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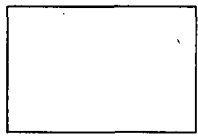
CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D. C.

IRONBARK

24 September 1962

MEMORANDUM FOR: Director of Central Intelligence

SUBJECT : Comments by Dr. Klaus Knorr on Articles from
Military Thought and other IRONBARK Reports



1. We are forwarding you the attached analysis by an O/NE consultant, Dr. Klaus Knorr. We find it a most useful review of the materials on Soviet military thinking which we are currently receiving. The conclusions, of course, are those of the author and do not necessarily represent the views of the Office of National Estimates.

2. As you know, a number of topics of strategic importance in the IRONBARK materials are being reviewed and summarized in NIE's and in such publications as OCI's CAESAR series. In his analysis, Dr. Knorr has concentrated on Soviet concepts for the employment and control of nuclear weapons in theater warfare. This paper will therefore be of particular value in the drafting of NIE 11-14-62 on the Soviet theater forces, which is now in preparation.

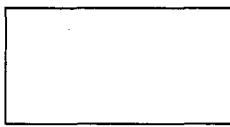


SHERMAN KENT
Assistant Director
National Estimates

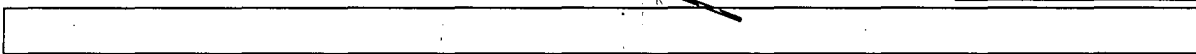
Original: Director of Central Intelligence

cc: The White House : Mr. Bundy
The Department of State : Mr. Rostow
: Mr. U.A. Johnson
The Department of Defense: Mr. Nitze

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DATE: DEC 2004



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Original: Director of Central Intelligence - cp#1

cc: White House - Mr. Bundy cp# 2
State - Mr. Rostow cp# 3
- Mr. Johnson cp# 4
Defense - Mr. Nitze cp# 5
DDCI - cp# 6
DDI - cp# 7
DDP - cp# 8
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AD/RR - cp# 12
AD/NE - cp# 13, 14, and 15

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WARNING: This paper contains IRONBARK information and therefore can be read and discussed only by those persons authorized for IRONBARK material. Further use of IRONBARK information appearing in this paper must have the prior approval of the office originating the material.

SUBJECT: Comments by Dr. Klaus Knorr on Articles from Military Thought and Other IRONBARK Reports

Preface

My reading of the material and my focus of attention have been selective. I have not read more than half the papers. I have concentrated on Soviet command and control concepts, and the possibilities of selective use of tactical nuclear weapons. I have ignored the papers on naval operations.

I do not know how the authors of the papers rank in terms of influence in the Soviet military establishment. The biographical material I have consulted does not help much in this respect.

1. I was impressed by the forthrightness with which the Soviet generals responded to the invitation to be controversial. On the whole, I was also impressed by the analytical quality (though not the literary style) of the papers. This seems to me about as good as what we get in the military journals of the West. To be sure, most of the papers in the latter are written by officers of more junior rank but, I suppose, so were most of the Soviet generals' papers. The Soviet pros do know their stuff and, as is true of many of their western counterparts, they are less impressive on strategy than on tactics and other components of the art.

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2. The papers I read cover a time span of about two years. Reading these rapidly one after the other, I tried to be alert to any doctrinal changes or trends over time. But I discovered none except that, regarding most of the controversial issues, I sensed a gathering consensus which represented a compromise between extreme positions.

3. The discussions, which exhibit a strong intellectual ferment, were bounded by extremists - on the one hand those who called for a fundamental, "revolutionary" rethinking of military strategy and tactics, which they thought was indispensable in view of new weapons technology (especially nuclears and rockets) and, on the other hand, those who pleaded for a more cautious, "evolutionary" approach and were critical of the hot-heads. The former tended to be somewhat younger in age; the latter tended to be more inclined toward particular service interests (e.g. tanks, conventional artillery).

4. The chief controversial issues were these: How decisive are nuclear weapons in future war? And, connected with this issue, how long or short are future wars likely to be, and how much can the size of conventional forces be reduced? How much is future war likely to be fluid rather than positional, both in offense and defense? Will ground forces start major operations simultaneously with or following the initial nuclear exchange? Are strategic nuclear weapons required for tactical as well as for strategic purposes and, conversely, should shorter-range tactical nuclears contribute to the initial strike of longer-range weapons?

5. The following consensus - taking its basic cue from Marshal Malinovskiy's line - seems to have developed (none of it surprising): nuclear weapons, with special emphasis on longer-range missiles, will be decisive in the initial phase, and probably decisive in any subsequent phases, of war in the European theater which takes place within the context of general war. Nuclear arms are not to be regarded as just a fancy kind of fire support. Though such a war might be prolonged, it is likely to be relatively short, and perhaps very short. The operation of ground forces will be far less positional and more fluid than during World War II, and defense cannot be linear. Ground forces will of necessity operate in smaller masses.

-2-

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6. No doubt this consensus - which is by no means either sharp or final - was shaped first of all by the pronouncements of top leaders, but also by the debate itself, by increasing supplies of and familiarity with nuclear weapons, and by Soviet interpretations of NATO military maneuvers.

7. One impression is overwhelming: The Soviet writers, virtually without exception, discuss only one kind of war; the general war involving large-scale strategic strikes. With practically no exception, they focus on the European theater. And without exception, they assume the massive use of nuclear weapons - strategic and tactical - in this theater.

8. The undeviating sharpness of this focus may be accounted for by the terms of reference which instructed the discussants. These were asked to speculate boldly on "modern" warfare, and to accord special attention to missiles. By implication, the would-be authors were directed to pay special heed to nuclear war.

9. Another, and perhaps even more important, determinant of the discussion focus is the common assumption that the West plans and would conduct an unlimited nuclear war. Soviet military analysis of NATO maneuvers confirmed this; and, this assumption is probably further confirmed by the Soviet view that the conventional strength of the NATO forces is inferior (cf. Ivanov [redacted] p. 11). Ivanov concludes: "All calculations of the NATO command are based on the use of nuclear weapons".

10. There is no reference to any Western suggestions, which have been made for years, that a war in Europe could be kept conventional or that a nuclear war might be fought in a highly controlled, discriminating fashion.

11. Of course, all authors assume that the West would be the aggressor in any war. Most authors assume, furthermore, that the West would initiate physical hostilities, but a great many propose that the SU should pre-empt once Western aggression was imminent. All authors agree that any war would start either after a sharpening political crisis (allowing both sides to prepare) or by surprise. Only one author, Colonel General Babadzanyan, adds that the general war might be started by escalation, "through involvement of principal countries in the course of a local war in one of the areas of the world". (CSDB-3/649,439, pg. 9.) This is the only reference to local limited war I came across.

- 3 -

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12. Concerning the nature of war in the European theatre, once general war is precipitated, nearly all authors assume all-out use of nuclears, tactical as well as strategic. I noticed only one writer who differentiated. Major General Goryainov distinguishes three concepts of the ensuing war

- (a) Main reliance on all-out strategic nuclear war, with local forces, equipped with small yield nuclears, to mop up and occupy.
- (b) Main reliance on tactical nuclears and ground forces, with simultaneous strategic attacks in a supporting role.
- (c) Main reliance on ground forces, equipped with many tactical nuclears, leaving strategic weapons "aside".

Concept (c) relates definitely to a limited war. But even in this eventuality, the author states flatly that the massive use of nuclears would be decisive and that the primary mission of the Soviet armed forces would be to destroy the West's nuclear-missile capability rather than to seize territory.

13. I found two references suggesting a limited use of tactical nuclears. General Kurasov (a very high-ranking Army officer) states that the mass use of nuclear missiles has become "reality" but admits cryptically the possibility of "limited use of nuclear weapons" with a consequently massive use of conventional units. Babadzhanyan also briefly mentions the possibility of "restricted" nuclear war and vaguely attributes this possibility to political and economic factors, and to differences in theaters of military operations. ("Economic" factors undoubtedly refer to limited supplies of nuclear arms.)

14. This rigid focus on unlimited nuclear war is surprising, and also puzzling. It cannot be explained fully by the terms of reference which are suggestive but vague. Perhaps the authors were given further and clear-cut instructions not contained in the Forward to the series. (This seems to me improbable.) The crux of the problem is this: even if massive use of nuclear weapons in the European theater were, in Soviet military eyes, by far the most probable form of any war, they could not adequately discuss strategy, tactics, force levels, force missions, etc. without allowing for other forms of war that were considered possible, though very improbable. This is so because the capability to wage the possible, though improbable, forms of war must be reasonably

-4-

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compatible with, built into, the capability to fight the probable forms of war. With negligible exceptions, there is no evidence of such thinking. Soviet military thought seems wholly geared to fighting the nuclear war which has figured eminently in SHAPE announcements and NATO maneuvers. It seems to assume that any military conflict in the NATO area is bound to escalate promptly, if not instantaneously, to general war - which, of course, is what we have been telling them for many years.

15. There is no evidence in the papers that even alludes to the possibility of what, of late, we have been calling a controlled nuclear war, that is, a selective, discriminative employment of nuclear weapons. Several authors refer briefly to limited uses of tactical nuclears. But what they mean is economical use necessitated by limited availability of nuclear weapons. In general, the emphasis in the articles is on massive application of nuclears, and especially so during the initial phase of war. Indeed, in keeping with Soviet concepts of the "depths" of the front, up to 1,000 km, there is much reference to the contribution of strategic missiles (in one paper with a range of up to 2,000 km) for the purpose of destroying entire areas if not countries.

16. The question, of course, arises as to whether the rigid Soviet focus on general war represents a lag in their thinking, in that they are occupying the conceptual position en vogue until very recently at SHAPE and in the US and the UK. This may be so and, as long as this question remains open, it leads to the further question of whether, and to what extent, the indicated Soviet posture is reversible, or at least capable of modification, in the direction of permitting the SU to fight a conventional war or a war which sees only a limited, discriminative use of nuclear weapons.

17. If Soviet policy adopted the more extreme approaches advocated in some of the papers - which recommend an extreme reliance on nuclears and a consequent reduction of conventional forces - Soviet forces might become organized and integrated in a way which would seriously hamper their capability for conventional or near-conventional war, and which to reverse would be costly and time-consuming. However, this extreme view has apparently been rejected and, thus far, the Soviet forces no doubt retain a high capability for waging conventional war.

-5-

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18. The Soviet ability to conduct a conventional war or to fight a war with only limited and discriminatory employment of nuclear weapons depends additionally on their command-and-control systems. I assume that an adequate c-and-c system exists as far as the strategic, long-range weapons are concerned. This leaves nuclear weapons of various ranges at the disposal of Front, Army, Corps, Divisional and Regimental Commanders.

19. Many of the papers discuss the control of these weapons at great length. However, in keeping with the dominant focus on general war and on mass use of nuclear weapons, these discussions are concerned exclusively with three control objectives:

- (a) Improving reactive speed with which weapons could be fired.
- (b) Improving the efficiency of firing, i.e., the achievement of accuracy, assurance that weapons of the right kind and yield are selected, determination of the right burst, avoidance of duplicative targeting, and of harming Soviet troops through fall-out.
- (c) Improving the survivability of Soviet missiles against enemy attack.

In all these respects, incidentally, authors claim that there is vast room for improvement. This is mainly due to three conditions:

- (a) inadequate training of, and familiarity to, the troops involved;
- (b) compared with the U.S., a lack of contextual richness, that is, the absence of sophisticated support in terms of computers, communications equipment, mobility, etc.;
- (c) a loose control system.

It is to be assumed that the SU is making efforts to upgrade these facilities.

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20. To repeat, I was struck by the complete absence of any reference to the prevention of unauthorized firings as an objective of c-and-c. Since the Soviet military have apparently given no thought to this subject, it would obviously take some time to insert this objective effectively into a Soviet c-and-c doctrine for the use of tactical nuclears. Indoctrination takes time and thrives on familiarity with the problem it is meant to solve.

21. There may be three reasons which would make it relatively easy for the Soviets to achieve such a control purpose:

- (a) In view of the greater Soviet emphasis on military discipline and obedience, compared with Western armed forces, the SU could rely to a greater extent on human control;
- (b) The SU probably has no problem of controlling the use of tactical nuclears by the troops of allies;
- (c) According to several papers, the SU is less interested than the US in developing and employing tactical nuclears of very low yield, which would have to be used in large numbers and deployed in a highly decentralized manner. 1]

On the other hand, as the SU has been unable to provide sophisticated support for its nuclear missile units, it has most likely a low capability for developing hardware devices for preventing non-authorized firings, and has probably given little, or no, thought to the matter.

- 1] Thus Major-General Goryainov deploras the stress of some military in the US on developing low-yield nuclears which, to him, are just more fire power, and not decisive weapons. Dzhordzhadze [redacted] who is extreme in favoring a "nuclear-missile war" regards small tactical nuclears as inefficient and uneconomical devices and favors longer-range weapons with a yield of from one-half of three (!) megatons in order to destroy the US "field army".

-7-

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22. This leaves the question of whether, considering the organization of their missile forces, the SU could readily implement tight control over fire authorization if it wanted to do so. Article [redacted] in The Artillery Collection indicates that this possibility exists. According to this article, custody of nuclear warheads and special fuel for some types of missiles is not with the missile-firing units but with the Mobile-Repair-Technical Base (PRTB). The paper discusses Soviet responses to a Western attack on Germany during "the night of July 16/17" which followed a severe crisis putting the SU on alert. In preparing a counter-offensive, a Soviet missile battalion is ordered to be ready for firing on July 18, 1600 PM (!). The PRTB unit prepares the "special charges" and assembles the nosecone for battalion use on the morning of July 18. I refer to these details because they indicate that control over the warhead passes to the firing crews at what appears to be the latest possible moment. Even though, according to the scenario, the Soviets expected a western attack and put their forces on full alert, there was no haste in delivering warheads to the firing units.

23. In sum, the SU is in a position to introduce a strategy (or an effective war plan) for waging conventional or controlled nuclear war, the chief impediment probably being the unfamiliarity of the Soviet military with the very concepts and their military implications. However, in this connection it should be noted that - though there have always been some Army and Navy officers interested in a conventional posture - the US military as a whole have not been particularly forthcoming either in probing and writing about these possibilities. The recent heightened US interests in various forms of limited and controlled war was generated by a political input from civilians. Obviously, any major change in Soviet military thought on these matters would also require an initiative from the political leadership.

24. I wish to mention three more impressions I received from reading the papers. Compared with the US, the Soviet capability for nuclear warfare in Europe rests more on intermediate range missiles than on shorter-range missiles with the troops. This relative emphasis is likely to continue, for it is in line with much of the analysis and prescription presented in the papers, and it will commend itself to Soviet leadership on economic grounds. The critical items in consideration of economy are probably not only the costs of developing and producing more shorter-range missiles with

-8-

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appropriate warheads but the costs of sophisticated supporting equipment.

25. In discussing problems of warfare, the Soviet authors have as little propensity to take into account what the opponent can and might do to thwart one's plans as is displayed by comparable writings in the U.S. (The few exceptions are Gorbатов, Gusakovskiy, Khetagurov.)

26. I was struck with the frequency of references to Soviet use of chemical weapons. For instance: Yefimov [redacted], 696 in the Artillery Collection. The latter item emphasizes the employment of these weapons during the initial phase of war. "It is advisable to begin with the use of chemical ammunition with quick-acting toxic substances in the first concentration of fire carried out against enemy artillery and mortar battalions, radio technical equipment and command posts ... under favorable meteorological conditions ..." (p. 5). By contrast, I noted no references to Soviet use of biological weapons.

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