only way to determine requirements is to ask the military experts. What is required is whatever the generals and admirals say is required, and that's that. While we agree that the recommendations of military experts must be considered seriously in reaching decisions on force levels, we emphatically reject the idea that their stated requirements should go unquestioned. To begin with, as we have pointed out in Chapter 3, it is impossible for military experts or anyone else to derive a purely military requirement except in the most limited of tactical situations; for example, capturing a particular hill. Even here the requirement is highly uncertain, because there is always a wide area for judgments on risk, enemy capabilities, leadership, and morale—to say nothing of the basic judgment on whether the hill must be taken. But it is a long way from specifying the number of troops to do a limited job to specifying the total U.S. force structure. In this larger context, many important factors must be considered, including strategic and political objectives, costs, possible enemy reactions, allied contributions, balance-of-payments effects, public support, and so on. In short, total U.S. force requirements are very far from being a purely military matter to be settled only by the military experts.

In addition, the military experts—the Joint Chiefs of Staff, in particular—are regularly subjected to massive institutional pressures for setting ever higher requirements. They have thousands of officers working for them whose very careers are bound up in getting more forces (and whose promotional possibilities vary directly with the expansion or contraction of their parent Service). These are men who have devoted their lives to military service and have associated mainly with other military officers. They are not intimately acquainted with the other needs of society or in a good position to balance them against military needs. And they have nothing to lose from calling for more forces and much to lose from accepting less.

In saying this, we intend no criticism of the JCS members personally, or the staff officers who serve them. Rather, we call for honest recognition of their conservative pragmatism in approaching the question of needs and of the institutional setting in which they operate. If anyone deserves to be criticized, it is those who would have us blindly accept the recommendations of the JCS as balanced, authoritative statements of the forces the United States must have.

### *Arbitrary Budget Ceilings*

To get a better handle on requirements, some have advocated going to the other extreme of using arbitrary budget ceilings. This approach rests on the idea that the best policy is to allocate to defense some portion of the budget—usually some fixed percentage of the Gross National Product (GNP)—and then leave it to the military to decide how best to spend it. This is the view that operates in many European countries today, and the view that operated in the United States in the 1950's. For three basic reasons, we do not believe this to be a satisfactory approach for the United States. First, as explained at length elsewhere, need cannot be ignored in the force planning process any more than cost; the two must be considered together. The nation's force needs are far from being a purely financial question demanding only a financial answer. Neither a "requirements only" nor a "costs only" approach is a satisfactory way to plan for the nation's security. Second, in the past, leaving the allocation within the budget ceilings to the Services has resulted in serious imbalances in the total force structure, as the Services have fought to keep prestige items in their budgets at the expense of the "horseshoe nails" that make their existing forces effective and have kept existing forces and systems (battleships, horses, bombers) when new systems (carriers, tanks, missiles) should have replaced them.

Third, there is no discernible "optimum percentage of GNP" for defense spending. If it were really necessary, the United States could probably spend half of its GNP on defense for a sustained period of time. Under other circumstances, 5 percent might be wasteful. It depends on—to use an overworked phrase—national priorities. To see the fallacy of the theory that defense spending should be set at a fixed percentage of GNP, suppose that at a given level—say, 10 percent—the United States had forces considered to be adequate in every respect to meet its objectives. Then, if during the next year GNP grew—again, say, by 10 percent—this theory would dictate that we raise defense spending by 10 percent. Now, it is entirely possible that the higher GNP would make it reasonable for the nation to entertain more ambitious defense objectives, but that ought to be a

reasoned choice, not a mechanical extrapolation from some fixed fraction of GNP.

### *Numerical Comparisons*

Still another widely held approach to setting requirements would have the United States make a direct numerical comparison of its forces with those of potential enemies to ensure that it always has more of everything ("superiority") across the board. One major problem with such comparisons is that they often ignore crucial differences in quality. This was the case, as we have seen, with early comparisons of NATO and Warsaw Pact tactical aircraft. Quite apart from qualitative differences, however, a direct numerical comparison of U.S. forces with an enemy's forces may or may not even be relevant to our ability to accomplish national defense objectives. Often it is not. For example, in the field of strategic retaliatory forces, if the United States has enough forces to destroy completely the society of the Soviet Union in a retaliatory strike (after an attack on U.S. forces), it doesn't much matter how many forces the Soviets have.

Perhaps more than any other area, strategic forces show the irrelevance—in fact, the danger—of simply adding up the available forces on the two sides as a measure of adequacy. The danger of using such force comparisons is that we might mislead ourselves into thinking that our forces are adequate when they are not, or into thinking that our forces are not adequate when they are.

Suppose, for example, that the United States had 1,000 ICBM's, relatively inaccurate and all based above ground ("soft") on ten sites. Now suppose that the Soviets had only 100 ICBM's, but that they were all based underground in very "hard" silos, were widely dispersed, and were very reliable. In that case, even though U.S. missiles outnumbered Soviet missiles ten to one, we might very well not have enough forces. The Soviets could shoot several of their missiles at each of our ten sites and destroy virtually all of them, knocking out our retaliatory force. Our 10 to 1 numerical superiority, under these circumstances, would be meaningless, and we might indeed have an inadequate force. On the other hand, the Soviets, although badly outnumbered in this case, might have an entirely



adequate force if the combination of their silo hardness and our missile inaccuracy meant that enough of their 100 ICBM's could survive an attack by our missiles to be able to strike back at our cities.

Yet even today, some members of the Congress continue to emphasize force comparisons as the best way of determining how well the nation is meeting its requirements. They compare the number of strategic nuclear warheads the United States can deliver with the number the Soviet Union can deliver, and they continue to assert the need for American supremacy—as if such totals had much to do with the realities of military power in the world. The more important fact is that either side has enough strategic retaliatory forces to destroy the other; and the more important problem is whether, in the face of changing technology, U.S. forces are appropriately designed to survive a Soviet attack. Thus, the annual counting exercise, where it is pointed out that the United States has three or four times as much of this or that as the Soviet Union, is not a very penetrating analysis of military needs or capabilities.

Or, to take another example of misleading numerical comparisons, in the field of naval forces and antisubmarine warfare, the relevant issue is not how many attack submarines the Soviets have relative to how many the United States has; their objectives are different from ours, and their force structure is correspondingly different. Rather, the issue is the adequacy of the total U.S. antisubmarine warfare posture—including not only attack submarines but land- and sea-based patrol aircraft, surveillance systems, and destroyers as well—to accomplish U.S. objectives.

The Services and their spokesmen in the Congress can be very vocal in pointing out cases where the Soviets outnumber us, and thus where we are not meeting our "requirements." We hear a lot about the number of Soviet attack submarines compared with ours, or the number of Soviet divisions compared with ours, or the number of Soviet megatons, but we hear little about the cases where we outnumber them. For example, we hear practically nothing about the comparative sizes of the U.S. and Soviet attack-carrier force (15 to 0); or about the fact that the U.S. amphibious-assault shipping fleet alone contains more tonnage than all combatant ships in the entire Soviet Navy; or that the United States has substantially more men

under arms world-wide than the Soviet Union; or that its strategic forces can deliver three times as many separately targetable warheads.

Force comparisons have their uses, of course; but, by themselves, they are an inadequate basis for determining the nation's military needs. Even careful comparisons, accounting for qualitative differences, tell only what one has, not what one can do with it.

### *Another Alternative*

If military requirements are not necessarily what the military say they are, if defense needs cannot be adequately set by arbitrary budget ceilings based on some fixed percentage of GNP, and if force comparisons alone are an unsatisfactory way to determine requirements, what approach *should* be taken? We would argue that military requirements ought to be determined by reasoned choice with the open participation of the responsible government officials, military and civilian. In other words, requirements should be set by a combination of analysis and judgment, with each issue being decided on its own merits. Such an approach explicitly recognizes that military requirements are a matter of choice, that there is no such thing as a "pure" military requirement in the abstract. Requirements depend on what we want to accomplish in the national security field, tempered by what we are willing to give up elsewhere. Analysis can help decision makers understand exactly what must be given up to reach a certain capability.

It was in the area of trying to develop yardsticks of sufficiency that the Systems Analysis office expended its greatest efforts and faced its greatest challenges; the results were mixed. In some areas the office was quite successful; in others, much less so. The most we would claim is that a good beginning has been made. The office has helped lay the foundation of a conceptual structure for determining military requirements; but the structure is a long way from being completed. Above all, our experience suggests that while there is no simple answer to the question of "how much is enough," the question is not unanswerable. The following sections describe, for strategic nuclear forces and for three components of general-purpose forces—tactical air forces, antisubmarine warfare forces, strategic mobility forces—how the problem of analyzing requirements was approached and with what degree of success.