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THE DIRECTOR OF CENTRAL INTELLIGENCE

WASHINGTON, D. C. 20505

14 September 1979

National Intelligence Officers

MEMORANDUM FOR: Director, National Foreign Assessment Center
FROM : National Intelligence Officer for Strategic Programs
SUBJECT : Ellsworth/Adelman article in Foreign Policy, Fall 1979, "Foolish Intelligence"

Bruce

1. I concur in the evaluation prepared for you by OSR. After a series of gross overestimates in the late 1950s and early 1960s and a series of gross underestimates in the middle and late 1960s, the record of estimating Soviet strategic force prospects in the 1970s has been closer to the mark. It has contained some overestimates, some underestimates, and a number of estimates that appear now to have been about right. Most important, our techniques of projection have avoided single best guesses, have explicitly set forth the ground-rules and uncertainties associated in the projections, and have fostered prompt adjustment of our estimates in response to new evidence and analysis.

2. The OSR evaluation is a technical one which does not directly address the bill-board message of the article. I read this message to be that CIA is the principal culprit in whatever shortcomings exist in US intelligence estimates. This is allegedly attributable to the dominance of wrong-headed clandestine service officers in CIA. This is a distortion which fails completely to recognize that:

a. In recent years, national estimates on Soviet strategic forces have been prepared by working groups drawn from the full intelligence community;

b. Inputs on weapons characteristics like accuracy (including recent changes in our best estimates of these characteristics) have been prepared by WSSIC subcommittees under DIA chairmanship; and

c. CIA's clandestine services do not participate in preparing these estimates at all. With his long experience in intelligence-related matters, Ellsworth should know better.

Howard Stoertz, Jr.

Attachment: As stated

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14 SEP 1979

MEMORANDUM FOR: Director, National Foreign Assessment Center

SUBJECT : Comments on "Foolish Intelligence" (Robert F. Ellsworth and Kenneth L. Adelman, Foreign Policy, Fall 1979) and the Subsequent Summary in the Washington Post

1. We have reviewed the articles (Attachment F) and selected for discussion in this memorandum the issues in OSR's bailiwick. Those selected are:

a. The overall track record of our estimates of Soviet strategic capabilities;

b. The specific charges that there were major changes in the 1979 estimates (compared to the 1978 estimates) in force residuals and in ICBM fractionation, accuracy, and reliability;

c. The estimates of Backfire production have been too low;

d. The doubling in 1976 of our estimate of the percentage of the Soviet GNP devoted to defense; and

e. Our reported delay in recognizing the North Korean force build-up.

2. The following paragraphs summarize our current views on these subjects. Additional information on each can be found in the attachments.

3. Topic A, the overall track record of our estimates of Soviet strategic capabilities.

Ellsworth and Adelman's statements that the CIA consistently underestimated the projections of the Soviet ICBM build-up are true for our estimates in the mid- and late 1960s. During this period, our estimates were driven by the mistaken belief that the Soviets would not want to exceed the numbers deployed by the US, thereby triggering major new US programs.

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4. The charge of consistent underestimation does not hold up for other times. In the late 1950s and early 1960s, the NIEs significantly overestimated the prospective capabilities of the Soviet ICBM force. [REDACTED]

5. During the 1970s, the record has been mixed. We have made changes in our estimates as new data come in. Assuming the more recent estimates are more accurate, some of the changes reflect previous underestimates of Soviet capabilities. Examples are, the degree of fractionation of ICBM payloads and the accuracy of Soviet ICBMs. But counter examples also exist. We overestimated the rapidity with which the Soviets would convert older ICBM silos for newer systems, and would develop a new intercontinental bomber and a new large SSBN. [REDACTED]

6. We will be making further adjustments to our estimates this year. Again, some of them will be in the direction of increasing the threat. The projected accuracy of the ICBMs will be increased slightly, and the estimates of ICBM force reliability will be increased. In the other direction, our estimate of the accuracy of the newest Soviet SLBM system (SS-N-18) will be about [REDACTED] meters, versus [REDACTED] meters in last year's NIE. The expected IOC for the Typhoon SSBN will probably be slipped a year or two. Also, the estimates of expected yields for many ICBM and SLBM warheads are being reduced by about [REDACTED] percent. The yield of the SS-18 Mod 4, for example, has been reduced from [REDACTED] kilotons to [REDACTED] kilotons. (See Attachment A for additional discussions of the track record of the Estimates.) [REDACTED]

7. Topic B, Specific charges that there were major changes in the 1979 estimates (compared to the 1978 estimates in force residuals and in ICBM fractionation, accuracy, and reliability).

Force residuals--the two graphs presented in Ellsworth and Adelman's article are taken from DoD's annual reports for FY 1979 and FY 1980, which in turn, were taken from the force projections given in the NIE's for 1977 and 1978 (published in 1978 and 1979, respectively). The two graphs they chose to depict are estimates of post-strike force residuals which, under day-to-day alert conditions, would for the Soviets be those ICBMs not used or destroyed and the at-sea SLBM force. Our estimates of ICBM and SLBM RVs did increase in the 1978 NIE: the 1978 Estimate has about 25 percent more ICBM RVs in the early 1980s than the 1977 Estimate, and about twice as many SLBM RVs in the mid-to-late 1980s. Nevertheless, both Estimates reached approximately the same number of on-line weapons by the end of the decade. [REDACTED]

8. ICBM Fractionation--The 1978 NIE initially contained fewer deployments of the single RV variants of the fourth generation ICBMs, resulting in more MIRVed RVs projected to be in the force during the early 1980s. By 1985, however, both the 1977 and 1978 estimates were essentially the same in number of online ICBM RVs. Evidence of greater SLBM fractionation for the SS-N-18 led us to believe the Soviets would deploy more MIRVed variants of their SLBMs beginning in the early 1980s. The number of SLBM RVs consequently increased from 1400 in 1977 to about 2900 in the 1978 NIE. [REDACTED]

9. ICBM Accuracy--We did revise our estimates of Soviet ICBM accuracy between the 1977 and 1978 NIEs. We detected significant new testing in late 1977 that suggested an accuracy improvement program, and we so noted it in the 1977 Estimate. The improvement in accuracy was projected in the 1977 and earlier Estimates, but the projected IOC was a few years later. By the 1978 Estimate, we had updated our accuracy estimates and included them in the force projections. [REDACTED]

10. We assume the authors arrived at their figure of "a 180 percent improvement" by comparing accuracy of current ICBMs ([REDACTED] meters) with accuracy projected for systems which would IOC in the early-1980s ([REDACTED] meters). They did not, however, compare the estimate of accuracy which we made in 1977 with those we made in 1978. If they had, by our calculations, projections made in 1978 for Soviet ICBMs in the force during the mid-1980s would show about a [REDACTED] percent improvement over projections made in 1977 for the same period. [REDACTED]

11. ICBM Force Reliability--We made no changes in reliability in our 1978 Estimate. As mentioned above, however, we do plan to increase our estimate of reliability in the forthcoming Estimate. (See Attachment B for additional discussions of these issues.) [REDACTED]

12. Topic C, Backfire Production Estimates

The charge that we have underestimated the Backfire bomber production rate is groundless. We have not made any significant changes in our projections, and see no reason to change them now. (See Attachment C.) [REDACTED]

13. Topic D, Percentage of GNP devoted to defense

Ellsworth and Adelman misrepresent the message contained in the CIA's reevaluation in 1976. The factor of two increase was clearly billed as an increase in the estimated ruble cost of military programs, and not as an increase in our estimates of the physical size or capabilities of Soviet forces. It did indicate that the Soviet defense industry is less efficient in the use of its resources, and that the Soviet leaders' commitment to their defense effort was greater, than we had previously believed. [REDACTED]

14. The authors should have known better than to make this charge against the Agency. We took every precaution at the time to explain the change, even in our unclassified report of May 1976. Furthermore, it was briefed to Mr. Ellsworth at the time of issuance. (See Attachment D for additional information.) [redacted]

15. Topic C, North Korean force build-up

Ellsworth and Adelman are correct in claiming that we underestimated for a while the size of North Korea's infantry force. But the statement is misleading in that it does not even hint at the serious concern and excellent reporting we did devote to what we saw as an increasingly alarming situation. We did report all along on the increasing numbers of tanks and artillery forces. We noted the growth in naval, air, and air defense forces, and expended considerable effort in the area of indications and warning. But we had little direct evidence of widespread expansion of the infantry. This was corrected in late 1977 and early 1978 when the Community, led by Army Inscom, conducted a massive study of this problem. (See Attachment E for additional information.) [redacted]

[redacted]

R. M. HUFSTADLER
Director
Strategic Research

Attachments: (6)

- A. Review of NIEs by NIO/SP
- B. Discussion of Specific Charges
- C. Backfire Production Estimates
- D. Percentage of GNP Devoted to Defense
- E. North Korean Force Build-up
- F. Article on "Foolish Intelligence" and Washington Post Summary of Article

Attachment A

Topic A

**The Overall Track Record of our Estimates of
Soviet Strategic Capabilities**

**(An assessment written by Mr. Howard Stoertz
in response to a Senate Request)**

and

**Two Articles from Studies in Intelligence
on the Same Subject**

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THE DIRECTOR OF CENTRAL INTELLIGENCE

WASHINGTON, D. C. 20505

National Intelligence Officers

SP - 34/79
27 February 1979

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MEMORANDUM

SUBJECT: Addition to Record of DCI Testimony, Senate Armed Services Committee, 23 January 1979

Question: Please supply for the record the number of years the CIA has underestimated the Soviet strategic threat. In light of the record, what confidence can be placed in the estimates?

1. It is well known that in the late 1950s and early 1960s, NIEs significantly overestimated the existing and prospective size of the Soviet ICBM force, and that in the middle and late 1960s they significantly underestimated the prospective size of that force. The initial overestimates were based in part on the pace and success of the Soviet development program, and in part on projections of Soviet deployment capabilities and likely programs made in the absence of hard evidence of actual deployment activity.

2. From the time in the early 1960s when satellite photography corrected the previous overestimates, the Intelligence Community has had good knowledge of Soviet ICBM launcher construction and deployments existing at any given time. The subsequent underestimates of prospective future deployments reflected the mistaken belief that the Soviets would deploy either fewer, or later, only about the same number of ICBM launchers as the US. In retrospect, the estimators erred in thinking that the Soviets would want to avoid triggering further expansion of US missile forces, failed to appreciate the depth of Soviet determination to overcome the weaknesses that contributed to their humiliation in the Cuban missile crisis, and probably overreacted to the previous overestimates of the "missile gap" era.

3. The analysis in Prof. Wohlstetter's articles entitled "Is There a Strategic Arms Race?" (Foreign Policy, Summer and Fall 1974) was reviewed by CIA analysts and found to be essentially correct. Wohlstetter had concluded that future size of Soviet ICBM, SLBM, and heavy bomber forces was consistently underestimated during the 1960s. A CIA "track record" study completed in early 1976 showed that with respect to ICBM forces, the mistaken view of Soviet

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intentions persisted through 1968. In retrospect, it appears that the estimators clung to their original belief that the Soviets would level off their ICBM launcher deployments at a level ranging from somewhat below to somewhat above the US total until, in 1968-69, the Soviet construction program actually exceeded the US level. [Redacted]

4. CIA's 1976 study carried the record forward to 1975. The review showed that, following the belated recognition that the Soviets would not only catch up with the US in number of ICBMs but keep right on going, the estimative record improved somewhat. In 1969, 1970, and 1971, the three years preceding the SALT I agreement which froze the combined Soviet total number of ICBM and SBM launchers, the NIE forecasts compared with future Soviet performance as follows:

--In operational ICBM launchers, the actual level of 1,500-1,600 reached in 1972-1975 fell within the range forecast in all three NIEs.

--In modern SSBNs, the actual 1975 level of 46 compared with 35-50 forecast in 1969, 50 in 1970, and 47 in 1971. By 1968-69, current information had established the approximate rate of Y-class SSBN production. However, these estimates did not anticipate that the Soviet objective under SALT I conditions would be an eventual force of as many as 62 modern SSBNs and 950 launchers. Only the non-SALT projections were this high or higher.

--In heavy bombers, moreover, the NIEs continued through 1974 to predict retirements of older Bisons and Bears, whereas the Soviets actually retained a constant force level. [Redacted]

5. The Intelligence Community has always attached great importance to the quality of Soviet strategic forces as well as to their numbers. The 1976 "track record" study reviewed estimates made in 1966-1975 with respect to qualitative trends in Soviet forces, and found that the estimative record was mixed. On the positive side:

--The NIEs forecast Soviet development by the early or mid-1970s of MIRVed ICBMs with improved accuracy and hard target kill capability. They also forecast the introduction of longer range SLBMs.

--In the various fields of strategic defense, the NIEs were found to have identified correctly the likely lines of Soviet development, although for a time in the early 1970s they overestimated Soviet strategic SAM deployment and overestimated Soviet willingness to deploy ABMs despite

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the identified shortcomings of the available Soviet ABM system. Soviet ASW capabilities against SSBNs have remained very low, as was estimated.

On the negative side:

--The NIEs failed to foresee that under the SALT I limitations the Soviets would deploy SS-17 and SS-19 ICBMs having throw-weights much greater than that of the SS-11, would introduce cold launch techniques with the SS-17 and SS-18, and (in the case of the SS-19) would greatly increase missile volume without increasing silo diameter.

--Persistent uncertainties and disagreements were noted in the estimative record about such critical questions as: whether the SS-9 Mod 4 ICBM was a MIRV system (it was later determined not to have been); whether the SA-5 was an ABM or possibly a dual-purpose ABM-SAM (it was later determined to be a SAM); and whether Backfire had marginal or substantial intercontinental capabilities (a question which remains unresolved today).

6. Another review of the NIE record, done for CIA in the spring of 1978 for the period 1970-1977, examined in detail the estimative performance with respect to three topics perceived to be of particular importance. It found that:

--With respect to Soviet strategic offensive force composition under SALT I limitations, the NIEs of the early 1970s underestimated the rate of ballistic missile submarine deployment, overestimated the rate of conversion to fourth generation ICBMs, and did not anticipate the number of diverse types and modifications of ICBMs that would be developed during the period.

--With respect to ICBM accuracy and force readiness, prospective Soviet capabilities were underestimated. The Soviets were found to have achieved more with relatively crude technology than expected and, later, to have introduced new technology sooner than expected.

--With respect to air defense systems, in the early 1970s the priority with which the Soviets would seek to develop an airborne warning and control system (AWACS) was overestimated and the size of the air defense interceptor force was underestimated. The NIEs failed until 1975 to establish extensive Soviet deployment of nuclear-capable SAMs and electronic countermeasures equipment (ECM) for strategic air defense.

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7. To bring the record fully up to date, we have now reviewed the NIEs of the most recent five years. The first two of the attached tables compare forecasts made in 1974 and 1976 with the facts as known and reported in 1978. These two tables confirm the mixed record of recent years.

--The entries on the first table dealing with operational ICBM launchers, MIRVed launchers, and online ICBM reentry vehicles (RVs) show a substantial overestimate in 1974 of the pace at which the Soviets would convert their SS-9 and SS-11 silos to the new SS-17s, SS-18s and SS-19s, and a consequent overestimate of the number of ICBM RVs they would have online in 1978. These estimates were adjusted downward after that, but the 1976 forecast was still somewhat too high. The estimators failed to foresee that the Soviets would stretch the conversion program over about 8 years. Using historical evidence, they projected Soviet conversions at about the same pace demonstrated in the construction of the original silos. This was correct for the SS-18, but not for the SS-17 and SS-19 conversions.

--The CEP entries on the first table show that the accuracies of the presently deployed ICBMs were initially underestimated, but that these estimates were largely corrected by 1976. Yield estimates also had to be adjusted, but only slightly.

--The second table shows that in 1974, the prospective growth in numbers of Soviet SLBM launchers, SLBMs with MIRVs, and online SLBM RVs was slightly underestimated. A corrective upward adjustment was made in 1976. (Note that, as shown on the third table, the IOC date of a MIRVed SLBM was in fact forecast correctly in 1974.)

8. The last two tables address the difficult question of the likely adequacy of some of our most recent forecasts. Because many of the initial operational capability (IOC) dates shown on the third table are still in the future, as are all of the quantitative forecasts for 1982 on the fourth table, there is no way of knowing today whether these forecasts will actually prove to be correct. We can, however, compare the forecasts made in 1974, 1976 and 1978 to judge whether accumulating evidence has required major adjustments. Assuming that the most recent estimates are the best--an assumption which is not provable but is plausible because evidence accumulates over time--the comparison of past and present forecasts offers some insight into the amount of leadtime the estimators have been able to provide to NIE consumers. We find that:

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--Many of the IOC dates forecast in 1974 and 1976 have not had to be changed much.

--The diversity of Soviet offensive and defensive systems now expected in the early 1980s was not anticipated in 1974. Several new systems now expected were not forecast that long ago. However, the Soviets have evidently deferred deployment of a mobile ICBM which was forecast on the basis of R&D activity.

--The rapidity with which the Soviets would develop ICBMs with considerably improved accuracy was underestimated in 1974 and 1976.

--The rapidity with which the Soviets would develop a new SSBN and a new heavy bomber was overestimated in 1976, judging by present evidence.

--Finally, the last table shows that this year we have increased considerably our estimate of online Soviet intercontinental weapons four years hence, because we believe recent evidence points to a sharp upward trend which was not forecast in previous NIEs.

9. This review of the estimative record confirms that the NIEs consistently underestimated Soviet strategic force goals throughout most of the 1960s. It indicates that in the 1970s the estimative performance has been mixed. Insofar as can now be determined, many recent forecasts have been about right. There have been some apparent overestimates. However, in two important aspects of Soviet intercontinental striking capability in the early 1980s--the accuracy of Soviet ICBMs and the number of online Soviet missile RVs and bomber weapons--we now believe that in the past few years we were underestimating. This conclusion was reached in 1978 on the basis of newly-acquired flight-testing and other evidence pointing to sharp Soviet improvements, whereas previously the evidence had pointed to more gradual Soviet advances.

10. There remains the question of what degree of confidence consumers should have in NIE forecasts in light of the estimative record. A number of considerations are relevant:

--Our present forecasts are based on the expectation that the USSR will continue to demonstrate broad scope, vigor, and persistence in its

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strategic programs. Concern about US reactions is no longer assumed to inhibit the Soviets' determination to improve their deterrent and war-fighting capabilities.

--In general, our historical base and current information about on-going Soviet deployment programs is better than before, but we still have very little information about specific Soviet plans. Because we are, in effect, projecting forward from recent and current trends, forecasts for the near term are likely to be much more reliable than forecasts for the period 5-10 years hence.

--When deployment programs are in mid-stream and their pace is well established, confident forecasts can extend some years into the future. Periods of change in Soviet deployment programs, however, can introduce substantial uncertainties about even the near term. While the overall pace of ICBM launcher conversions has been fairly steady and predictable for several years, the Soviets have clearly adjusted its details more than once to prospective SALT II limitations. The Soviet SSBN construction program is believed even now to be in transition from the D-class to the Typhoon class and the program to convert ICBM launchers to SS-17s, 18s and 19s will reach the prospective SALT II ceiling about two years hence. Changes in Soviet programing which break historical precedent will remain particularly difficult to forecast.

--With respect to new weapons, we usually know of their existence several years before deployment. Because development leadtimes are long, we can be reasonably confident that future Soviet strategic forces will consist very largely of types of weapons identified several years in advance. Examples of forecasts for the early 1980s based on developmental evidence include a new, solid propellant ICBM and a new SSBN/SLBM weapon system. If, however, the Soviets run into difficulty in developing a system, or if they cancel it, we are not likely to have forewarning.

--Soviet security measures, however, usually prevent us from determining the specific characteristics of new weapons and from identifying modifications to existing weapons until late in the development cycle. Uncertainty sometimes persists until well after deployment has begun. Examples are our recent confirmation of much-improved guidance systems on modified Soviet ICBMs [redacted], and our continuing uncertainty and disagreement about the performance characteristics of the Backfire bomber.

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--Recognizing these limitations, our present estimative philosophy is to change our forecasts, even drastically, as soon as possible when the evidence leads us to believe we have detected a new development or trend, or that the Soviets have altered a program. This means we accept considerable fluctuations in forecasts from year to year in the interests of giving our consumers as much advance warning as possible.

Attachments

8 February 1979

ESTIMATED OPERATIONAL SOVIET SLBM FORCE IN MID-1978

	<u>1974 Estimate</u>	<u>1976 Estimate</u>	<u>1978 Actual</u>
Number of SALT-accountable SSBNs*	60	63	62
Number of SALT-accountable SLBM launchers	926	952**	950
SLBMs with MIRVs	54 @ 4 RVs	128 @ 3 RVs	112 @ 3 RVs
Online SLBM RVs	960	1,040	1,034
Best SLBM CEP			

* Limited to 62 by SALT I, but 1974 and 1976 NIEs anticipated its expiration in October 1977.

** Actual projection was 936, which excluded 16 launchers on several uniquely-configured Soviet submarines now counted in the total.

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ESTIMATED OPERATIONAL SOVIET ICBM FORCES IN MID-1978

	<u>1974 Estimate</u>	<u>1976 Estimate</u>	<u>1978 Actual</u>
Number of launchers at deployment fields*	1,482**	1,378	1,398
Launchers operational with SS-18s	152	134	134
Launchers operational with SS-17/19s	580 (200/380)	360 (140/220)	230 (80/150)
Launchers operational with MIRVs	712	354	318
Online ICBM RVs	4,540	3,832	2,850
MIRVed ICBM CEPs--(Estimated in 1974, 76, & 78)			
SS-17 Mod 1			
SS-18 Mod 2			
SS-19 Mod 1			
MIRVed Warhead Yields--(Estimated in 1974, 76, & 78)			
SS-17 Mod 1			
SS-18 Mod 2			
SS-19 Mod 1			

* Construction of new fixed launchers banned by SALT I.

** Included 60 mobile ICBMs.

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IOC DATES FOR NEW OR MODIFIED SOVIET SYSTEMS

	<u>1974 Estimate</u>	<u>1976 Estimate</u>	<u>1978 Estimate</u>
ICBMs with CEP of 	1976	1976*	1976*
ICBMs with CEP of 	1980s	1980-82	1979
ICBM with MIRVs	1975	1975*	1975*
SLBM with MIRVs	1978	1977	1978*
Typhoon SSBN/SLBM System	--	1980 (4 RVs)	1982 (8 RVs)
New heavy bomber	-- (no evidence but capable of doing so)	1981	1984
Mobile ICBM	1977	Deferred	Deferred
Mobile IRBM (with MIRVs)	**	1977	1978*
Low-Altitude Interceptor (Lookdown/shootdown)	-- (predicting interceptor w/somewhat less capability)	1980/81	1981
New low-altitude SAM (SA-X-10)	-- (some evidence of a program)	1980	1980
AWACs aircraft	1982	1982	1981
Long-range air-launched cruise missile	--	-- (could by late 1970s)	early 1980s
Small long-range air-launched cruise missile	--	-- (could in mid- late 1980s)	-- (could in mid- late 1980s)

* Signifies that NIE reported IOC data as past occurrence.

** The subject of Soviet intermediate range forces was not addressed in 1974 estimate.

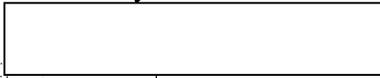
8 February 1979

PROJECTIONS FOR 1982 UNDER SALT II CONDITIONS

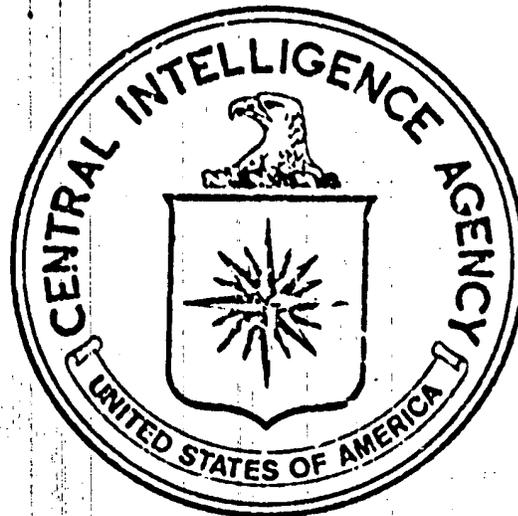
	<u>1976</u> <u>Estimate</u>	<u>1977</u> <u>Estimate</u>	<u>1978</u> <u>Estimate</u>
Total Delivery Vehicles*	2,200	2,200	2,250
Online Weapons			
ICBM RVs	4,958	4,784	6,056
SLBM RVs	1,360	1,184	2,256
Bomber Weapons	284	122	154
Total	6,602	6,090	8,476
Online EMT			
ICBMs	5,285	4,751	5,074
SLBMs	1,186	746	923
Bombers	383	273	347
Total	6,554	5,770	6,344

* Figures derived from assumed SALT II provision. Backfire bombers are not included in totals.

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STUDIES IN INTELLIGENCE



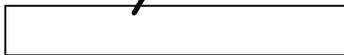
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CENTRAL INTELLIGENCE AGENCY

For Reference

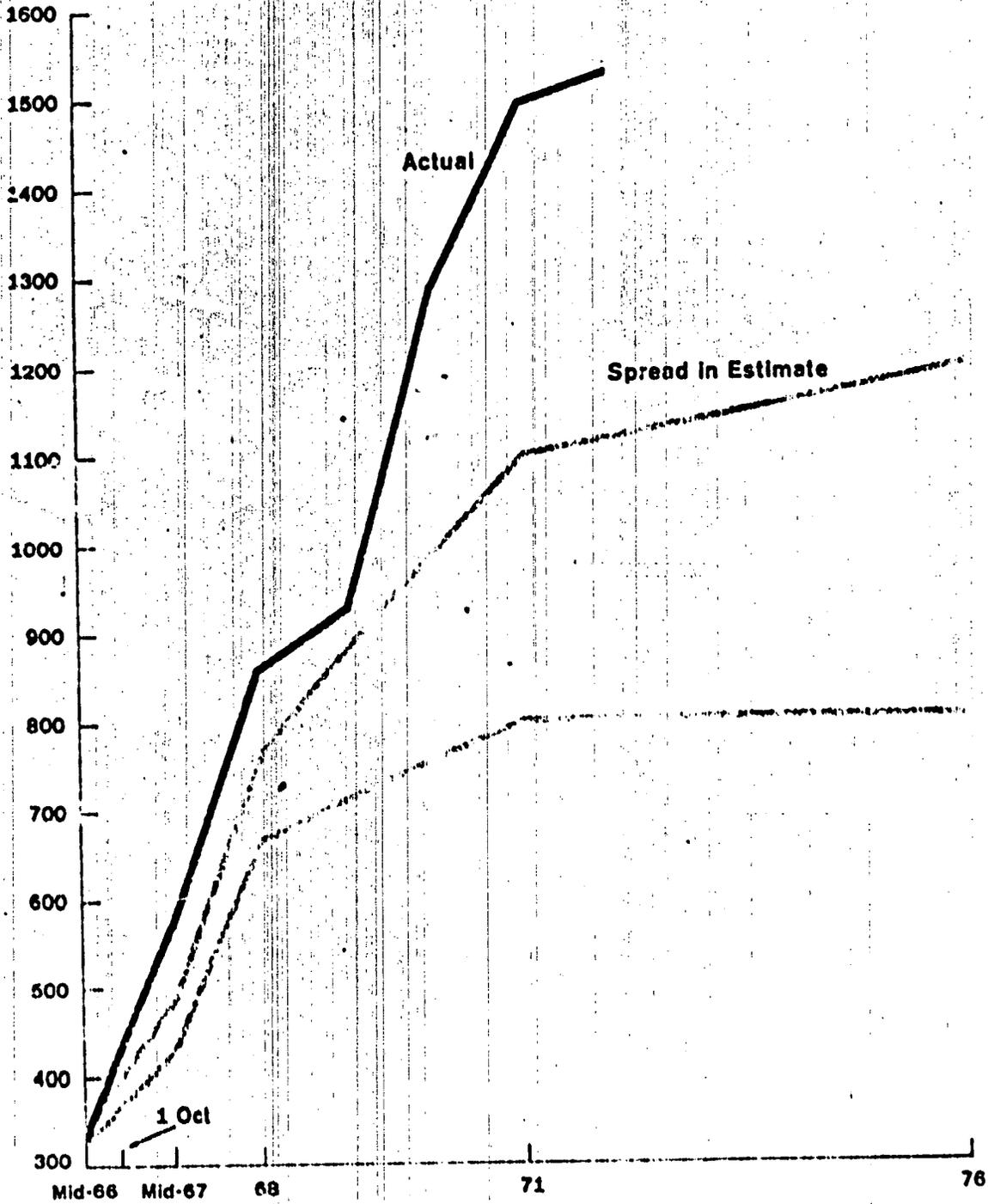
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ICBM Launchers: NIE 11-8-66 v. Fact

Chart 1



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Chart 1. NIE 11-8-66 v. Fact.

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*Soviet weaponry—
overestimated or underestimated?*

WOHLSTETTER, SOVIET STRATEGIC FORCES, AND NATIONAL INTELLIGENCE ESTIMATES

Jack H. Taylor

The summer 1974 issue of *Foreign Policy* carried an article by Professor Albert Wohlstetter titled "Is There a Strategic Arms Race?" In the article Wohlstetter took up the question of myths and realities in the "arms race." He sought to demonstrate that much of the public debate over the arms race has been driven by myths, among others the myth of overestimation—that is, the widespread belief that the Pentagon systematically *overestimates* the strength of Soviet strategic forces. Using the Defense posture statements as his basis, Wohlstetter showed that in fact during the mid-1960s the tendency was to *underestimate* in such things as ICBMs, SLBMs, and bombers (although earlier, in the "missile gap" era, the tendency had of course been quite the contrary).

Since the article was published, I have examined National Intelligence Estimates going back to 1960 to see whether or not the same charge could be directed at the official judgments of the corporate body whose task it is to communicate the views of the U.S. intelligence community, the U.S. Intelligence Board, as set forth in the NIEs. I also checked estimative history as regards anticipated qualitative improvements in weapon systems and their predicted operational dates.

I am satisfied on the basis of my research that Dr. Wohlstetter is essentially correct in the case of ICBMs during the 1960s. There are some minor differences between what the intelligence community said and the data Wohlstetter used, but not enough to make a case against Wohlstetter's findings.

Take some examples of how the USIB tended to underestimate:

NIE 11-9-63 forecast a spread of 370 to 670 launchers for mid-1969. The actual count in mid-'69 was 858.

NIE 11-8-64 was even more extreme. It forecast 410 to 700 launchers for mid-70. The actual count was 1,292.

The worst of the lot was the NIE issued in 1966. It forecast a spread of 800 to 1,120 for mid-72. The actual count was 1,527. With the exception of the initial year, the actual count exceeded the projected annual spreads over the entire period covered by the estimate. (See Chart 1.)

In reading the past NIEs, I hoped to find some clear rationale for the repeated underestimation. In many years the community expressed views essentially along the lines that the Soviets would not deploy as many ICBMs as the U.S. for fear of touching off a new round of deployment in the U.S., or that they would be content with a retaliatory force somewhat smaller than the U.S. force. In 1967, the rationale given for estimates such as 11-8-66 was that the

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Soviets saw political and psychological advantages in having an ICBM force roughly the same size as that of the U.S., and that was said to be the goal of their deployment program. In other years, however, no clear rationale was presented for the projected numbers.

In 1968, the text of the NIE established a lower side of the range for the future at 1,360 launchers (the number operational and under construction at that time). Because of several factors that could influence the size of the force, however, it did not estimate the maximum size it might reach.*

I thought, when embarking on this venture, that it would be found that we had credited the Soviets with the ability to make rapid strides in weapons technology (leading to MIRVs, high accuracies, etc.,) and that consequent improvements in quality would permit Moscow to limit the quantity of weapons deployed. But this was not the case. Our judgments on when the Soviets were likely to introduce certain qualitative improvements into their systems fitted pretty well with what has actually happened.

The "Missile Gap"

I suspect, but obviously cannot document the fact, that part of the reason for the repeated underestimation of the growth of Soviet ICBM forces was a subconscious (or maybe even conscious) overreaction by the intelligence community to the gross overestimation of Soviet ICBM growth during the days of the "missile gap." The intelligence community took quite a public flailing for that error of judgment.

The "missile gap" era began in August 1957 when the Soviets carried out the first test firing of an ICBM. That firing and subsequent ones served to convince a large segment of the U.S. intelligence community, as well as sizable elements of Congress and the Department of Defense, that the Soviets were preparing to embark on an ICBM deployment program involving large numbers of missiles. From the late 1950s until September 1961, the tocsin was repeatedly sounded that the Soviets were outpacing the United States in ICBM production and deployment. Several statements made by Khrushchev during those years, both public and private, seemed to be encouraging such thoughts. The "missile gap" was much discussed during the Presidential campaign of 1960, and the NIE for that year serves in part to tell why. (See Chart 2.)

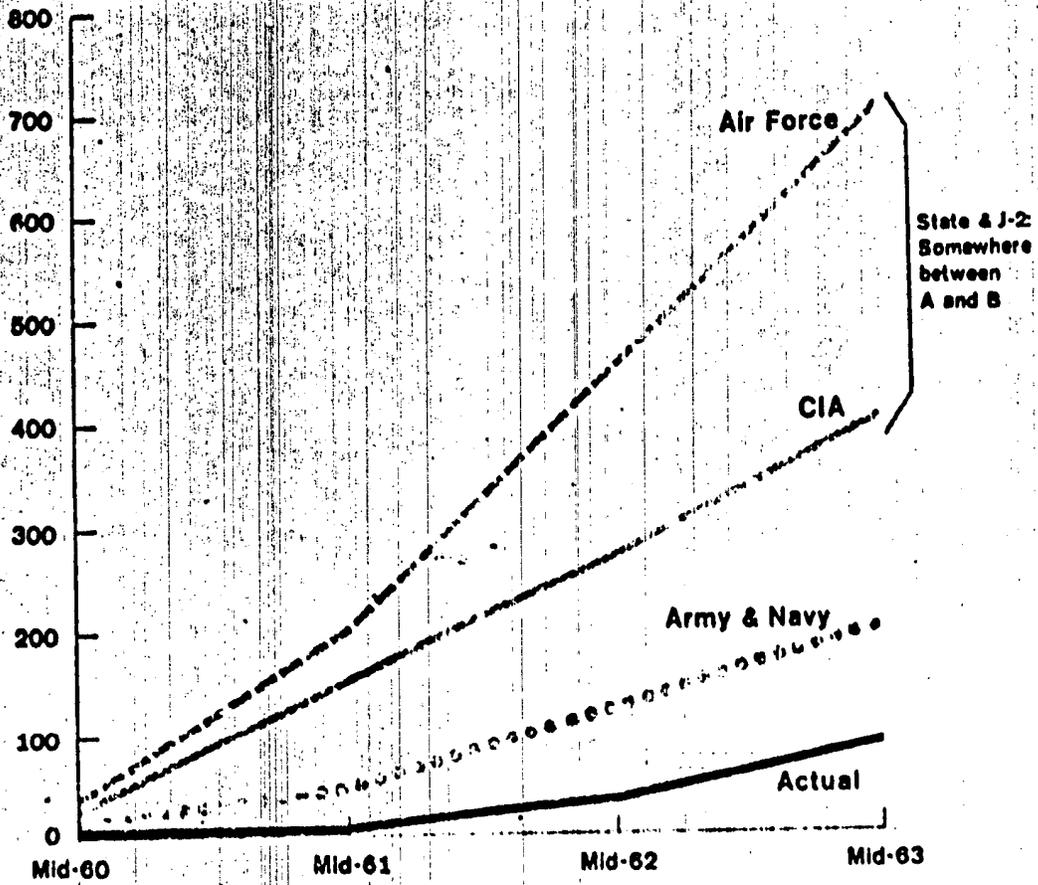
NIE 11-8-60, dated 1 August 1960, contained three numerical estimates of Soviet ICBM strength for mid-1963. The Air Force estimated 700, the CIA 400, and the Army and Navy 200. State and the J-2 of the Joint Staff stated that they thought the number would be somewhere between the CIA number and the Air Force number. *By mid-1963 the actual number deployed was less than 100.*

In NIE 11-9-61, dated 7 June 1961, opinion was again well divided. CIA estimated that by 1964 there would be 200 to 400 ICBMs deployed; State INR's spread was 300 to 500; Army and Navy liked 150 to 300; and the Air Force projected 850. *By mid-1964 the number actually deployed was 191.* The Air

*State, DIA, and the military services all took footnote to this omission. They considered 1,800 launchers to be the upper limit.

ICBM Launchers: NIE 11-8-60 v. Fact

Chart 2



000197 G-75 CIA

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Chart 2. NIE 11-8-60 v. Fact.

Force, bolder than the rest of the community, also projected ahead to 1966, estimating that by that time the Soviets would have 1,450 in the field. By 1966 the actual number deployed was 250. (See Chart 3).

Data collected during the late summer of 1961 showed the community how wrong its estimates had been, and a Memorandum to Holders of NIE 11-8-61 was issued in September of that year. All agreed that there were probably 10 to 15 ICBMs deployed at that time (there were actually only 4) and that by mid-1963 the spread would be some 75 to 125; the number actually deployed by mid-1963 was 91, close to the center of the spread.

The Cuban Impact

I also feel that part of the reason for repeated *underestimating* was a lack of appreciation on the part of the intelligence community of how bitter Khrushchev, and probably others in the Soviet hierarchy at the time, felt about the "facing down" they experienced as a result of the Cuban missile crisis in 1962. At that time the Soviets had less than 50 ICBM launchers operational, and we knew it. The Soviets knew they were dealing from a position of weakness and probably at least suspected that we were aware of their lack of ICBM strength. The chronology of the growth of their ICBM force fits very neatly with a decision that might have been taken shortly after the pullout from Cuba to expand their ICBM force at a rapid rate and probably to a size never originally intended. Deployment of the SS-9 and SS-11 really started to take off four years after the crisis.

Heavy Bombers

Wohlstetter is again correct in the case of heavy bombers. From 1960 through 1971, the NIEs always phased out the Bison and Bear bombers at a faster rate than actually occurred. There has, in fact, been no reduction in the heavy bomber force for the past six years. I still think that the estimative judgments were logical, albeit erroneous. Why the Soviets would go to the expense of retaining such a small fleet of obsolete heavy bombers defies well-reasoned explanation.

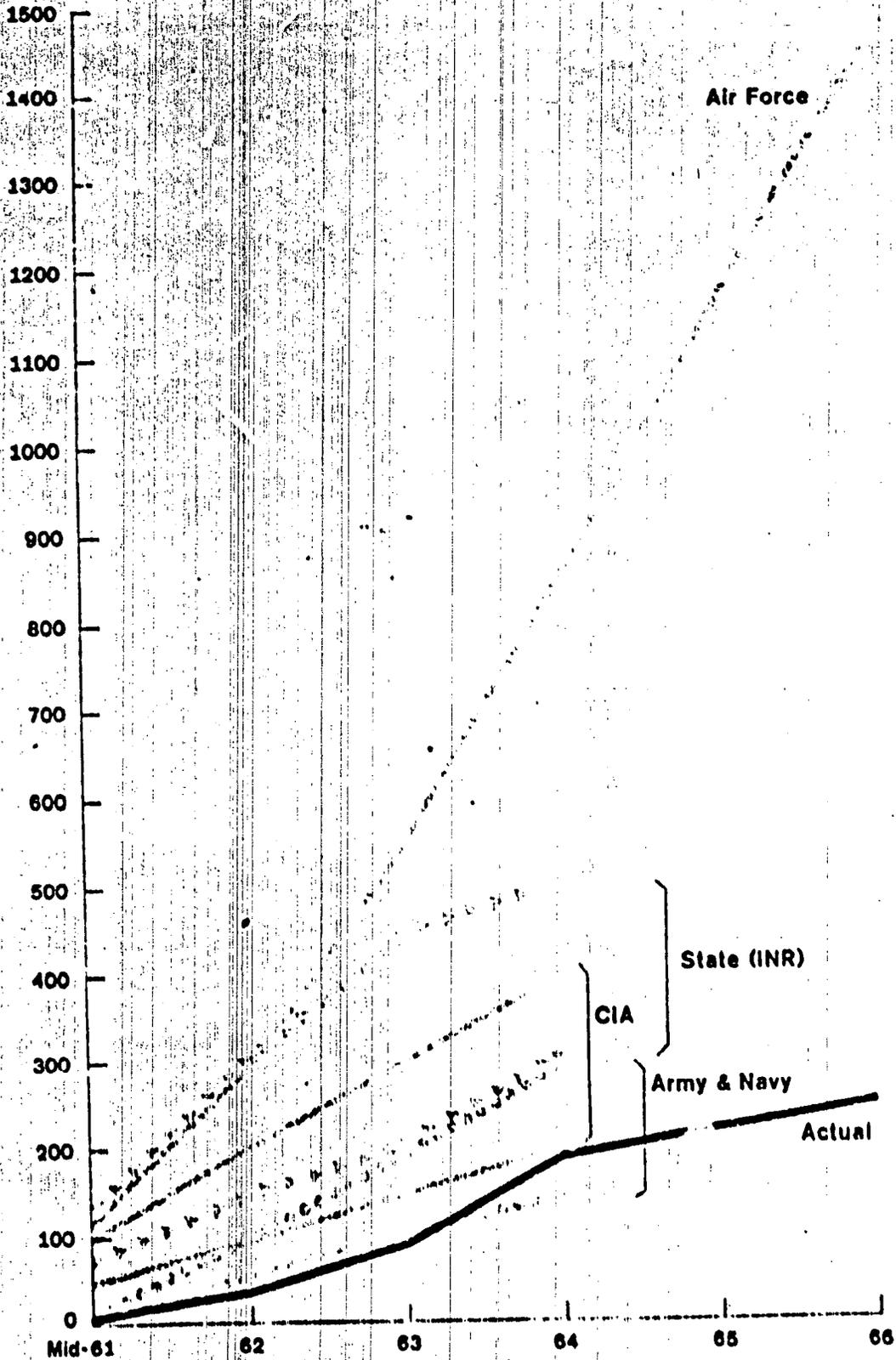
Submarine-Launched Ballistic Missiles

In the case of Soviet submarine-launched ballistic missiles, Wohlstetter is somewhat wrong in his assertion that the tendency was to underestimate. The NIE history on those systems is mixed. From 1961 through 1963, the NIEs overestimated. The spread of 100 to 250 projected for 1970 in the 1961 NIE was exceeded, but only in that one year. (See Chart 4.) (It is only fair to point out that the only NIE Wohlstetter used for these allegations about numbers of SLBMs was the 1961 projection, and that isn't cricket.)

The subsequent 1965 estimate erred slightly on the high side in its projection for mid-1966, showing a spread of SLBMs for that year of 122 to 137. The actual count was 108. The projection for mid-1967 held at 122 to 137 and was pretty good but for the wrong reason; the unpredicted advent of the first Y-class in 1967 boosted the actual count to 124, within the NIE spread. In projecting beyond

ICBM Launchers: NIE 11-8-61 v. Fact

Chart 3



004190 0-75 CIA

Chart 3. NIE 11-8-61 v. Fact.

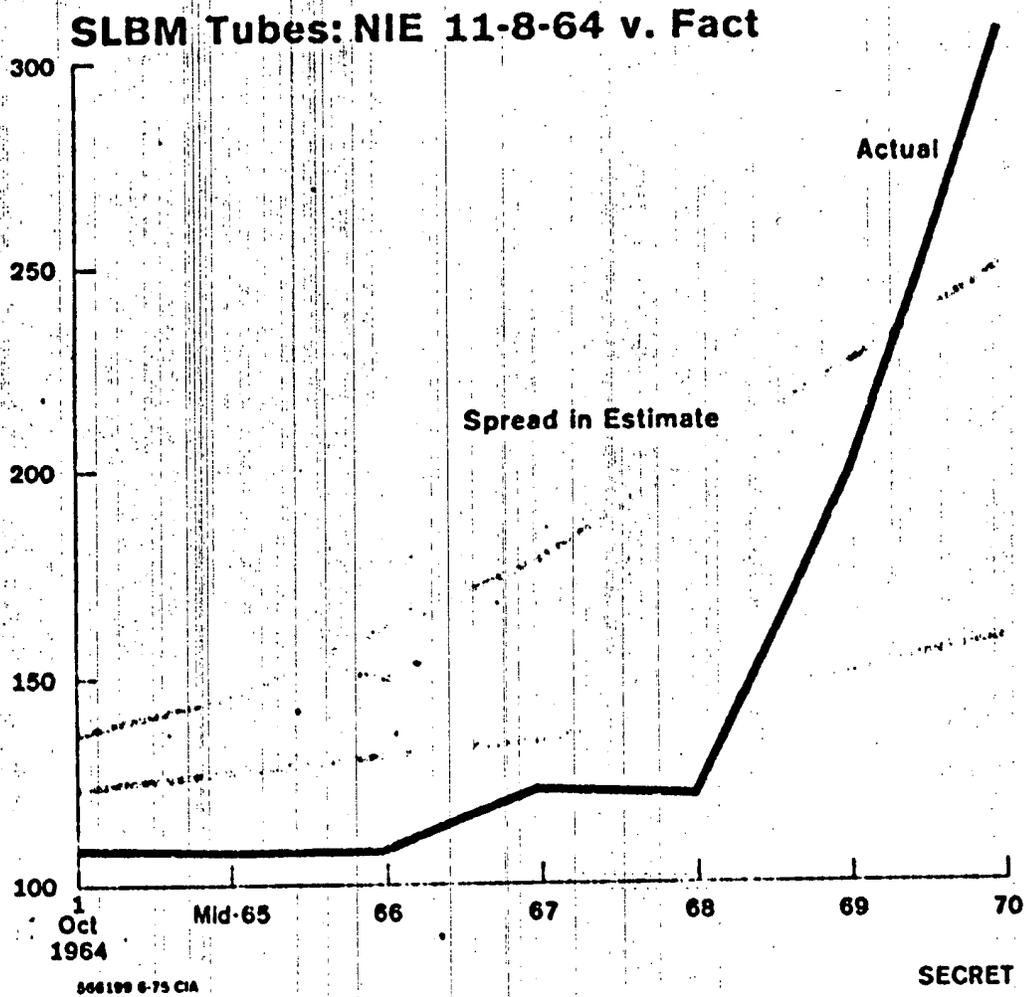


Chart 4. NIE 11-8-64 v. Fact.

1967, the NIE considered only the ballistic missile submarines, and did not specify the numbers of tubes per boat. In doing so, however, the estimate was not too bad. It projected some 50 such submarines, including perhaps 7 of a new class, for mid-1970. The actual number was 47, including 13 of the new Y-class.

Our projection in 1966 for mid-1971 fell well below the actual count for that year, principally because we had not yet established a production rate for the Y-class, and the Soviets had 21 of that class operational by 1971, as opposed to an estimate of 10. The NIE in 1967 also fell short in its projection for mid-69 and for mid-72 for the same reason. The 1968 estimate was quite accurate in its prediction, as was the one in 1969. The 1970 NIE's record for the years 71, 72, 73, and 74 was under, under, over, over—but the margin of error in each instance was 20% or less.

The main reason for the overestimates in SLBM strength in the early 1960s was the fact that the size of the ballistic missile submarine force remained static from 1962 through 1966. The natural tendency in estimating when a new weapon

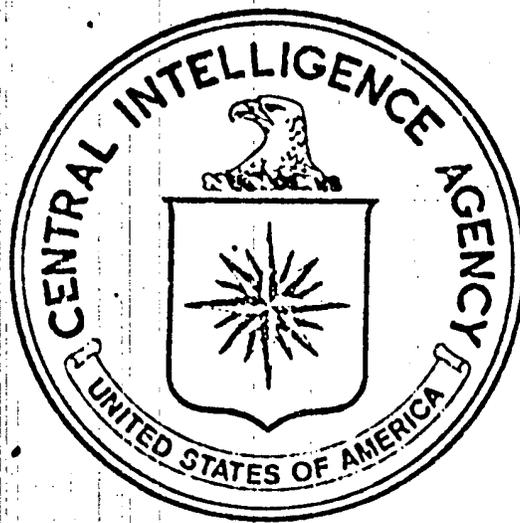
system is seen coming in is to project a continuing growth in that system and to anticipate the development of new, improved models. In retrospect, it is now clear that the Soviets opted to hold their SLBM force at a modest level of three-tubed G- and II-class submarines, equipped with short range missiles, until something more nearly approaching the U.S. Polaris system could become available. And it did--the Y-class, fitted with 16 tubes.

In sum, the USIB repeatedly erred after the mid-1960s in two out of three categories. No one can claim this as a triumph, and let us hope that the shortcomings prove instructive in the future. As Wohlstetter has observed, however: "Predicting the size and exact mixture of a potential adversary's weapon deployments several years hence is a hard line of work. It is intrinsically uncertain, reversible by the adversary himself between the time of prediction and the actual deployment."

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STUDIES IN INTELLIGENCE



VOL. 19 No. 2

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CENTRAL INTELLIGENCE AGENCY

For Reference

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In the preceding issue of *Studies*, Jack H. Taylor matched the results of NIE's on Soviet weaponry against the thesis of Professor Albert Wohlstetter that the Pentagon track record—public opinion notwithstanding—has been to underestimate rather than overestimate Soviet strategic forces. Taylor found for Wohlstetter's thesis. In the following article Ross Cowey demonstrates that the estimates fared much better in their non-quantitative judgments.

The Editor

MORE ON THE MILITARY ESTIMATES

Ross Cowey

Having worked closely with Jack Taylor in drafting some of the National Intelligence Estimates which he surveyed in his article in the February *Review of National Intelligence*,* I read his piece on Soviet military estimates with great interest. I found myself in agreement with most of his findings, but disappointed by his failure to go farther with some of his analysis.

Taylor's summary of the Estimates reminded me of an observation which Abbot Smith made in an article in the Fall, 1969 issue of *Studies in Intelligence* (XIII/4): "One could easily make up a list of projections (from the military estimates) which were too low, another of those which were too high, another of those which were substantially correct, and a final one—very short—of those which, thanks more to luck than wisdom, were precisely correct." Taylor certainly proves the point.

Admittedly, Taylor focused on the quantitative underestimates referred to by Professor Albert Wohlstetter.** What his article does not show, therefore, is that the estimates were right with respect to a number of important, non-quantitative judgments made over the years about Soviet forces. Perhaps the most significant of these was the repeated judgment through the Sixties that the Soviets could not expect to achieve strategic capabilities which would make rational the deliberate initiation of general war.

Any review of the Estimates written since about 1962—i.e., since the advent of improved collection systems—would also show that the intelligence community has been able to provide warning of the introduction of every major Soviet strategic weapon system well before its initial operational capability. We have *not* always been able to agree among ourselves on the specific mission of each new system (e.g., the SA-5 missile and the Backfire bomber) or—as Taylor shows—about the pace or extent of its deployment. But we have been able to provide the planner with knowledge sufficient for general guidance, if not for detailed planning.

I would agree with Taylor that part of the reason for our repeated underestimates in the mid-Sixties of the impending growth in Soviet ICBM forces was an over-reaction by the community to the gross overestimates on this subject in the late Fifties. Over-reaction to past mistakes—at least to past overestimates—seems to be a recurring pattern in the estimative process. Our overestimates in the mid-to-late

*See also *Studies in Intelligence*, XIV/1.

**"Is There a Strategic Arms Race," *Foreign Policy*, Summer 1974.

Fifties of Soviet missile, bomber, and fighter strengths were followed by underestimates for each of those forces during the Sixties.

Another analytical syndrome working against us—one which may be even more controlling—is our tendency to overestimate future force levels in the absence of firm evidence, and to underestimate with the advantage of such evidence. During the late Fifties, we were groping in the dark for information on what the Soviets were doing as they translated the new technology of the space age into new military hardware. With the introduction of more sophisticated intelligence collection methods in the Sixties, we gained a much better appreciation of Soviet capabilities to make use of the new technology. But this more complete base of information led to more conservative analysis, and to consistent underestimating. The *less* information we had, the more we *overestimated*; the *more* information we had, the more we *underestimated*. We hedged against uncertainty, but felt constrained by evidence. This is not to say we would have been better off with less information. What it does say is that we should guard against this tendency to overestimate in the absence of hard evidence, and to underestimate in its presence. Another phenomenon to which we seem to fall prey is the one to which Wohlstetter refers in his article, and which Taylor cites: the intrinsic uncertainty of predicting the size and mixture of a deployment program, because decisions on size or mix can be reversed between the time of our prediction and the time of actual deployment. In 1958, for example, we overestimated the strength of Soviet fighter forces for the early Sixties, but this resulted mainly from Khrushchev's unanticipated decision in the interim to cut back Soviet general purpose forces in favor of missiles.

Indeed, our estimates—right or wrong—can in themselves have an impact on force-level decisions, in both the U.S. and the USSR. The infamous “missile gap” gave strong impetus to U.S. strategic weapon programs, which contributed at least indirectly to Khrushchev's decision to put strategic missiles into Cuba. Soviet embarrassment in Cuba in turn gave impetus to the USSR's strategic weapon programs. The ensuing underestimates of the growth in Soviet ICBM forces resulted at least partly from our failure to take full account of this action-reaction phenomenon. The full effect of such interactions is so unpredictable, however, as to make complete accounting difficult if not impossible—even in retrospect.

In the submarine force estimates, we ran into a different problem: mirror-imaging—the tendency to use American experience as the means to measure likely Soviet goals. In the early Sixties, we estimated (without any direct evidence) that the USSR would follow the U.S. lead and build a sizable force of ballistic missile submarines. What we did not recognize at the time was that the Soviets saw a need for more cruise missile submarines—to defend themselves against U.S. aircraft carriers—and that the Russians were having difficulty developing an acceptable ballistic missile submarine system. The result was that full-scale production of modern ballistic missile submarines did not start in the USSR until the mid-Sixties, which put our estimates of the early Sixties way over the mark. I would like to think that the later and correct five-year estimates of 1968 and 1969 resulted from my having written them, but in reality they resulted merely from straight line projections of identifiable production rates—on up to the “mirror-imaged” and now demonstrably low estimate of as many as 50 modern ballistic missile submarines, a figure we then believed to be the ultimate Soviet goal.

The list of quantitative errors, then, is a long one. But this, perhaps, is not so surprising, considering the number of specific estimates made and the limited amount of information available to us at the time they were made—at least in the early part of

the period. The future is not likely to be any brighter. We will not be wanting for sophisticated intelligence collection systems, but difficult-to-observe qualitative improvements in the weapons already deployed will be as important to us in the future as changes in the observable number of delivery vehicles have been in the past.

In an arms control environment, where most of the developments prohibited by a treaty will be those which are relatively easy to monitor, we will not only have to watch for violations of the agreements themselves but will have to try to follow the variety of more difficult-to-observe improvements in Soviet weapon systems which will be permitted and which are likely to proliferate under such agreements. More than ever, the task for intelligence will be to observe the unobservable—and as the Soviets become more cognizant of our intelligence sources and methods, more things are likely to become less observable.

Attachment B

Topic B

Specific Charges that there were Major changes in
the 1979 Estimates (Compared to the 1978 Estimates)
in Force Residuals and in ICBM Fractionation, Ac-
curacy, and Reliability

14 September 1979

MEMORANDUM FOR THE RECORD

SUBJECT: Comments on "Foolish Intelligence" (Robert F. Ellsworth and Kenneth L. Adelman, Foreign Policy, Fall 1979)

1. Ellsworth and Adelman assert that the intelligence community in 1977 did not imagine the scope of Soviet improvements in fractionation, accuracy or reliability of ICBMs and SLBMs. As evidence they present on page two of their article two charts from the DoD annual reports for FY1979 and FY1980 (attached). The charts show the relative capability of Soviet and US forces to attack a given set of targets following a Soviet surprise attack and US retaliation. The charts indicate that the intelligence community's 1978 estimate of Soviet capability in the mid-1980s is substantially greater than was estimated in 1977.

Comparison of 1977 and 1978 Estimates

A. Deployment of MIRVed ICBMs and SLBMs:

2. Trends in Soviet capability as shown on these charts primarily reflect the number of weapons which would not be used in a Soviet first strike and which would also survive a subsequent US retaliatory attack. Under day-to-day

alert conditions this would be Soviet ICBM RVs not used or not destroyed in the exchange and weapons carried on SSBNs at sea. Our estimate of the number of online ICBM and SLBM RVs increased in the 1978 Estimate because we judged that the Soviets would initially deploy more MIRVed variants of their new ICBMs and fractionate their MIRVed SLBMs to higher levels and deploy them in greater numbers than we had previously believed. In particular, we projected in 1978 that:

--The Soviets would deploy a ten RV variant of the SS-18 beginning in 1979. In the 1977 Estimate we had projected that a ten RV large ICBM would not appear until 1982. Moreover, we projected that MIRVed variants of the SS-17 and SS-19 ICBMs would replace single RV variants by 1982. We had previously projected that some single RV variants would remain in the force through 1984. These judgments were based on evidence of extensive Soviet testing [redacted]

[redacted]

--The Soviets would deploy the SS-N-18 with seven MIRVs rather than three and that they would deploy a new SLBM for the Typhoon with eight MIRVs rather than four. Evidence of extensive Soviet flight testing [redacted]

--The Soviets would take full advantage of the SALT-II subceiling on MIRVed launchers and eventually would deploy MIRVed SLBMs on all D-III and on all new Typhoon SSBNs. In the 1977 Estimate we projected that the Soviets would deploy a mix of MIRVed and single RV SLBMs. The Soviets have demonstrated their interest in MIRVed systems with the development of the seven RV SS-N-18. Moreover, their requirements for high yield single RV SLBMs could be accommodated through continued deployment of the SS-N-6 and SS-N-8.

3. The rapid growth in Soviet online RVs which the intelligence community identified in the 1978 Estimate is compared with the 1977 Estimate for ICBMs, SLBMs, bombers and the total force. Our projections of earlier deployment of MIRVed ICBMs and higher fractionation of SLBMs result in an overall increase of some 2,400 RVs in the Soviet moderate SAL force during the early-1980s--from about 6,100 RVs in the 1977 Estimate to 8,500 in the 1978 Estimate. The number of ICBM RVs increases by about 25 percent in 1982--from 4,800 in the 1977 Estimate to 6,100 RVs--and the SLBM force about doubles--from 1,400 RVs to 2,900. By the end of the decade, however, both estimates project that the Soviets would deploy equal numbers of MIRVed ICBMs. The difference between estimates of total forces is therefore substantially less during this period.

B. Improved ICBM Accuracy:

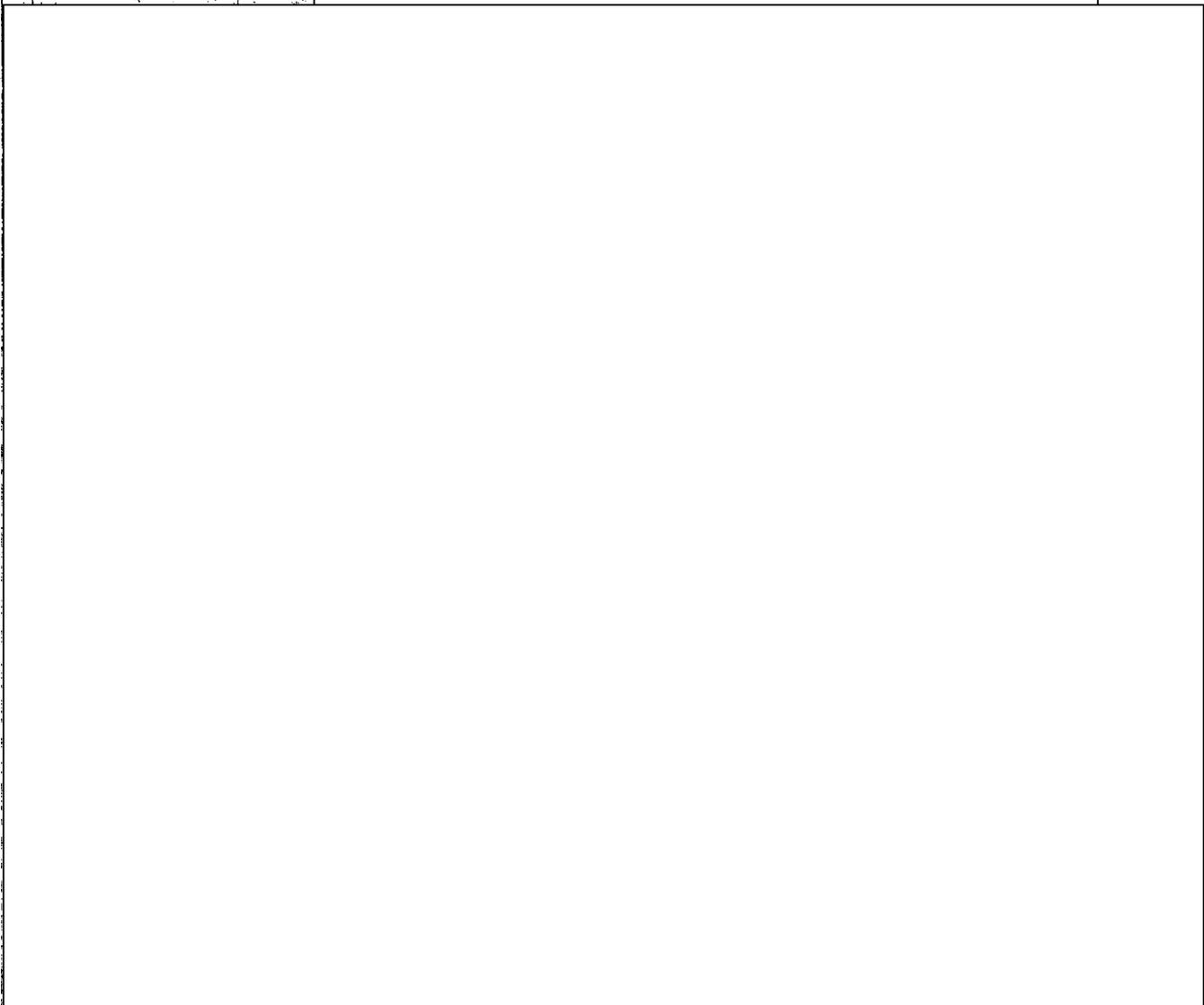
4. The decrease in US force capability during the early 1980s as indicated by both DoD charts reflects the growing vulnerability of US ICBMs to highly accurate Soviet ICBM RVs.* This decline is more rapid in the chart from the FY1980 report because we estimated in 1978 that new Soviet ICBMs would have better accuracy than we had projected in 1977. Ellsworth and Adelman comment that the intelligence community did not appreciate in 1977 the extent of accuracy improvements in Soviet ICBMs--that the Soviets would achieve a 180 percent improvement in accuracy over their current generation of ICBMs.

5. In 1977, we estimated that future Soviet ICBMs would achieve substantial improvements in accuracy, from about meters in 1977 to meters in the late 1980s. Extensive flight tests of MIRVed ICBMs with caused us to revise our estimate and project that the Soviets would achieve these greater accuracies three to four years earlier. This judgment resulted in an ICBM force that was more accurate and had greater counterforce capability during the early and mid-1980s than we had indicated in the

* The further decline in US capability during the mid-1980s depicted in the chart from the FY1980 report is due to slippage in the US Trident program.

1977 Estimate. T

of



Average accuracy of moderate SAL MIRVed ICBMs from the 1978 Estimate is percent better in the early and mid-1980s than the 1977 Estimate for the same period.

the 1978 Estimate remains within the upper bound of our uncertainty which we described in 1977.

C. Force Reliability:

6. Our 1978 Estimate of overall Soviet force reliability was unchanged from the year before: about 80

percent under normal day-to-day readiness and about 85 percent under generated conditions. (We note, however, that these estimates will be revised upward for NIE 11-3/8-79 to about 85 and 88 percent). [redacted]

Effect of Current Evidence on Projections

7. The changes in Soviet force projections which are cited in the Ellsworth and Adelman article represent our response to evidence acquired during the period of the 1978 Estimate. We are keenly aware that, in some cases, major changes in the estimate must rest upon a fragile evidential base. We remain ready to alter our projections as new data is gathered. We do not believe our estimates of moderate Soviet forces would be improved, as the article suggests, by "imagining" greater Soviet strategic capabilities. We try in our moderate Soviet force projections to remain consistent with current evidence, and to explore, [redacted]

[redacted] the implications of greater potential Soviet threats by means of high force projections. In these high forces we use deployment rates and IOC dates that represent a high level of Soviet effort and ascribe characteristics to these forces that are at the more threatening extremes of our uncertainties. [redacted]

8. We continually reexamine the manner in which we perform our strategic analysis and the impact which new evidence may have on our force projections. [redacted]

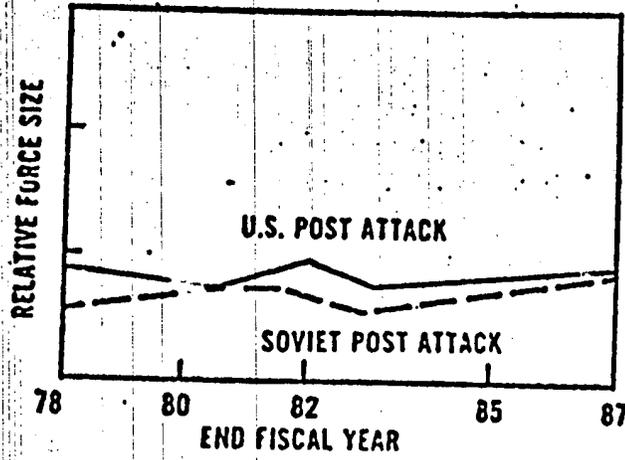
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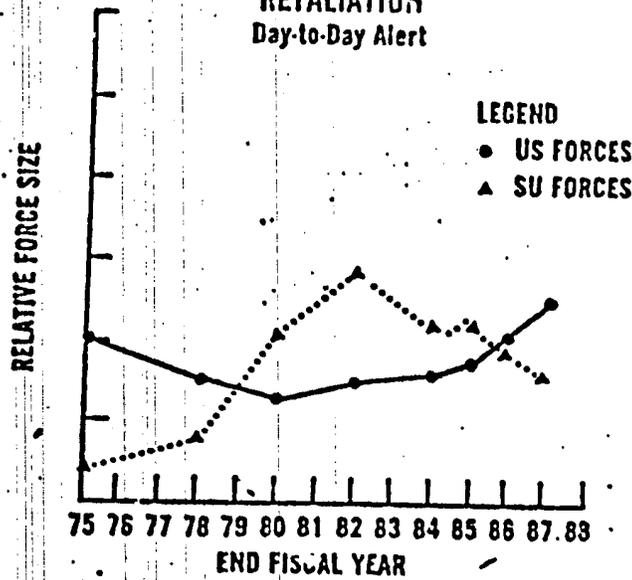
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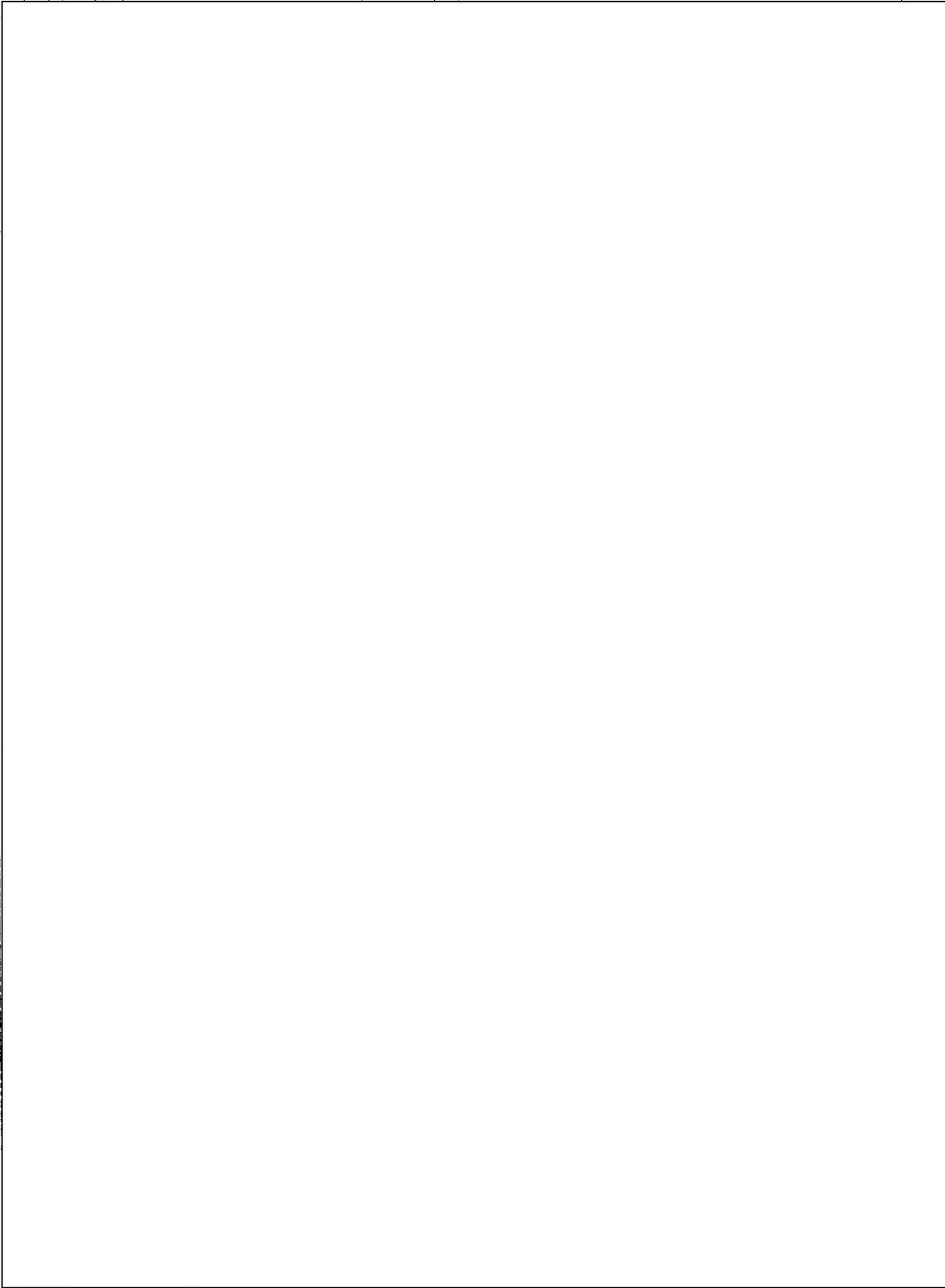
**Attachments:
As stated**

**FY 1979
AFTER U.S. RETALIATION**



**FY 1980
AFTER U.S. COUNTERFORCE
RETALIATION
Day-to-Day Alert**





Attachment C

Topic C

Backfire Production Estimates

12 September 1979

MEMORANDUM FOR: Deputy Chief, [redacted], OSR

SUBJECT : Fall 1979 Foreign Policy Article "Foolish Intelligence"

1. In the fall 1979 issue of Foreign Policy, the authors of the article "Foolish Intelligence" cite as a failure on the part of the Intelligence Community the fact that our estimates of the rate of Backfire production had been too low. The reference comes in a paragraph which contrasts intelligence estimates for 1978 and 1979. While we continually refine our estimate based on new information, we have made no significant change in our projected rate of Backfire production. [redacted]

2. The reference may reflect the uncertainty that was introduced into our Backfire [redacted] estimate in 1978 by the acquisition of some ambiguous production information. [redacted]

[redacted] because of the [redacted] we elected not to change our estimate but to await further evidence. [redacted]

3. The uncertainty was resolved in mid-1979 with the acquisition of additional [redacted] information. These data were in accord with our estimate. Thus we continue to estimate that the rate of Backfire production is about 30 per year. [redacted]

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Attachment D

Topic D

Percentage of GNP Devoted to Defense

Comments on article
"Foolish Intelligence" by
Robert F. Ellsworth and Kenneth L. Adelman
in Foreign Policy Fall 1979

Quotation from article:

"U.S. intelligence also committed a gross error by underestimating the overall Soviet military effort. In 1976 the CIA suddenly and retroactively doubled the percentage of gross national product it figured the Soviets had been and were devoting to defense—from between 5 and 7 percent (only slightly higher than the U.S. level) to between 11 and 13 percent (up to nearly three times the U.S. level)."

Comment:

In 1976, the CIA published an estimate of Soviet ruble spending for defense which was about twice as high as the estimate made two years earlier. Also, the estimate of the share of GNP absorbed in the USSR by defense was revised to 11 to 13 percent, approximately double the previous estimate.

The principal reason for the change was new information indicating that ruble prices of Soviet military hardware

were substantially higher than had previously been thought. The increase in the ruble estimate of total defense spending did not change the CIA's estimates of the physical size of Soviet military forces, Soviet military capabilities, or the dollar cost of Soviet defense activities. Rather, the higher ruble prices were an indication that Soviet defense industry was less efficient in its use of resources than we had believed.

The higher estimate also suggested that the economic impact of Soviet defense activities and the commitment of Soviet leaders to the military effort were greater than we had thought. Even before the estimate was revised, however, we had cautioned our consumers that the true economic burden of Soviet military programs was substantially greater than that implied by a simple calculation of the share of GNP devoted to defense.

This explanation of the change in the ruble estimate was provided along with the new estimate itself in our unclassified report of May 1976. It was also briefed to Mr. Ellsworth at the time.

Quotation from article:

" Such tremors constitute an early warning signal of sliding American technological supremacy. For the Soviet Union is charging ahead both in terms of military production (it now spends three times as much as the United States on

strategic forces and one-third more on general purpose forces) and in terms of military infrastructure, upon which future arms programs are to be mounted (where it spends 80 percent more than the United States)."

Comment:

Although the authors disparage the CIA estimates of Soviet defense costs, it is interesting to note that in this paragraph they are apparently using figures from our comparison of the dollar costs of U.S. and Soviet defense efforts. The references are made in such an imprecise way, however, that we cannot easily comment on their correspondence with our published estimates.

Attachment E

Topic E

North Korean Force Build-up

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12 SEP 1979

CIA's Study of North Korean Ground
Forces During the Seventies

The authors err in charging that the Intelligence Community overlooked North Korea's development of the world's fifth largest army, but they're right in claiming that we underestimated the size of that country's infantry force. That is, we did in fact give warning of a North Korean buildup, but because of a combination of factors-- the peculiar expense and difficulty of ground force order-of-battle analysis (especially in North Korea), some false or mis-read policy signals from Kim Il-sung, and an unfortunate over-emphasis on the indications and warning problem-- we failed to give timely notice of the full size of the infantry portion of that buildup.

Research on ground force order-of-battle is a murky and labor-intensive operation, compounded in the case of North Korea by the North Korean propensity for deploying divisions and brigades in a fragmented fashion--usually in installations accommodating units no larger than a battalion. A major, integrated study is required to assess the full size of such a force.

We made such a study in 1970-1971 and our assessments proved to be accurate. Thereafter, however, the North's declared goal of building up its guerrilla-type forces and

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our lack of clear-cut evidence for the expansion of ground force units made us falsely complacent, despite the growth we observed in the North's naval, air, and air defense forces early in the decade. By mid-1975, however, we noted significant increases in ground force firepower and mobility that prompted us to begin reevaluating the threat from the North and, alarmed by what we found, we subsequently turned our attention to the indications and warning problem. We became sufficiently disturbed by the changes in the North to alert the President and other senior officials, and we reported in August 1976) , and again in January and March

of 1977, that we believed that the North had achieved an across-the-board advantage in capabilities.

Despite indications of continued growth in the armor and artillery forces, we still had little direct evidence of widespread expansion of the infantry. The special studies done within the Community in late 1977 and early 1978 on North Korean armor and artillery, however, raised the distinct possibility that the North had additional infantry to go along with its added tanks and guns. It was only when the Community--led by the Army Inscom team--began in the spring of 1978 the massive study to reevaluate the North's

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ground forces by exhaustive all-source analysis that we learned the true magnitude of North Korea's programs to improve and expand its ground forces.

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Attachment F

Enclosed are:

a. "Foolish Intelligence" by Robert Ellsworth and Kenneth L. Adelman, Foreign Policy, Fall 1979, and

b. Washington Post (UPI) Summary of the above.

FOOLISH INTELLIGENCE

by Robert F. Ellsworth
and Kenneth L. Adelman

The intelligence community should brace itself for a new wave of castigation that widens its past sea of woes. The looming storm will arise from accusations that it inadequately warned the United States of Soviet military capabilities and technological breakthroughs during the 1970s and early 1980s. These inevitable accusations, originating from the center-right, will diffuse throughout the body politic and will focus on the competence of American intelligence analysis. For the Central Intelligence Agency elite—those in the Operations Directorate—has catered for years to America's foreign policy establishment view that the biggest game in town is at least collaboration and at most condominium with Russia. This has led to a process of discounting data that portray the Soviet Union as a genuine threat rather than as a potential partner.

Past hubris has brought on present nemesis. The CIA's (and military intelligence's) attempts at political assassinations, covert shenanigans, illegal spying on American citizens, and free-wheeling operations have reaped their reprisals. The now receding accusations, originating from the center-left, focused on these intelligence excesses. As a result, the reins of the covert operators were pulled in, as the five-year-old investigations and presidential Executive Orders scaled down the CIA's activities.

The limitations were perhaps overdue, though the fanfare was overblown. The CIA was never as nefarious as strident critics con-

tend, and few of its members indulged in offensive deportment. Even if every official investigated for illegal practices were found guilty, the culprits would still add up to a tiny percentage of all intelligence personnel. Executive and congressional investigators have highlighted the sensation at the expense of the more significant.

President Carter aimed at the right target—inadequate performance rather than overzealousness—on Armistice Day 1978, when he fired off a handwritten memo to his top security advisers. It opened pungently, "I am not satisfied with the quality of political intelligence." The president was justifiably distraught by the crumbling of the shah's reign in Iran. He resented that American intelligence officers, long stationed in Tehran, had failed to tell him what General Ludendorff told the kaiser after a brief visit with the Austrian army on the eve of World War I: "We are allied to a corpse."

The much touted intelligence failure in Iran was due to a massive failure of imagination. Similar human frailty led the British ambassador in Berlin, two days before the onset of World War I, to report that war was out of the question. The syndrome also afflicted American leaders on the eve of Pearl Harbor, Stalin at the outset of Operation Barbarossa (Hitler's 1941 invasion of Russia), and the Israelis immediately before the 1973 Yom Kippur war—the three most celebrated intelligence failures of recent times.

But no such failure of imagination can account for staggering CIA errors, compounded over 15 years, in estimating Soviet forces and intentions in strategic weaponry and overall military effort. Beginning in the 1960s, the CIA embarked upon a consistent underestimation of the Soviet ICBM buildup, missing the mark by wide margins; its estimates became progressively worse, on the low side. In the mid-1970s the intelligence community underestimated the scale and effectiveness of the Soviets' multiple independently targetable reentry vehicle (MIRV) programs. Even more important, Soviet war-

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head accuracies that have already been achieved—and that have equaled U.S. accuracies—had been estimated by American intelligence to be unattainable by Moscow before the mid-1980s.

U.S. intelligence also committed a gross error: by underestimating the overall Soviet military effort. In 1976 the CIA suddenly and retroactively doubled the percentage of gross national product it figured the Soviets had been and were devoting to defense—from between 5 and 7 per cent (only slightly higher than the U.S. level) to between 11 and 13 per cent (up to nearly three times the U.S. level). Such flawed CIA estimates helped form national security policy for the past 15 years. In the mid-1960s the United States began its decade-long strategic stall, basically abjuring new strategic initiatives. It was then that Secretary of Defense Robert McNamara informed the public that “the Soviets have decided that they have lost the quantitative” strategic arms race and “are not seeking to engage us in that contest.” Lest the point be missed, he added, “There is no indication that the Soviets are seeking to develop a strategic nuclear force as large as ours.”

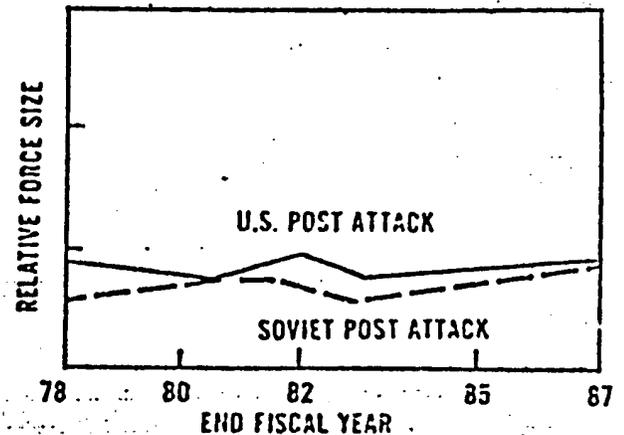
Legacy of Failures

The same American errors in anticipating the Soviet strategic build-up linger on. The latest flaws can be gleaned simply by comparing a series of charts measuring the superpowers' relative strategic capabilities. The charts published in the fiscal year 1980 annual report by the secretary of defense, when compared to those of last year, show a worsening forecast of the strategic situation in the early 1980s. Instead of enjoying an edge over the Soviets, as predicted only last year, it now seems the United States will be substantially inferior until about 1986, one year after the scheduled expiration of SALT II. This means the United States will be negotiating SALT III from a weak position.

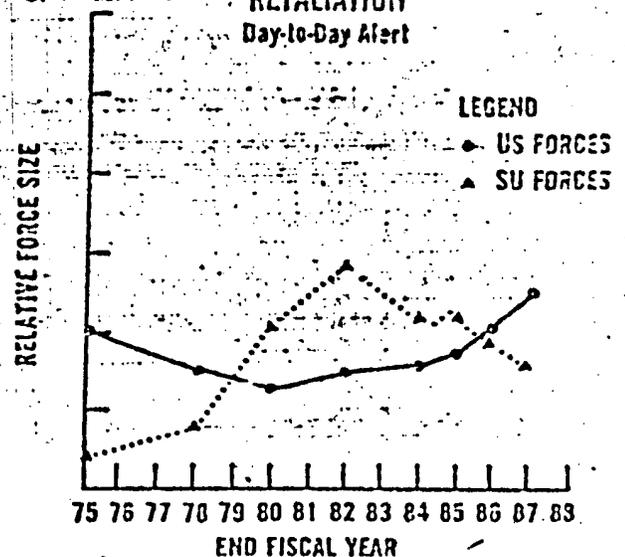
The change in estimates between 1978 and 1979 is not due to American revisions of force posture. Rather, the changes in the

charts reflect 1979's correction of 1978's underestimation of the drive and momentum of Soviet strategic improvements. Specifically, U.S. intelligence last year did not imagine the scope of recent Soviet improvements in fractionization or number of warheads per missile, accuracy (which gave them a 180 per cent improvement over the current generation of Soviet intercontinental ballistic missiles), and overall force reliability (the percentage of times their missiles launch when triggered). Also, estimates of Soviet Backfire bomber production rates had been too low.

FY 1979
AFTER U.S. RETALIATION



FY 1980
AFTER U.S. COUNTERFORCE
RETALIATION
Day-to-Day Alert



The same problem has dogged U.S. intelligence at the regional level. Defense Secretary Harold Brown informed the Congress last February that the Soviets' "ability to move their forces speedily into position for an attack" in Europe was "estimated to be greater" than was thought a year ago. At about the same time, the intelligence community found its previous estimates of North Korea's military might palpably low. Therefore, the CIA and others suddenly had to boost their estimates of Pyongyang's ground forces by some 25 per cent, even though U.S. estimates of the North's tanks had previously been increased by nearly one-third. Again, nothing much had actually occurred on that volatile peninsula; North Korea's military build-up has been boringly steady since 1970-1971. But U.S. intelligence failed to note that North Korea had amassed the fifth largest ground army in the world. Today major conflict involving the United States may be more likely there than anywhere else.

This string of recent intelligence estimates on the low side disproves a recurrent notion within liberal circles that the Pentagon and the CIA are in cahoots to overestimate the Russians for their own budgetary and ideological motivations. The fact that the legacy of such failures reaches back over 15 years and four presidents likewise disproves a recurrent notion within conservative circles that the recent underestimates of Soviet power can be ascribed solely to the Carter administration's infatuation with arms control.

The real source of the problem lies deeper, within the bowels of the intelligence bureaucracy itself. American intelligence has long been stultified by the domination of a clique. The CIA has suffered from an encrustation of leadership as its directors over virtually all of its history have been linked—by shared experience, psychological inclination, and profession—to the CIA's Operations Directorate (which is responsible for covert activities). This link began under William Donovan in the World War II Office of Strategic Services and was carried forward

by CIA Director Allen Dulles, who came out of World War II thrilled by his covert operational successes in Switzerland. His brother, Secretary of State John Foster Dulles, according to former CIA official Kermit Roosevelt, was "licking his chops" to rerun the dazzling covert operation in Iran (which had in 1953 reinstated the shah) in sundry spots scattered throughout the Third World.

Firestorm of Criticism

The Operations Directorate reigned supreme even after the Dulles era: Two-thirds of the highest CIA executive positions were filled by officers whose careers had blossomed in covert activities, and for years after the Dulleses departed, the covert side still consumed more than half the agency budget. The clandestine clan planned and executed the reckless Bay of Pigs invasion while keeping intelligence analysts in the dark. President Kennedy was thus denied the opportunity for a detached evaluation of the scheme. Covert operations are spectacular when they succeed but hideous when they do not; the Bay of Pigs did not, as intelligence analysts could have forecast had they been given a chance. In another show of strength, the Directorate handled much of the CIA's liaison with State, Defense, and other key agencies until the mid-1970s, thus spreading its own perspective beyond CIA headquarters.

Admiral Stansfield Turner, the current director of central intelligence, has weathered a firestorm of criticism for "gutting American intelligence." In fact, he has simply accelerated the task begun under predecessors James Schlesinger, William Colby, and George Bush to pare down the overstuffed but powerful Operations Directorate. The CIA is not synonymous with the Operations Directorate, though the Directorate's partisans contend otherwise. Turner has taken care not to stack the top with old clandestine hands. Just the opposite, in fact, since he is surrounded by individuals who generally lack experience as national intelligence producers or users.

Though Turner has trimmed Operations' sails, he has yet to launch a successful program to boost the capabilities of the National Foreign Assessment Center, the agency's analysis side. In the past, it has focused far too much on current intelligence and has been content with a lack of professionalism on the part of country and regional specialists. This became clear in the early 1970s after the National Security Council ordered the CIA to address an age-old topic: Yugoslavia after Tito. The report was more superficial than those written in German and Swiss daily newspapers. It turned out that the agency analysts who wrote it averaged less than two years' experience with the country and had not tapped outside expertise.

Covert operations are spectacular when they succeed but hideous when they do not.

Nor does Turner have control over all the actions of the Operations crew. Two years ago, for instance, the leadership of the analytic branch of the CIA realized that it could not achieve from within the needed upgrading in breadth of expertise and perspective on world affairs. They sought to find a way to gain access to the best minds in the nation for help in analyzing intelligence information. A strategy was developed to find and focus the talents of people from academia, business, private research groups, and others to assist the agency and to be available as a resource for selected agency analysts on momentous matters.

But the effort was soon sabotaged by those inside the agency who stood to lose most—the Operations crew and their alumni within the administration, the inspectorate general, and current intelligence reporting offices. They recognized that outside help, however well intentioned in trying to build up rather than tear down the intelligence capability, would weaken their hold by forcing other opinions to be considered or even incorpo-

rated. Better, they figured, to nip the budding threat. So they objected to the outsiders' access to classified material and charged financial falsification of government accounts and sloppy management of specific projects. Those standing accused heard the abounding innuendos but were not permitted to see the specific allegations. Yet a protracted struggle ensued until those organizing the new initiative were worn down, and it was abandoned.

Poor Preconceptions

Intelligence forecasts for Iran were also victims of this infighting. At the close of 1978, a congressional intelligence committee requested a full briefing on the situation in Iran. The CIA responded by sending its Operations—not its Analysis—people who, of course, testified from their own limited perspective. They lacked the imagination to see that a massive, popular counterrevolution had been launched against the shah's modernization revolution. These covert officers had treasures within Iran, not only the shah on the Peacock Throne, but also the now-famous listening posts on the Soviet border. These men swayed the entire intelligence community to report that the shah's opponents were numerically insignificant and politically impotent.

The prominence of cloak-and-dagger traditionalists casts a shadow beyond slanted country or regional reports. Their supremacy affects strategic issues and can be related to the dangerous underestimation of the Soviet military build-up. As a group, these members of the CIA have long subscribed to an essentially optimistic world view. First, they assumed that smooth superpower relations are critical to America's survival and welfare, and that the United States and the Soviet Union are winding their way toward a modicum of cooperation, if not collaboration. They felt their vocation was to work out the rules of the global game for the new era. Dedication to this vocation led to projection of similar purposes upon the essential partner—the Soviet Union—even if that projection also led

to screening out data that clearly suggested another vision of the future.

Second, they assumed that the Third World lacks the wit and wherewithal to influence decisively the great game of world politics. They cherished the developing world as a playground for covert operations, not as a participant in world affairs worthy of serious and sustained analysis. Thus, the CIA displayed a shocking failure of imagination in 1973 when it explicitly discounted the Yom Kippur war (although the head of the State Department's Bureau of Intelligence and Research wrote in April 1973 that war was highly likely there before the year's end), the Arab oil embargo, and the oil price hike.

The Operationists' preconceptions are widely shared among academics, journalists, and even government officials. Yet in Langley these preconceptions have screened out data that, if properly queried and digested, should have prevented strategic intelligence failures. Such perspectives have pervaded U.S. strategic behavior over the past 15 years and helped ease the Soviet Union into a relatively more assertive role on the world stage. This is a risky trend, one that has increased the possibility of superpower confrontation. It could be fostered by Soviet cockiness over what Moscow perceives to be strategic and historic imperatives flowing as much from U.S. permissiveness as from Soviet military prowess.

The United States desperately needs to know not just what the Soviets have done or are doing, but what they will be doing years from now. Most weapons systems take somewhere between two and 12 years to research and develop and have a lifespan of five to 20 years. Thus, today's defense planning must be based on estimates of a far tomorrow's adversary capabilities. Even if future arms control agreements hold down or reduce weapons more effectively than SALT I and II, the United States will nonetheless have to anticipate the trends in weapons development allowed under their terms.

To do so, the traditional intelligence-gathering methods must yield to the advanced

technique of signals intelligence (SIGINT). Historically, human espionage has reaped bountiful harvests for world powers, radiating an image of might and beauty—the British Empire between 1815 and the close of the nineteenth century, and the United States between World War II and the Kennedy assassination. But such luster has now dimmed. Besides, human espionage is of limited value in trying to penetrate a closed, compartmentalized society like the Soviet Union. It can occasionally confirm data, but can rarely furnish reliable original information.

Answering the Unanswerable

The deficiencies of human espionage must be compensated for by SIGINT, which can best help the United States learn and predict what the Soviets are up to in terms of weapons research and development. This was potently demonstrated by the furor over the loss of two listening posts in northern Iran by which the United States learned the results of Soviet missile tests. Turner publicly bristled over their loss, particularly since the green-eyed types in the Office of Management and Budget (OMB) had made savage cuts last December in funds for SIGINT in favor of other intelligence accounts. Espionage received its fair share, but OMB lavished funds upon today's most enchanting intelligence technique—photographic equipment.

OMB's error was grave and was made all the riskier by the fact that the U.S. technological superiority in weaponry is swiftly fading. The U.S. Navy was agape last May, for instance, when the Soviets launched a nuclear-powered submarine that steams faster (40 knots) and dives deeper (more than 2,000 feet) than anything the United States has.

Such tremors constitute an early warning signal of sliding American technological supremacy. For the Soviet Union is charging ahead both in terms of military production (it now spends three times as much as the United States on strategic forces and one-third more on general purpose forces) and in terms of military infrastructure, upon which

future arms programs are to be mounted (where it spends 80 per cent more than the United States). According to the Defense Department, the Soviet military is increasing its share of highly skilled labor, even though more than half its research and development scientists and engineers are already thought to be working on military projects. Their impressive efforts, marshaling increasingly scarce resources, signal a wish to persist in acquiring larger and more capable military forces. Such activities also propel the Soviet society and economy into additional military endeavors, thereby seeding arms-related institutions and spawning military-oriented activities that, over time, gather a momentum of their own.

Advanced signals and photographic sensors are now able to monitor every major construction activity in the Soviet Union and virtually every major Soviet weapons test. The verification debate that is building up over the SALT II agreement will make many Americans realize that U.S. security depends as much upon strategic intelligence as it does upon the size and nature of U.S. offensive strategic weapons. The Carter administration will be explaining each of the provisions of SALT II in terms of specific American strategic reconnaissance capabilities.

But even strategic reconnaissance, as promising as it now seems, cannot provide the answer to U.S. intelligence needs. Traditionally, presidents have turned to their advisers to answer the unanswerable—the singular solution to a perplexing problem or the definitive analysis of any happening. Woodrow Wilson was extreme in degree, though characteristic in kind, when commanding his advisers aboard the *George Washington* on the way to Versailles: "Tell me what's right to do and I'll do it."

In the vain hope of telling a president "what's right to do," intelligence was centralized by the National Security Act of 1947. The new intelligence system thereby became different from that of Britain, which has at least five separate organizations responsible for intelligence; France, which has four;

and West Germany with three. In contrast, the American structure, headed by a director of central intelligence (DCI), has lumped a veritable array of responsibilities—for paramilitary operations, technological collection, military order-of-battle estimates, and political and economic analysis—into one institutional framework. This consolidation exposes the entire intelligence community to the same political and cultural pressures, and reinforces the tendency of all elements to sway together with the mood of the moment. It has fostered a type of "groupthink" where the pressures for unanimity override individual mental faculties—somewhat analogous to what occurs in a jury room.

U.S. technological superiority in weaponry is swiftly fading.

This problem could be relieved by loosening the 1947 act in order to promote fiercely independent, keenly competitive centers of intelligence collection and analysis. Carter's Executive Order of January 24, 1978, moved in quite the opposite direction. Responsibilities laid on the DCI were specified to include: acting as chief of the CIA itself; exercising full and exclusive authority for approving the CIA's budget, as well as those of all intelligence units in the departments of Defense, State, Treasury, and Energy, and the FBI and Drug Enforcement Administration; and shouldering responsibility for the accuracy and value of all intelligence appraisals. The Carter Executive Order has also assigned dual roles to the CIA's own National Foreign Assessment Center and Directorate for Administration.

The two functions—head of national intelligence in terms of both budget and estimates, and operating chief of the CIA—should be separated. Such a move, which can only be made by Congress, would eliminate considerable confusion. Far more important, it would improve the caliber of reporting by divorcing America's main intelligence chief

from concerns for the immediate agency and its activities. The new, liberated DCI could coordinate all intelligence programs without special responsibility for any one segment. In case of a conflict between the DCI's sense of national intelligence needs and the desires of one agency, the presumption would be that the national perspective would prevail.

Nonetheless, the new DCI should stay clear of the traditional sand trap and not try to coordinate intelligence estimates or analyses. The president should be presented with the conflicting evidence and opposing views that well up from the newly dispersed intelligence network, and the DCI should avoid placing a distinctive stamp on the product. The president must grapple with alternative interpretations of events and the risks and costs of adopting one policy view over another.

The Congress, meanwhile, wrestles with the question of an overall charter for American intelligence. If enacted, such a charter would give Congress a set of responsibilities roughly commensurate with its traditional privileges of ex post facto criticism of intelligence. More important, it would cloak the sundry components of the intelligence community in a robe of congressional and even constitutional legitimacy they presently lack and, in this way, help redeem and justify the intelligence agencies to the public. If sagacious enough to legislate a clear separation between the head of the CIA and the DCI, the charter would go a long way toward improving the quality of U.S. information on foreign activities and intentions.

It is time to reissue Shakespeare's "warnings and portents of evils imminent," as well as prescriptions to avoid them. What the nation requires is national intelligence that is so tough, shrewd, and ruthless that no trend or fashion will ever again screen data or warp perception. What is required is such realistic and icily penetrating national intelligence that no degree of conformity—with the press or with academia or with political fashion—will force such blunders in the future. It is a tall order.

Former Pentagon Officials Accuse CIA Of Underestimating Soviet Arms Effort

United Press International

The Central Intelligence Agency in the last 13 years has damaged U.S. security by grossly underestimating Soviet military strength and intentions, according to two former Defense Department officials.

The CIA's biggest mistake during that time was underestimating the Soviet Union's nuclear capability and its overall military effort, Robert Ellsworth and Kenneth L. Adelman said in the fall issue of Foreign Policy magazine.

In addition, the CIA "assumed the Third World lacks the wit and wherewithal to influence decisively the great game of world politics," thus discounting the Yom Kippur war, the Arab oil embargo and oil price hike, and the revolution against the shah of Iran, Ellsworth and Adelman said.

Ellsworth, a former deputy secretary of defense, is now at the School of Advanced International Studies, Johns Hopkins University. Adelman, a former assistant to the secretary of defense, is senior political scientist at the Strategic Studies Center of Stanford Research Institute International.

"Beginning in the 1960s, the CIA embarked upon a consistent underestimation of the Soviet ICBM

buildup, missing the mark by wide margins; its estimates became progressively worse, on the low side," the two said.

Also, Ellsworth and Adelman said U.S. intelligence failed to note that North Korea had amassed the fifth largest ground army in the world and the U.S. Navy was shocked in May when the Soviets launched a nuclear-powered submarine "that steams faster and dives deeper than anything the United States has."

The two men said the source of the problem lies within the CIA's Operations Directorate, which assumes that "the United States and the Soviet Union are winding their way toward a modicum of cooperation, if not collaboration." In order to support this vision, they said, the directorate screened out data that suggested otherwise.

The present U.S. intelligence system has lumped too many responsibilities into one institutional framework, fostering a type of "groupthink," the authors said. They suggested that Congress separate the two functions of the director of the CIA, distinguishing between the operating chief and the head of national intelligence for budget and estimates.

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