

147. Memorandum From the Director of Net Assessment, Office of the Secretary of Defense (Marshall) to Secretary of Defense Schlesinger¹

Washington, July 30, 1974.

SUBJECT

Net Assessment of U.S. and Soviet Ground Forces

Background

Attached is the Executive Summary of the Project 186 net assessment of U.S. and Soviet ground forces. Project 186 began life as NSSM 186.² The original idea was to get an idea of the relative efficiency of the U.S. and USSR in producing, maintaining and operating ground forces. A first step would be to produce a complete, full, rich comparison of the two forces, including the qualitative factors often overlooked in most studies. The attached study is only a partial success in taking this first step. It is worth your reading, particularly the first twelve pages. It has generally been well received, except in the intelligence community.³ But it is not nearly the advance we hoped it would be.

There are several reasons why the study was not more successful. We foresaw many of the data problems and intelligence gaps, but we had little appreciation of how bad the problem was. Nor did anybody else. At the first steering committee meeting, we requested the JCS representative, a Rear Admiral, to provide data on the organization, manning, equipment, etc. of the U.S. ground forces, 1960 thru 1980. He promised the data in two weeks. It took over two months to produce, and was not nearly as complete as we expected. He was as surprised as we were. The JCS and services made a reasonable attempt to produce the data, and failed.

Similarly, on the Soviet side, we found that many things we thought we knew were the product of legend or speculation. For example, the community has very little idea how many men are in the Soviet ground forces. The $\pm 15\%$ confidence interval applied only to divisional forces in GSFG. Even there the basis of the estimate is suspect

¹ Source: Library of Congress, Manuscript Division, Schlesinger Papers, Action Memoranda, October–November 1974. Top Secret.

² Document 139.

³ On June 6, Colby sent a memorandum to Marshall criticizing the study's treatment of cost data and its inadequate "consideration [of] recent information on changes that are taking place in Soviet weapons and forces." (National Archives, Nixon Presidential Materials, NSC Institutional Files (H-Files), Box H-200, Study Memoranda, NSSM 186)

outside the community. Another example is medium tanks. The community presently puts the Soviet inventory at about 43,000. They acknowledge that the Soviets have produced over 70,000 medium tanks in the last 20–25 years, but cannot reconcile the two figures. [3 lines not declassified.]

With regard to less quantitative aspects of Soviet forces the picture is even worse. DIA could not supply an estimate of how much the readiness of Soviet ground forces divisions is degraded by the semi-annual influx of new recruits that make up 25% of the division. Most of the new recruits have essentially no training. When pressed on this subject, they asserted that it would be unwise to assume any degradation in readiness. Similarly when asked about the effectiveness of the Soviet pre [word illegible] training (140 hours spread out over two years), DIA replied that this was not known, but that prudence dictated the assumption that it was roughly the same as the U.S. eight week basic training course.

Thus in the course of the study we confirmed two problem areas:

- Serious intelligence gaps, particularly with respect to the qualitative aspects of Soviet forces.

- A strong tendency for the community to fill the gaps with worst-case estimates.

It is worth noting that both the JCS and the Army liked the study. Indeed the Army would have considered withdrawing its concurrence had we watered down the conclusions further as requested by DIA and CIA.

Observations Drawn from the Study

1. *Tooth to Tail.* The study makes it clear that we don't understand the question of appropriate support ratios. In Central Europe we have about twice as many men behind each weapon as the Soviets. We can't say whether that's good, bad, or indifferent. On the other hand, the Soviet mix may cause them problems in a war of any length. The annual transfer of troops from the USSR to East Germany causes quite a disruption of rail service in Eastern Europe. Reinforcement and resupply under wartime conditions cannot seem to them a trivial problem. In any event, the U.S. support tail probably gives our forces balance that the Soviets do not have.

2. *Readiness.* This is second only to "tooth/tail" in potential for arousing parochial passions. Here it appears that we really do derive some advantage from our readiness and training activity. By contrast Soviet forces must have semi annual cycles in their readiness levels. However, we do not know how to take credit for this yet in our comparisons.

3. *Mobilization.* There must be some way out of the dilemma that our reserves cannot be made ready before the war is over, but their reserves are effective in a week or two. Why do we have any reserves at all, and why do they have active forces? The question is only partly facetious.

4. *Divisional Structure.* Except for their seven airborne divisions the Soviets seem to have nothing but heavy divisions best for ground combat in Europe. Our mix contains a number and variety of light divisions, clearly intended for use other than on the Central Front. Is this the mix we want? Is it consistent with our notion that only the active forces will be available for combat in a war with the USSR?

5. *New Soviet Systems.* Some of the new Soviet equipment looks complex and sophisticated compared to their older stuff. The BMP and ZSU 23-4 are examples. Indeed it is alleged that all new Soviet ground force weapon systems show a discontinuity with past practices of simplicity of design, etc. It may be that these new designs are responding to some technical imperatives of their own. I intend to explore the hypothesis that this represents a trend to more expensive and capable equipment, and what the consequences might be for Soviet resource cost and maintenance requirements.

Further Work

Clearly we cannot leave this subject in this state. I have several efforts going which may help clarify some of the issues raised here. The Army will undertake studies comparing U.S. and Soviet ground force training and maintenance. A potentially useful study of Soviet combat support is being done at General Research Corporation. We are concluding studies of anti-tank warfare and air defense over the battlefield, which will be briefed to you when done. I have Rand working on comparative U.S. and Soviet design philosophies for armored vehicles.

Andrew W. Marshall

Attachment

Executive Summary of a Net Assessment Prepared in the Office of the Director of Net Assessment, Office of the Secretary of Defense⁴

Washington, May 22, 1974.

PROJECT 186
NATIONAL NET ASSESSMENT
U.S. AND SOVIET GROUND FORCES
PHASE I
EXECUTIVE SUMMARY

[Omitted here is the table of contents.]

I. INTRODUCTION

A. Background

This paper describes and compares the ground forces of the US and the Soviet Union. It forms the first phase of the National Net Assessment directed by NSSM-186 and NSDM-239.⁵ This phase was essentially descriptive. Its purpose is to provide the reader with an understanding of how US and Soviet ground forces compare, and to diagnose potential problems and opportunities for the US. Asymmetries between US and Soviet Ground Forces are identified, but no conclusions have been drawn as to whether the Soviets are doing things right and the US wrong, or vice versa. Follow-on work will address specific issues that have been identified in this report.

Because Phase I covers only ground forces, conclusions which require consideration of other parts of the military establishment must be

⁴Secret. On September 25, Graham sent a memorandum to Schlesinger raising questions about the summary study's measurement of costs, readiness, and manpower procurement. On Graham's memorandum, Wickham addressed a note to Schlesinger that read: "I've arranged a special JCS-Sec Def meeting for this to be discussed, including DIA's views and where we go from here." A note, dated October 17, on Graham's memorandum reads: "Sec Def Has Seen." No record of the referenced meeting was found. (Library of Congress, Manuscript Division, Schlesinger Papers, Action Memoranda, October–November 1974)

⁵See footnote 3, Document 139. In an October 15 letter to Ford, Anderson reported that PFIAB, following consideration of the issue at its meeting of October 3–4, "continue[d] to believe a 'National Net Assessment' is required." (National Archives, Nixon Presidential Materials, NSC Institutional Files (H-Files), Box H—282, Intelligence Files, PFIAB (1) [1971–1975] [1 of 3])

deferred. For example, evaluation of readiness/force size trade-offs requires assessment of strategic mobility forces. An evaluation of the overall military balance is beyond the scope of this study, requiring assessment of the forces of Allies and potential enemies of the US and Soviet Union.

B. Definition of Ground Forces

Ground forces in this paper include ground combat forces with all the command and support structure behind them. For the US, the entire Army less strategic defense forces are included, together with the US Marines less fixed wing aviation and its share of support. For the Soviet Union ground forces includes the Soviet Army with its share of command and general support, plus naval infantry and helicopter forces.

This definition is needed to make a meaningful comparison, since Soviet general purpose ground forces (e.g., divisions) are more involved than US forces in performing general support mission such as individual training and reserve component support.

C. Uncertainties

The depth of our knowledge of Soviet ground forces is variable. We know certain things in fine detail: We have in our possession modern Russian tanks and personnel carriers, and we have good photography of many Russian military installations. Much of the Russian military establishment, however, is much less visible to us.

We have no direct information about Russian military manpower totals. Our estimates of manpower start [*less than 1 line not declassified*] with the smallest units, and are built up for larger units from estimates based for the most part on US practices. A large part of the Soviet total is estimated to be in units whose existence we know of but whose size we do not, and to this we add estimates for units that we do not see at all but which the US intelligence community feels must be present. DIA has made estimates of Soviet command and general support manpower, but they have a very low level of confidence in these estimates. A great deal of work is required to explain the uncertainties in manpower estimating and to distinguish between what is known and what is guessed at. Much additional collection and analysis will be required before we are confident in our estimates of Soviet military manpower.

The uncertainty increases when we talk about costs. The Soviets publish only one cost statistic—the single line entry for defense in the annual state budget. We do not know what this figure includes (it clearly excludes some military research and development financed from the “science” appropriation; many believe it excludes much more). Not only is there uncertainty regarding the inclusiveness of the

announced figure, but because it clearly serves a political function, its basic reliability is questionable. [2 lines not declassified]

[1 paragraph (16 lines) not declassified]

II. KEY CONCLUSIONS

A. Size

Since 1964 the number of Soviet divisions has increased by about 15% (from 147 to 169), and US active divisions⁶ have decreased by 15% (from $21\frac{2}{3}$ to $18\frac{1}{3}$). Manning and equipping of US reserve forces have increased during this time. The Soviet increase and US decrease roughly follow China's movement from alliance to hostility toward the USSR, and a reduction in its hostility to the US. Most of the Soviet buildup has been opposite China, while the US reductions have been spread among the Pacific, Europe and North America. At the present time Soviet ground forces manpower is about 2.1 million, compared to 940,000 for the US.

B. Readiness

US active forces are maintained in a higher state of readiness than most of the Soviet forces. Our tactical units have better trained men entering them, are generally manned much closer to their wartime authorization, operate their equipment more, and shoot their weapons more than their Soviet counterparts. The price of our readiness edge and the contribution to readiness of these US practices have not yet been evaluated in detail, but they involve over 200,000 men and several billion dollars per year above what would be required to maintain the active force by Soviet standards. Even Soviet forces in Germany, which are considered to be among their most combat ready ground forces, spend time every six months on training of new recruits, and the Soviets spend less on the readiness of these forces than they would have to spend to maintain them at US standards.

C. Quality of Soviet Manpower Estimates

Estimates of Soviet manpower are very rough. DIA and CIA believe the uncertainty about the number of Soviet troops now in Eastern Europe is about $\pm 15\%$. However, the basis for this confidence is unclear outside the intelligence community. [3½ lines not declassified]

D. Support

Comparing forces in West and East Germany, the US has twice as many men as the Soviets behind each weapon. The implications of this

⁶ US separate brigades and cavalry regiments are roughly comparable in size to one third of a division, and are so counted throughout this paper. [Footnote in the original.]

are not clear. This asymmetry has been cited as indicative of a US edge in sustaining capability (e.g., because of more ammunition suppliers and mechanics), a US edge in fighting (e.g., more target acquisition people supporting artillery fire), or alternatively as indicative of excessive overhead. All three explanations probably have some degree of validity.

E. Manpower Procurement

The US has a volunteer force, while the Soviet Union has nearly universal conscription. This probably limits the number of people in the US military to roughly the present or possibly a reduced level. It keeps pressure on the US to use men more efficiently, to recruit women into the force, and to use civilians. The pressures on the Soviet Union are less clear. The estimated ruble costs of their conscript force are quite small, but the real costs to the Soviet economy in terms of opportunities foregone are unclear. While the military uses large quantities of scarce manpower, it also turns out some skilled workers and may thus serve an educational function performed in the civilian sector in the US. One clear result of this asymmetry (volunteer vice conscription) is that the US has more reenlistments and lower turnover in its force. As a result US ground forces have a much larger number of experienced enlisted men: over 50% of the US enlisted force has more than two years of service, while only 10% of the Soviets do. A second result is that the Soviets have about 800,000 men with military experience entering the reserves each year, whereas the US does not.

F. Mix of Divisions

Almost all Soviet divisions are tank and motorized rifle, oriented toward a war on the Eurasian land mass. Only half of US active divisions and one-third of US reserve divisions are armored and mechanized. The rest are amphibious (Marine), airmobile, airborne, and infantry, which provide us worldwide capability to fight lightly armored (largely infantry) forces and/or to fight in terrain which is not conducive to armored warfare.

G. Mix of Weapons

The US places a higher fraction of its major caliber antitank weapons and indirect fire weapons in the hands of infantry. Thus the US will have a higher ratio of antitank guided missile launchers to tanks, and has more mortars per cannon, than the Soviets.

H. Weapon Characteristics

Generally US weapons are more complicated, more expensive, more capable and incorporate more human engineering factors than Soviet weapons. For example, all our tanks have range-finders, com-

puters, automatic transmissions, and plenty of working space; the Soviet tanks have none of these. US anti-tank guided missiles are much more accurate and easier to use than Soviet missiles. Several recent Soviet weapons (e.g., BMP, ZSU-23-4) do not fit this generalization, and may represent a trend reversal.

I. Costs

Considerable work has been done to analyze Soviet defense costs and compare them to those of the US. The current state of costing methodology and data limitations preclude our obtaining an accurate estimate of the cost of Soviet defense, its “value” in dollars, the relative “burden” of defense, or relative efficiency. CIA has estimated a dollar valuation of Soviet defense expenditures which, while probably overstating the value of Soviet activities relative to those of the US, are useful indicators of spending trends. They show that the valuation of the Soviet ground forces program in constant dollars has increased by one third since 1964. The cost of the US program in constant dollars has decreased by one quarter in the same time.

J. Asymmetries

Completion of a net assessment requires comparisons in detail of the way the US and Soviet Union operate. Where there are asymmetries in the two nations’ way of doing business several possible explanations can exist:

—We’re right and they’re wrong. We should continue business as usual or find ways to increase our advantage accruing from the asymmetry.

—They’re right and we’re wrong. We should change our system to look more like the Soviet.

—We’re both right, and have gone off in different directions because of different resource constraints, geography or national strategic objectives.

—We’re both wrong.

Deciding what the proper implications of the asymmetries are requires a study of the total force. Work to date has focused exclusively on the US and Soviet ground forces. Final judgments require a comparison of overall capabilities, including forces of Allied nations and forces other than ground forces. There is no way to settle, for example, whether our ground forces are appropriate without considering the contribution of US mobility and tactical air forces and the forces of our Allies.

A number of the study conclusions taken together suggest that a major asymmetry exists between how the U.S. and the USSR expect a war in Central Europe to be fought. The Soviets appear to expect a short war, (on the order of weeks). The U.S. and our Allies appear to ex-

pect a somewhat longer war, perhaps several months or longer. Successful conclusion of the war, in the Soviet view, is to be achieved by overrunning most of Western Europe and destroying all NATO military forces there. The U.S. hopes to "win" the war by preventing a Soviet breakthrough, and by stabilizing the conflict along static lines of defense as close to present boundaries as possible.

This apparent asymmetry in view as to the nature of the war, if true, has strong impact on force structure planning, support, weapons mix, and tactical doctrine. As Project 186 continues it will be important to refine the concept of this asymmetry, and clarify its implications.

While no final conclusions have been drawn, major asymmetries have been cataloged and resultant advantages to each side have been listed on Table 1.⁷

⁷ Attached, but not printed.

148. Memorandum From Secretary of Defense Schlesinger to the Director of Central Intelligence (Colby)¹

Washington, November 2, 1974.

SUBJECT

Comparing the Size of U.S. and Soviet Defense Efforts

I am increasingly concerned about present trends in the relative military positions of the U.S. and the USSR. It seems clear that the USSR is steadily adding to its overall military capabilities, while budgetary constraints are forcing us to cut back, delay and stretch out our modernization programs. I am convinced that these trends cannot continue very long before the U.S. may be widely perceived as risking its present position of leadership in the world.

¹ Source: Washington National Records Center, RG 330, OSD Files: FRC 330-78-0011, 320.2, Strategic (Sep.-Dec. 1974). Confidential. Marshall forwarded a draft of the memorandum for Schlesinger's signature to Wickham under a covering memorandum, October 30. (Ibid.)