

The Origins of Net Assessment

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The Office of Net Assessment (ONA) was responsible for carrying out three programs in the Department of Defense from November 1973 until the collapse of the Soviet Union:

- Net assessment, which focused on selected warfare areas and theaters, to support the leaders of the defense establishment in making decisions for the extended competition with the Soviet Union;
- An effort to correct the apparent underestimation of the Soviet defense burden, that is, the percentage of the Soviet gross national product (GNP) devoted to its military forces and other national defense goals; and
- Special tasks, including lessons learned efforts, for instance, following the Yom Kippur and Falklands Wars; discussions with other military establishments such as Israel, France, and Japan; and especially in the 1980s, efforts to prepare projections of the future security

environment, and to explore the effects of space-based missile defense systems.

It should be added that during the 1990s ONA focused on the nature and likely consequences of a revolution in military affairs (RMA) for the United States as well as the similar prospect for the People's Republic of China. Other studies analyzed past experiences of large-scale changes in defense analogous to a contemporary RMA, and insights on why some military organizations do well in such periods and others do not.

This chapter reviews ONA's work on the first two programs and also traces the origins of that work to approaches and concepts developed by the RAND Corporation from the mid-1950s to the late 1960s. Those intellectual precursors included studies of trends and asymmetries in the defense policies of the United States and the Soviet Union as well as the framework of the Cold War as a long-term competition in order to outlast the Soviet Union.

The goal of the particular kind of net assessment that ONA performed was to provide the Secretary of Defense and the service chiefs with insights to help them make better decisions on long-term competition with the Soviet Union than would otherwise be possible. Such assessments depended on a shared belief in the existence of an extended competition with the Soviet Union, a perspective that was far from universal at the time.

Each net assessment sought to illuminate both trends and asymmetries in the behavior of the United States and its allies in contrast to the behavior of the Soviet Union and its allies. The goal was to provide as good a picture as possible of the key competitions and contrasting strategies of both sides as they had evolved over the previous 20 to 30 years. These assessments sought to identify the ways in which Soviet conduct differed from ours as a result of geography, culture, history, organizational structure, or other factors. Special attention was paid to the asymmetries that favored the United States or that provided opportunities for U.S.

strategy to exploit. Assessments in most areas were repeated every few years and improved as understanding of competitions and practices of both sides improved and analytic methods were developed or refined.

This kind of net assessment process was not the only type that could be done. Indeed, when asked in 1972 to establish or re-establish a net assessment group on the National Security Council (NSC) staff, I enquired what sort of net assessment was needed. The answer was developing a means of scoring outcomes of prospective near-term wars or campaigns such as a European conflict or an all-out war in multiple theaters. That prompted me to question whether existing models of warfare were good enough and how many alternative scenarios leading to war should be examined.

For various reasons, I did not believe that this could be done well enough or be that useful. Then I happened to meet General James H. Polk, USA, who had just come home

after commanding US Army Europe. He mentioned his efforts to obtain intelligence from his staff on how good Soviet ground forces actually were. He failed to get much information, but his endeavor to get anecdotal stories on the various operational problems experienced by the Soviet Union during training and exercises allowed him to form his own judgment. The Soviet military had many problems, mainly arising from inferior skill levels among conscripts. When I indicated that my preference in the net assessment process included analytic methods to look for critical asymmetries, he was encouraged.

I do not think that such a process could have succeeded at the National Security Council. My subsequent move over to the Pentagon did make it possible because Secretary of Defense James R. Schlesinger and I agreed on what would or could be useful, given the time required to develop databases and analytic methods. My move to the Department of Defense resulted from a deal struck by Henry A. Kissinger, the National Security Advisor to the

President, and Schlesinger. After seeing a report on the first net assessment of US and Soviet ground forces conducted under the interagency process roughly one year earlier, Schlesinger indicated that he wanted three assessments on the strategic nuclear, maritime, and Central Front in Europe. In addition, ONA activities would include special studies—for example, reviews of lessons learned from recent conflicts and, as discussed below, broader measures to assess the ability of the Soviet Union to compete with the United States. Schlesinger decided that these net assessments must be frank in reporting problems and that he would decide who should get these reports.

Thus began the production of diagnostic net assessments that might assist Schlesinger and his successors to make better decisions. I thought that the most effective way of developing such assessments was to use some of the methods that Joseph E. Loftus had introduced to me when he came to RAND in the autumn of 1954. Loftus had served in Air Force intelligence from 1950 to mid-1954. While in

the RAND Washington office, he read the internal RAND paper entitled “The Next Ten Years.” Written by Bernard Brodie, Charles J. Hitch, and me, it attempted to provide ideas on major questions deserving of attention. In December 1954, Loftus wrote a short paper, “Ten Minutes on the Next Ten Years,” dissenting from some of our conclusions.

Loftus became my colleague in the Economics Department at RAND when he moved out to California in early 1955. We began talking in detail about his reasons for claiming that “The Next Ten Years” was too pessimistic, which were based on his reconstruction of Soviet history and American behavior within the bounds of what today is called the strategic nuclear balance. Loftus highlighted efforts by Joseph Stalin to initiate several major programs to bridge the Soviet strategic offensive and defensive gaps during and immediately after World War II together with special organizations to manage them. The efforts needed substantial outlays of resources that suggested that the

Soviet Union faced major challenges unlike the United States, and also that it was pursuing the competition with the United States in quite different ways.

Shortly after the end of World War II, the Soviets began what would become an expensive program to develop air defenses. In addition to covering major cities such as Moscow, this effort included protecting investments made under another major post-war initiative, Stalin's drive to build nuclear weapons. The Soviet Union had obtained US bomb designs and then set people to work on their own designs around 1943. Since no fissile material was available, a special program was initiated to produce it. Soviet fissile material sites were protected by air defense units. Loftus had reason to believe that in 1947 half of the concrete and three quarters of the stainless steel made in the Soviet Union was going to support the construction of nuclear facilities.

Loftus inferred another major asymmetry in the competition from his observation of Soviet investments in bombers and missiles. He came to believe in the early 1950s that the Soviets were committed to developing intercontinental ballistic missiles (ICBMs) rather than using bombers to potentially mount nuclear attacks on targets in the United States. This meant that at a time when most American analysts considered that Soviet bombers could pose nearly as serious a threat as US airpower posed to the Soviet Union, Loftus perceived Soviet capabilities for intercontinental strikes were more limited. Loftus and I speculated that a lack of trust in Soviet pilots, a deficit of bases to refuel and recover their damaged aircraft in proximity to the United States, the absence of a tradition of valorous pilots from World War II, or perhaps some combination of these factors accounted for the asymmetry. Even though the Atomic Energy Commission initially had custody of nuclear weapons, and some were deployed by 1952 at Strategic Air Command bases and later on bombers

on airborne alert, the Soviets never delegated custody to their forces.

Loftus' approach was very different from that of other RAND colleagues. To assist the Air Force, RAND needed to produce projections of Soviet forces and their posture over the next 10 to 15 years. Some people believed that such intelligence and projections should be based on data including stolen plans. Loftus and I held that something more systematic was possible and needed. The central task was identifying trends in the Soviet allocation of resources. As economists, we knew resources were finite. Thus, when the Soviet Union was pouring money into air defenses, it meant that other capabilities such as naval forces could not be as well financed. The World War II US Strategic Bombing Survey had shown that notwithstanding the activities of the Wehrmacht across Europe, one third of German expenditures were spent on air defense. This reinforced the sense that such investments in air defenses could be costly and that identifying the patterns of expenditures by an

adversary over time could be illuminating with regard to its future prospects and asymmetries in the competition.

The diagnostic net assessment approach was further informed by studying organizational behavior. During the late 1950s, Loftus and I considered the improvements being made in our predictions. In looking at trends in allocating resources, we were studying how resources were allocated by—and to—Soviet organizations. It led us to ask what was known about their behavior. I was aware of the collaboration of Herbert A. Simon and James G. March, but I reread their work on organizations and also visited them and their colleagues at Carnegie Mellon. This helped me refine my thinking on how to make improvements in our projections.

Most important for my future thinking on strategy, I got to know Joe Bower and Roland Christensen at the Harvard Business School during this period, which trained future chief executive officers to compete in their respective

sectors. From them I learned that the students were being taught to ask the following questions:

- What business are you really involved in?
- Who are your competitors in that business?
- What are your relative strengths and weaknesses?

These questions were designed to help corporate leaders develop a strategy to gain market share at the expense of their competitors and perhaps even drive them out of business. This academic orientation later informed my thinking on a framework for approaching long-term competition with the Soviet Union in the development of the net assessment process.

Loftus was my major collaborator until 1963, when I went to Paris to work on a project that Secretary of Defense Robert S. McNamara assigned to RAND. While I was gone, Loftus retired. But just before I left for Europe, Schlesinger joined RAND and, once I returned in the spring of 1965, we began to collaborate on what became the idea of a long-

term competition framework. Consistent with the formulation of the strategy of containment by George F. Kennan, Schlesinger arrived at RAND with the idea that the object was outlasting the Soviets and encouraging them to devote resources to activities that were less threatening or even favorable to the United States. He had already become skeptical of estimates made by the Intelligence Community that the share of Soviet GNP allocated to the military, the so-called *defense burden*, was six to eight percent. Schlesinger thought that this percentage was a serious underestimate. Therefore, he encouraged adopting a focus not only on respective US and Soviet approaches to particular warfare areas but also to the broader comparison of our respective defense burdens.

I succeeded Schlesinger as the Director of Strategic Studies at RAND, a position that Henry S. Rowen had created, and which Schlesinger has occupied for about a month before joining the Nixon transition team in late 1968. In that position I wrote the paper on long-term competition, which

I completed in the late spring or early summer of 1969 and which RAND published in 1972. It presented terms of reference for a small group tasked with developing a candidate approach to strategic nuclear competition. I laid out thoughts on how to formulate a strategy and goals based on some initial ideas about relative strengths and weaknesses. I had intended to use its results to initiate discussions on implementing US strategy. But after an extended vacation with my wife in late summer and early autumn 1969, I moved to Washington around Thanksgiving, having been recruited by Kissinger to conduct studies for the National Security Council.

When I moved to the Department of Defense, Schlesinger wanted me to continue working on developing alternative Soviet GNP estimates and defense spending as well as assessments on strategic nuclear, maritime, and the Central Front in Europe. Several other net assessments were quickly added, including a so-called investment balance: assessing the share of defense spending by both the United

States and the Soviet Union on capital stock (for example, military hardware) versus consumables (for example, fuel and ammunition). Eventually we did theater assessments of the Korean Peninsula, the northern flank of the North Atlantic Treaty Organization (NATO), and a broader Asian balance. Moreover, we looked at areas of warfare such as anti-submarine warfare, command and control, and power projection. Overall, about a dozen net assessments were conducted, several of which were done multiple times. We did not deserve an “A” on the Central Front assessment until about 1986 and the strategic nuclear balance also was a little like that. Somehow, finally, these efforts came together in a better way.

Because work on Soviet GNP and military spending were conducted in parallel with the net assessments, it corroborated the suspicion that Schlesinger and I thought the defense burden was larger than commonly believed. Igor Birman, a Soviet economist, who came to the United States in the mid-1970s, raised questions over the Soviet

GNP estimate by the Intelligence Community. At the time, it was generally accepted that Soviet GNP was roughly 50 to 55 percent of US GNP and slowly increasing. In fact, most American economists thought the Soviet Union was catching up and some even predicted it would surpass the United States by the 1990s. These economists largely failed to exercise independent, critical judgment on this topic.

By the late 1970s, the demographer Murray Feshbach was identifying problems with Soviet conscripts. As a result, ONA sponsored a project to interview Russian emigrés to understand the recruitment system. Feshbach indicated that although the Soviet military traditionally was mostly of Slavic descent, Russians from Central Asia formed an increasing annual share of new conscripts. Interviews revealed that men of Central Asian ethnicity or descent were assigned to non-combat roles such as working as railway and construction troops or as cooks and bottle washers in line units. They did not serve as members of tank crews because they were not trusted to fight or were

not fluent in Russian. Statements made by those involved in military training complained of the physical and mental skills of conscripts. Feshbach connected the complaints to contamination of the environment including the presence of heavy metals in the water supply.

Eventually, the relatively low skill level of Soviet recruits affected equipment maintenance and basic abilities in such areas as driving and map reading, which the US military did not face. This reinforced an insight that General Polk shared with me in the early 1970s about constraints on the Soviet military. By the early 1980s, a growing number of obstacles troubled the Soviets. When Ronald W. Reagan entered the White House, these findings matched to his inclination to drive home the advantages of the United States in the long-term competition.

It is notable that net assessments conducted at the time reflected the long- term competition framework that evolved from my work at RAND with Loftus and, especially,

Schlesinger. This explains the character of the assessments; they were designed to assist the Secretary of Defense and the service chiefs in making decisions about the future. Though not necessarily the only kind of assessment that could be done, much experience was gained in conducting them. The long- term competition framework became useful in drawing attention to questions on the capability of competitors to sustain their effort. Addressing that question requires investigating the size of the military effort and other areas to maintain power at home, manage an empire, and further project power abroad. In regimes where protecting the leadership and its control over the institutions of state is paramount, there may be a tendency to spend more on defenses.

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The lessons that I learned from Loftus suggest the sort of insight you can get from a careful review of the past. His reconstruction of Soviet behavior beginning at the end of World War II indicated enduring handicaps and

asymmetries that characterized its approach during the Cold War. Above all, his insights revealed how different the Soviets were, underscoring the need to do thorough research and

not assume that the competition was like us.

