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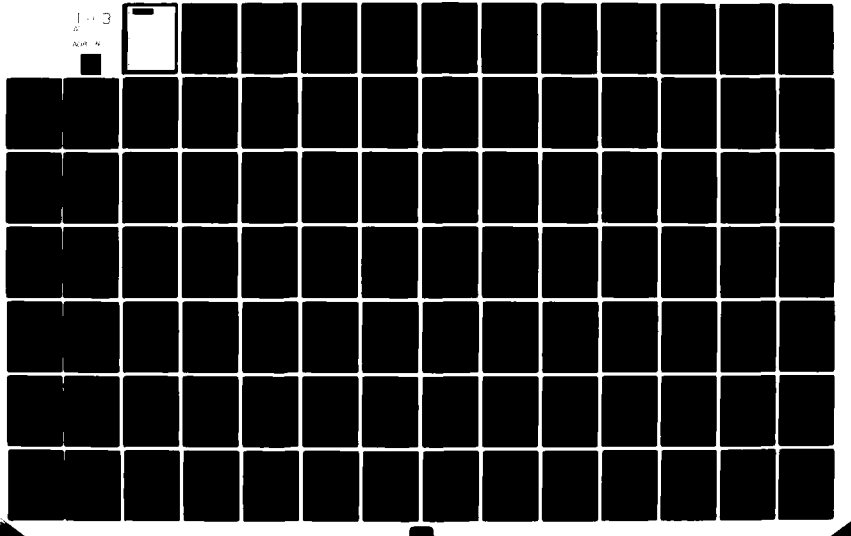

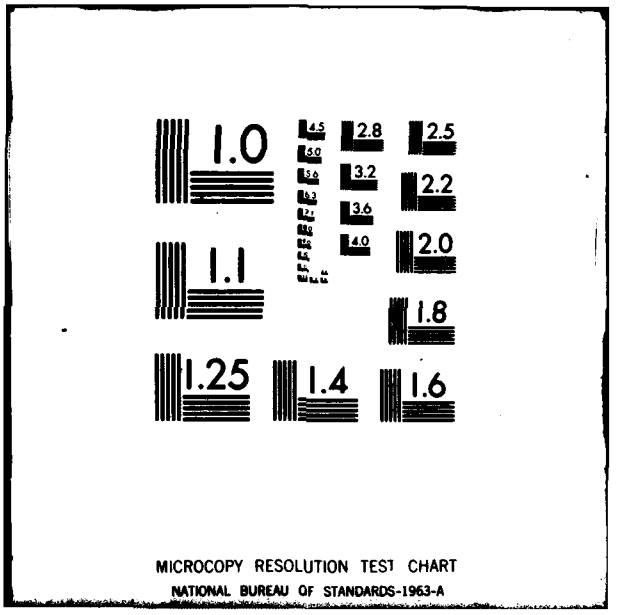
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FINAL REPORT OF THE SEMINAR ON SOVIET MILITARY MANPOWER: A FOCUS ON THE SOVIET MILITARY DISTRICT, held at the

University of Edinburgh,
Edinburgh, Scotland,
5-7 April 1978.

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Seminar Sponsors:
OSD/Net Assessment
- Directorate of Concepts, HQ USAF
Defense Studies, University of Edinburgh

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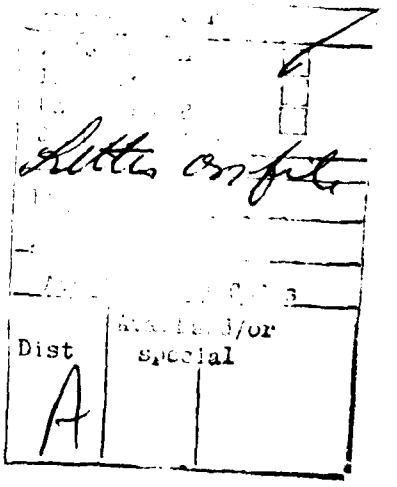
AB

NOTICES

This Notices page contains information and instructions in accordance with the provisions of Department of Defense ISPR 5200.1-R, November 1973 and AFR 205-1, 1 February 1973.

DISCLAIMER

This report contains the findings and opinions of the participants of the seminar and does not represent the official positions of the United States Department of Defense or the United States Air Force.



CONTENTS :

ACKNOWLEDGEMENTS

It has been said more than once that while we know a great deal about the manpower composition of informed elements of the Soviet army, we know little or nothing about the operations of the Soviet military system at large. If this statement is true, it represents an inexcusable state of affairs. If it is not true, then it deserves investigation. The purpose of this study seminar was, in a sense, to examine this proposition, but this time in terms of a specific "unit of study." Generalizations about military manpower will not suffice, nor will the transposition of western terms and western perspectives into the Soviet scene provide anything like a satisfactory answer. To this end, the "military district" was selected as the basic "unit of study," for it comprehends not only Soviet manpower practices, but also represents a degree of continuity with the Imperial Russian system. Finally, this "unit of study" is expressly limited, indeed self-limiting. This is to say that it represents a Soviet institutional arrangement, it embodies Soviet practices, and it must be investigated against the background of Soviet requirements. At least a close investigation of the military district throws some light on the institutional arrangements and leads at once to some adjustment of views about what has been discussed in terms of Soviet centralization and rigidity. At the same time, the military district must also be connected to certain operational aspects of the Soviet Armed Forces, so that this study has the advantage of looking at a variety of Soviet circumstances.

This study seminar would have been impossible without the assistance of Mr Andrew Marshall, OSD/NA, Mr Rex Minckler, GE TEMPO, and General Brickel, HQ USAF/XOC. We should like to thank all the participants, both civilian and military, but we think it in order to express special appreciation to Admiral of the Fleet Sir Peter Hill-Norton for his guidance in the preparation of the seminar, for his rigorous and effective chairmanship of all the sessions and proceedings, and also for his judicious summing up of a number of complex matters.

Defence Studies also wishes to record its appreciation for all the assistance given by the University of Edinburgh in making special arrangements for the convening and the conduct of the study conference.

Lynn M. Hansen
Lieutenant Colonel
USAF Research Associate
University of Edinburgh

John Erickson
Professor
Director/Defence Studies
University of Edinburgh

Miss K.U. Brown
Executive Secretary
University of Edinburgh

EDITOR'S COMMENTS

The Seminar on Soviet Military Manpower was, by almost any standard, a rather unique event. First of all, it was co-sponsored by two military organizations in the United States -- OSD/Net Assessment and HQ USAF/Directorate of Concepts -- and a British university -- the University of Edinburgh. The host of the seminar was British -- Professor John Erickson; the seminar chairman was British -- Admiral of the Fleet Sir Peter Hill-Norton, GCB; the administrator was American (Lt Col Lynn Hansen); and as the editor (and publisher) of the seminar report, I am also an American. The seminar participants came from eight countries, including Yugoslavia and Israel, and represented a variety of organizations within these countries. The one common thread of the participants was an interest in the topic of the seminar: Soviet Military Manpower.

As a staff member in the Directorate of Concepts, Headquarters United States Air Force, I have been working closely with Professor John Erickson over the past few years on a variety of projects. As a result of this association, I was particularly interested in taking on the task of producing this seminar report. The Director of Concepts, Major General James E. Brickel, was particularly supportive of the seminar and my role in it. In conjunction with Lt Col Hansen, the Air Force Research Associate who works with Professor Erickson in Defence Studies at the University of Edinburgh, I was able to participate in the organization of this seminar and to collect the papers, tapes, etc., after the seminar and to complete this report in a timely fashion.

In preparing the report for the Seminar on Soviet Military Manpower, a variety of very interesting and challenging problems arose. First of all, there was a vast difference in the nature and scope of the inputs for the seminar report. Many of the seminar presentations were accompanied by fully prepared and documented papers, while other presentations were developed (and were built on information given in the early seminar sessions) as the seminar progressed. Thus, when reading the text of the seminar presentations (Appendices C-K), one must

appreciate the differences in their origins and purposes. A second problem was that of editing. Every effort was made not to change through editing -- deliberately or inadvertently -- the substance of the by-lined presentations. Any failure to meet this standard is mine. A final problem was that of blending the rather diverse writing styles in Parts I through V so that there is some continuity and consistency in the paper. To this end, I rather arbitrarily imposed my own organizational style and personal preference on the inputs of the other writers -- Professor Erickson and Lt Col Hansen. Again, the shortcomings are mine. In spite of these problems, I am confident that the readers of this report will find it very intersting and extremely useful; the subject of the seminar virtually ensures both interest and utility. This is the report of a seminar with an ambitious agenda (Appendix A) and a diverse and talented group of participants (Appendix B).

I want to extend my personal thanks to Mr Rex Minckler of GE Tempo and to the staff of Defence Studies, University of Edinburgh, for their tremendous support in compiling the material for this report and for helping me get the report published in a timely fashion.

Major Thomas O. Cason
Directorate of Concepts
United States Air Force
30 May 1978

INTRODUCTION

OVERVIEW OF THE REPORT

This report of the Seminar on Soviet Military Manpower, held at the University of Edinburgh on 5-7 April 1978, has been written, compiled, and edited for the use of professional scholars and military people who are interested in the Soviet military system and particularly in the Soviet military manpower system. This report contains a wealth of information and a diversity of viewpoints on the general topics of Soviet military manpower. In order to assist the reader in understanding the organization of the material, the following brief overview of each part of the report is given.

o INTRODUCTION

This section contains a brief overview of the entire report plus a brief summary of the opening remarks of the seminar chairman.

o PART I - On the Consideration of Soviet Military Manpower Problems

In this segment of the report, there are summaries of the papers given by Mr Goldich ("Method and Mystique in Military Manpower Analysis"), Dr Bebler ("Manpower Policy in the Soviet Union and Socialist States"), and Dr Feshbach ("Soviet Population Trends and Military Manpower"). Highlights of the discussion of these three papers follows.

o PART II - Structure and Function in the Soviet MD

Part II contains summaries of the presentations and papers given by Professor Erickson ("An Investigative approach to Soviet Military Manpower: The Military District Model"), Col Schneider ("Soviet Military Training: The Red People Eater"), Mr Donnelly ("Soviet Military Manpower: Aspects of the Man-Machine Mix"), Commander Garde ("Naval Manpower and the Baltic Military District"), and Dr Sella ("Patterns of Soviet Involvement in a Local War"). The discussion of these five presentations is summarized at the end of this section.

o PART III - Some Soviet Perceptions of Requirements and Deficiences

In this section of the report, an attempt is made to detail the Soviet perceptions of their own requirements and deficiencies pertaining to their military manpower system and the MDs. Professor Erickson was the principal contributor to this section which parallels the ideas discussed in the seminar sessions.

o PART IV - Concluding Remarks by the Seminar Chairman, Admiral of the Fleet Sir Peter Hill-Norton

This section of the report attempts to convert the Admiral's excellent oral summary of the seminar into a written paper. For the reader who wishes to get a brief, but very insightful, look at what went on during the seminar, the Admiral's summary is highly recommended.

o PART V - Shto Delat? Research Priorities

This section is a postscript to the conference by Professor Erickson and outlines what he views as the directions that future research on Soviet military manpower should take. It is evident by Erickson's remarks that a great deal of work remains to be done.

o APPENDICES

The appendices contain the seminar agenda, the list of participants, and the texts of the conference papers.

SUMMARY OF THE OPENING REMARKS BY THE SEMINAR CHAIRMAN

The seminar chairman, Admiral of the Fleet Sir Peter Hill-Norton, opened the seminar with a challenge for the participants to tackle the topic of Soviet military manpower, a topic which he views as "complicated and involved and thoroughly understood by almost no one." The Admiral urged each of the participants to think and work beyond the traditional "bean count" analyses of Soviet military manpower and seek to develop a methodology for understanding what the Soviet manpower numbers mean. Two objectives for the seminar were set forth: (1) to determine the capabilities of the Soviet forces represented within the framework of the discussion, and (2) to ascertain the "constraints and vulnerabilities endemic to the Soviet military system which flow from the organizational, functional, and political peculiarities" of that system. The Admiral urged the participants to retain a Soviet focus on the seminar subject.

PART I

ON THE CONSIDERATION OF SOVIET MILITARY MANPOWER PROBLEMS

SUMMARY OF PRESENTATION BY MR GOLDICH:

"Method and Mystique in Military Manpower Analysis"
(Appendix C)

In his paper, Mr Goldich set out to examine several methodological problems in manpower analysis with special reference to the problem of identifying the proper questions to ask about military manpower.

The first question to ask is whether the military manpower analyst is interested in investigating (1) the economically and bureaucratically efficient management of a peacetime armed force operating on a steady-state basis or (2) the combat effectiveness of that peacetime force during mobilization for war. Many manpower analysts fail to differentiate between these two quite different questions. Criteria for the peacetime operation of military manpower systems -- financial efficiency, fairness and equity in a democratic society, or ease of operation -- are not necessarily the criteria which contribute to the combat readiness and wartime mobilization of that system. An example of the conflict between these two fundamentally different approaches can be seen in the ongoing debate between the proponents of small, well-trained, technology-intensive armed forces manned by long-service volunteers and a high proportion of career personnel and the proponents of larger, less well-trained, manpower-intensive forces manned by short-service conscripts and fewer career military personnel. In terms of peacetime, criteria of the smaller career force may be more efficient; in terms of combat readiness and wartime mobilization criteria, these smaller, elite forces may prove unable to cope with the larger conscripted armies. In terms of military manpower analysis, one must carefully state which of the two approaches is being tested, or, if indeed, one is testing both approaches, great pains must be taken to be certain that the proper criteria for both are

being considered. Without such care, the military manpower analyst runs the risk of misunderstanding and thus misevaluating the military manpower system that he is examining.

The second question, which is related to the first, that the military manpower analyst must determine is whether he is interested in (1) factors which directly affect the immediate combat readiness and effectiveness of forces in being or (2) factors which provide greater insight into a nation's military power system that have an impact on mobilization for a prolonged conflict and illuminate the relationship between the military and its society, but which, at best, only indirectly affect the combat readiness of the military forces. Both sets of factors are important and interesting areas of inquiry, and both are relevant to understanding military manpower systems. But the military analyst must not assume that these two sets of factors are interchangeable or that they provide equally valid and important insight to the military manpower system in terms of peacetime operation and wartime mobilization. Many of the factors which are important to military manpower analysts examining military systems in peacetime simply have little or no immediate relevance in terms of combat readiness or mobilization in wartime.

The third question that manpower analysts must ask is the degree to which one should consider other relevant factors about the people of a nation. Mr Goldich believes that the analyst should not discount the historical, psychological, sociological, and philosophical factors which are part of the people who comprise the manpower resources of any nation. Rather, the analyst must simply ensure that these factors are viewed in a proper perspective when he is evaluating the combat readiness of the military forces of a nation.

Once the military manpower analyst has sorted out his research objectives and goals in terms of the major questions raised above, he can then turn to an examination of the particular structures and functions of the military system or systems in which he is interested. The analyst must take a structural component (e.g., a Soviet military district) or a

functional component (e.g., the US military recruiting system) of a military manpower system and follow its threads forward and backward throughout the entire system until all of the interrelationships of the structure or function with the other parts of the system have been identified. Military manpower problems frequently result when all of the loose ends are not taken into account when policy decisions are made and instituted. Examples of these kinds of problems are all too prevalent in the West and are no doubt present, though not so conspicuously, in the Soviet Union and the Warsaw Pact. The manpower analyst must always be aware that each time he isolates and examines any single structure or function within a given military manpower system, he is freezing a dynamic process in stasis to facilitate his analytical work. As such, he always risks the problem of static distortion to a dynamic process.

Finally, Mr Goldich concluded that although the manpower analyst is often tempted to repair to the more glamorous disciplines of military strategy and tactical operations or to the more concrete disciplines of science, technology, and finance, there is the consolation for the imaginative military manpower analyst that the most prosaic dimensions of his work illuminate every aspect of human behavior far more than these other areas of military affairs. Good manpower analysis, as well as being technically proficient, should involve the study of man in his many aspects.

SUMMARY OF PRESENTATION BY DR BEBLER:

"Manpower Policy in the Soviet Union and Socialist States" (Appendix D)

In his presentation to the conference, Dr Bebler outlined some of the principal differences between the military manpower policies in socialist states and those in the bourgeois or Western states. One of the most important differences is the role of ideology in military manpower policies. In the socialist states, and particularly in the Soviet Union, Marxist-Leninist ideology influences a number of aspects of military manpower policy -- pre-military training, pre-induction training and the induction process, military training,

promotion procedures, and retirement procedures. The degree of influence that ideology has on the Soviet military manpower system is viewed from quite different perspectives. The position that ideology has total influence on the military manpower system is expounded by some Soviet ideologists and political officers in the Soviet military. The position that ideology has no influence on the Soviet military manpower system is voiced by some scholars in the West who choose to view the present Soviet military manpower system as a continuation of the system inherited from Imperial Russia. Dr Bebler stated that both of these views are equally erroneous and that ideology, although difficult to give a precise value, nonetheless exerts some influence on the military manpower policies and the military manpower systems in the socialist states. There are also differences between the military manpower systems of the various socialist states which, in turn, reflect the vast differences between the socialist states themselves. Some of the factors which account for these differences are size, foreign policy ambitions, internal stability, alliance positions, the level of miltiary technology, the structure of the armed forces, the presence or absence of a militia component of the armed forces, the national integration function of the military, the economic function of the military, variations in Marxist-Leninist doctrine, and traditions of the country.

The foundations of manpower policies of the socialist states can be seen in the writings of the key socialist writers. Some of the normative or perscriptive elements which influence the manpower policies of the socialist states are drawn directly from these writers. Engels, in 1852, pointed out that there should be a greater percentage of the people in the military in the socialist states (12-16%) than were serving in the bourgeois states (5-7%). Engels also stated that:

- o Socialist states should have strictly defensive military doctrines
- o Socialist armies should have greater moral motivation than their bourgeois counterparts
- o Socialist armed forces should be plain, modest, and ordinary and have strict mission orientation

- o Socialist armed forces should be a mix of standing and territorial armies
- o There should be no deferments in socialist armies; all males should serve
- o Socialist armed forces should provide for a wide system of pre-military training for all students

Lenin set forth a number of other tenets which influence the military manpower systems of socialist states. Above all, Lenin viewed the primacy of politics in socialist military systems as paramount. He also envisioned the socialist military systems as being highly debureaucratized, as having a high degree of civic action in which the social service functions were highly developed, and as being the school of civilization, particularly for the urban population. From Frunze and Mehring come the principle that socialist armed forces can be only as efficient as the societies in which they exist.

To the question of how significant are these prescriptions from the socialist writers, Dr Bebler pointed out that some of the tenets have been rigorously observed while others have been virtually abandoned. In evaluating the Soviet Union against these tenets, a number of significant deviations can be cited. First of all, there is a high level of authoritarianism in the Soviet military system. This runs counter to the principles of democratization and debureaucratization. Secondly, the Soviet Union has a strong military technocratic tendency which emphasizes the decisiveness of technology rather than the decisiveness of motivated men. Finally, and perhaps most importantly, the Soviet Union has abandoned the tenet of a strictly defensive military doctrine in favor of a mixed defensive/offensive doctrine. On the other hand, the Soviet Union has retained some very important elements of these tenets of ideology in their military manpower system. First, the overall tenet of simplicity has been retained. Secondly, the primacy of politics has been retained. This does not mean the same as the primacy of politicians; the primacy of politics is more pervasive and is present in almost all aspects of military policy and military manpower policy. In this respect, the most important

institution in the Soviet military that deals with manpower policy is the Main Political Administration (MPA). The primary purposes of the MPA are to ensure the political allegiance of the Soviet soldiers to socialist unity and to raise the effectiveness of the Soviet military in three areas: combat effectiveness, battle effectiveness, and war effectiveness. In terms of manpower management, the MPA applies ideology in the areas of induction, training, upgrading, motivation, punishment, and in the control of deviation or dissidence. The MPA also plays a key role in the professional educational and professional development of the officer and NCO corps of the Soviet military in the areas of promotion, selection, and even retirement.

In terms of the military manpower system of the socialist states, manpower effectiveness can only be understood in terms of the political and military uses of military forces. In short, there is no meaningful measure of military manpower effectiveness in the socialist states which addresses the pure military use of military forces; this simply is not the context in which these forces operate.

SUMMARY OF PRESENTATION BY DR FESHBACH:

"Soviet Population Trends and Military Manpower"
(Appendix E)

In his presentation to the conference, Dr Feshbach highlighted several significant trends in the Soviet population which will impact Soviet military manpower during the next 10-20 years. The supporting data is contained in his paper at Appendix E. (The paper for this conference is an exerpted and updated version of a paper Dr Feshbach has co-authored for the Joint Economic Committee of the United States Congress.) The principal trends in the Soviet population are the results of two phenomena that began in the 1960s and early 1970s. First, there was a marked decline in the birthrate for the Soviet Union as a whole during this period. Second, in spite of the decline in the overall Soviet birthrate, the birthrates in the non-European parts of the Soviet Union -- the Central Asian and Transcaucasian Republics -- have been and still are

much higher than the birthrates in the European parts.

The Soviet population growth has declined from 1.7-1.8% per year between 1950 and 1960 to only .9% between 1970-75. The projections for the growth rate increase to 1% from 1975-85 but decline steadily throughout the remainder of the century; for the years 1995-2000, the projected population growth rate is only .6%. Concurrent with the declining population growth are significant changes in the age composition of the Soviet population. The percentage of able-bodied persons in the Soviet population (men between 15-59 and women between 16-54) will decline from a projected high of 58.3% in 1980 to 55.4% in 1990 and 55.5% in 2000. This decline from 58.3% to 55.5% would represent a net loss of over 7 million able-bodied persons in a nation of 300 million people. Thus, one can not escape the conclusion that the Soviet Union will face a changing situation in the remainder of the century in which there will be fewer new entrants into the overall labor force and there will be a smaller percentage of able-bodied persons in the total population.

The demographic problems of the Soviet Union are not confined to the area of overall population growth rates. The great diversity in the population growth rates among the various sections of the Soviet Union creates potentially more serious problems. The data at Figure 1 illustrates this point. One can easily see in the table from Figure 1 the problems that could face the Soviet Union in the last part of this century. The growth rates among the non-European parts of the Soviet Union, although these sections constitute only 25% of the total Soviet population, are so much higher than those in the European parts that an ever increasing percentage of the new entrants into the Soviet labor market (and into the Soviet military) will come from the more backward, less industrialized, less urbanized areas of the Soviet Union. The non-Europeans are also less educated, less skilled in the Russian language, and less integrated into the mainstream of Soviet society. From the data at Figure 2, one can see how these higher birthrates will impact the changes in the total number of able-bodied persons in the Soviet Union.

SOVIET POPULATION GROWTH RATES, 1950-2000
BY MAJOR GEOGRAPHIC SECTIONS

Section	Natural Increase/1000 People (Births-Deaths)					
	1950	1960	1970	1980	1990	2000
Russian Republic	16.8	15.8	5.9	6.5	2.4	.1
Baltic Republic	7.7	10.2	6.1	4.7	3.4	1.7
Belorussia	17.5	17.8	8.6	9.5	6.9	4.0
Ukraine	14.3	13.6	6.3	5.6	2.6	.8
Moldavia	27.7	22.9	12.0	13.9	10.5	8.3
Transcaucasian Republic	19.4	28.0	17.4	18.1	17.6	14.2
Kazakhstan	25.9	30.6	17.4	19.3	21.7	14.7
Central Asian Republic	17.0	32.6	27.3	30.3	31.3	29.1
USSR as Whole	17.0	17.8	9.2	9.9	7.5	5.8

Figure 1

ESTIMATED INCREMENTS TO THE SOVIET POPULATION
IN ABLED-BODIED AGES, 1971-2000

	USSR	Russian Republic		Central Asia & Transcaucasus	
	Total National Increase	Total Increase	% of National Increase	Total Increase	% of National Increase
1971-75	12,963,000	6,039,000	46.6%	4,148,000	32.0%
1976-80	10,378,000	3,928,000	37.8%	4,586,000	44.2%
1981-85	2,664,000	-813,000		3,463,000	130.2%
1986-90	2,630,000	-880,000		3,394,000	119.0%
1991-95	3,291,000	-425,000		3,909,000	118.8%
1996-2000	8,101,000	1,964,000	24.2%	5,334,000	65.9%

Figure 2

Dr Feshbach then analyzed these overall demographic trends in the Soviet Union in terms of their impact on Soviet military manpower. First of all, there will be smaller cohorts of 18 year-old males in the Soviet Union beginning in 1979 and should reach a low point in 1987. If the Soviet military force levels and the conscript/career mix are held constant, this results in an annual requirement of 1,688,000 18 year-olds. If the present deferment and exemption policies are maintained, one can see at Figure 3 the situation facing the Soviet Union. Beginning in 1983, the Soviet Union will be faced with a deficit of 18 year-old males to man their military system. Of course, there are a number of options available to overcome these deficits and it is not suggested that the problem is insurmountable. However, there will have to be a number of changes made to overcome these deficits and regardless of the action taken by the military leaders, there will be few, if any, 18 year-olds available for the Soviet economy during these years.

The declining number of 18 year-olds is only part of the problem facing the Soviet military. The ethnic and racial composition of the 18 year-old cohorts will undergo a significant change during this same period. Because of the vast differences in birthrates in the 1960s and 1970s between the European and non-European sections of the Soviet Union, there will be an increasingly higher percentage of non-Europeans. The Soviet conscripted military force will become increasingly non-European and this cannot help but affect the Soviet military manpower system which has traditionally been European in outlook and European in its leadership. Without attempting to identify what changes the Soviet leadership might make in the military manpower system, Dr Feshbach concluded that the changing demographic trends in the Soviet population would require change.

ESTIMATED AVAILABILITY OF 18 YEAR-OLD MALES
IN THE SOVIET UNION, 1975-1990

Year	Total Number of 18 Yr Olds	Less: Deferments and Exemptions*	Plus Expired Deferments Exemptions*	Total Availability for Draft	Less: Draft Quotas**	Net 18 Yr Olds for Economy
1975	2,493	751	206	1,948	1,688	260
1976	2,558	766	216	2,008	1,688	320
1977	2,605	774	220	2,051	1,688	363
1978	2,646	785	225	2,086	1,688	398
1979	2,637	791	234	2,080	1,688	392
1980	2,542	785	236	1,993	1,688	305
1981	2,432	775	239	1,896	1,688	208
1982	2,308	763	240	1,785	1,688	97
1983	2,173	750	235	1,658	1,688	-30
1984	2,106	744	230	1,592	1,688	-96
1985	2,062	740	223	1,545	1,688	-143
1986	2,020	736	211	1,495	1,688	-193
1987	2,012	737	214	1,489	1,688	-199
1988	2,034	739	212	1,507	1,688	-181
1989	2,097	747	210	1,560	1,688	-128
1990	2,142	752	210	1,600	1,688	-88

*Assumes no major change in exemption and deferment policies
**Assumes size of Soviet military does not increase or decrease

Figure 3

DISCUSSION OF PART I

The discussion of Mr. Goldich's paper centered on two principal themes that he presented in his paper. The first theme was the distinction between the factors of manpower analysis which are important and relevant to combat readiness and those factors of manpower analysis which are less important and less relevant to combat readiness. Additionally, there was a candid admission that many manpower analysts do not make a distinction between these two kinds of factors in many of the manpower analyses. The second point made by Mr. Goldich was one that was reiterated in other discussions throughout the conference: that is, the distinction that must be made between the economically and bureaucratically efficient management of peacetime armed forces and the combat effectiveness of forces during mobilization for war. The absence of such distinctions between peacetime management and wartime mobilization can only lead to, at best, misunderstanding or, at worst, catastrophe.

In terms of manpower analysis, the flexibility of the Soviet military district system may be attributed more to the size and amount of manpower available than to any organizational capability of the military district system itself. The present Soviet system is geared to the availability of manpower and other resources. There were differing views among the conference participants on this particular point. On the one hand, it appears that the Soviet military system--and the military districts--have abundant manpower and other resources. On the other hand, the Soviet military system is viewed as a "stingy" system where tight constraints are placed on resources with the military districts and strict financial limitations are imposed. It can be argued that the Soviets, by loosening their own military system, could get a freer flow within the military districts and improve the overall efficiency of the system.

The question of the size of Soviet military forces was also raised in terms of the ability of Soviet leaders--military and political--to understand and manage their own system. Size can be a disadvantage and it can be argued that one of the most serious problems facing the Soviet military is that Soviet officers do not understand the "system". Erickson supports this view and is convinced that an "informal system of operation" actually keeps the Soviet military system going. It is this corruption of the system that enables it to function.

Dr. Bebler's presentation raised a number of questions and provided a particular insight which proved very useful in the conference proceedings. Specifically, Dr. Bebler pointed out the role of ideology in Soviet military manpower policy formulation and execution. One question arose almost immediately. How do the Soviets reconcile the ideological requirements of their doctrine with the technical requirements of manpower decision-making? The argument here is substantially one that questions the utility of ideology as a significant factor to an otherwise technical decision-making process. Bebler argued that the distinction should be made between the means of ascertaining problems/implementing solutions (which are indeed technical in nature) and the development of manpower policies in which the priorities are determined politically and encompass the tenets of the ideology.

Another series of questions were raised about Bebler's argument that the Soviets had deviated from some of the original policy prescriptions of Marx and Engels for military manpower in socialist states. It was pointed out that the most significant deviation was from Marx-Engels' prescription that socialist states should have strictly defensive military doctrines. The Soviet Union claims that theirs is strictly a defensive doctrine and that the emphasis on the offensive is merely a way of defending itself. This argument is perhaps valid if one is using strictly a military frame of reference. The real distinction between offensive and defensive military doctrine--in terms of the Marx-Engels' prescription--is to be found in political terms and here the Soviet deviation is very clear. The Soviet Union's political-military doctrine is offensive in that its military and foreign policy goals go far beyond the defense of Soviet territory. (This particular deviation, of course, is of very obvious concern to Yugoslavia). Bebler also pointed out that much of the Soviet military manpower doctrine and the Soviet military system today is based on the tenets of Lenin and not those of Marx and Engels. An example of these differences can be seen in the view of "good wars" and "bad wars". To Marx and Engels, "good wars" were defensive wars; "bad wars" were offensive wars. To Lenin (and to the Soviet leaders today), "good wars" are "just" wars; "bad wars" are "unjust" wars. Of course, the Soviet leaders determine what it "just" or "unjust".

Another significant area of discussion about Dr. Bebler's paper centered on the impact of ideology on the individual soldier through his training, indoctrination, etc., in terms of his reliability under pressure or when things become chaotic and disorganized in the heat of battle. Related to this is the apparent Soviet concern over achieving the double goals of strict discipline/close adherence to directives and initiative; these two goals intuitively seem to be contradictory, particularly in the Soviet context. Are the Soviet soldier's reliability and his initiative (or lack of initiative) serious weaknesses or vulnerabilities to the Soviet system? It was generally agreed that the lack of initiative, particularly among the junior officers and NCOs is a concern of the Soviet military leaders. But, whether or not this lack of initiative constitutes an exploitable weakness (i.e., a vulnerability) is another question. As for the reliability of the Soviet soldier, there is simply no evidence on which to base an argument that any significant degree of unreliability would develop. Although the Soviet military forces are, for the most part, not combat experienced, it does not follow logically that they will falter in combat. There is little opportunity for dissension in the Soviet military and the reins of control are kept very tight--witness the plight of the individual Soviet soldier in GSFG. In a prolonged war, particularly if it is fought on other than Soviet soil, there may be some reliability problems; however, reliability does not seem to constitute a major problem for the Soviet leadership.

The discussion of Dr. Feshbach's paper was lively and reoccurred throughout the conference. The arguments here centered around two principal themes of Dr. Feshbach's paper. First, there will be a shortage of 18 year-old males available for conscription into the Soviet Army after 1983. Second, there is a significant change in the ethnic composition of the society as a whole and a more pronounced change in the ethnic composition of new groups of 18 year-old males from 1980-2000. There was little disagreement about the facts supporting Dr. Feshbach's arguments; that is, there is no doubt that the lower birthrates in the Soviet Union in the 1960s and 1970s will produce fewer young men available for conscription, nor did anyone question the fact that an increasing number of the 18 year-old males will be either Central Asian or Transcaucasian (rather than Russian, Ukranian, Belorussian, etc.). The disagreement

among the discussants centered on first, the extent of the real shortage of young men and second, the impact that either the shortage of 18 year-old males or the changing ethnic composition of the Soviet Army would have on the Soviet military manpower system as a whole.

The shortage of 18 year-old males is really a complex problem which requires a thorough understanding of the data. Dr. Feshbach pointed out that there will be an absolute decline in the annual numbers of 18 year-old males beginning in 1979 and that by 1983, given the same deferment and exemption policies that presently exist, there will not be enough 18 year-old males to meet the conscription quotas. The counter-argument is that the Soviet leaders need only to change the deferment and exemption policies or to extend the length of conscripted service beyond the present two years. To do either of these would in itself, of course, impact the military manpower system as well as the civilian economy; any change which adds men or man-years to the military economy does so by reducing that which is available to the civilian economy. No resolution as to the degree of the impact of this shortage was reached.

The discussion of the increasing percentage of ethnic minorities in the Soviet society (and particularly in the cohorts of 18 year-old males conscripted into the military) centered around the issue as to whether this phenomenon would have a positive, negative, or neutral impact and whether or not this would be reflected in changes in the Soviet military manpower system. Again no concensus was reached but most of the participants expressed the belief that this changing ethnic composition would produce some changes in the Soviet manpower system; it seemed to be impossible to predict the nature and degree of the changes.

PART II

STRUCTURE AND FUNCTION IN THE SOVIET MD

SUMMARY OF PRESENTATION BY PROFESSOR ERICKSON

"An Investigative Approach to Soviet Military Manpower: The Military District Model" (Appendix F)

Within the overall context of contemporary manpower studies of the Soviet military apparatus, it is important to develop new methodological approaches in order to determine what the oft-quoted gross manpower figures really mean. Because of its long history and tradition as an integral part of the Russian -- now Soviet -- military organization, the military district is an excellent "unit of study." Within its framework it is certainly possible to consider military manpower as it relates to function, structure, and organization. The data is available but requires a lot of plain hard work.

A legacy from the last 55 years of the Czarist regime, the military district organization remains the cornerstone of the internal military administration of the Soviet Union. Its structure and philosophy have changed little since the Frunze military reforms of 1924. Characteristic of the military district has been its ability to survive through revolution and war as a fundamental unit of military administration and its adaptability to changing defense policy and war-fighting needs.

The basic role of the military district is to maintain a peacetime system and static deployment pattern, while concurrently generating combat-ready forces, and separating these forces from the administrative burden of the military district organizational apparatus. These "field forces" are, then, essentially freed from "administrative" requirements. They come under the operational direction of the arms commanders within the overall command and control responsibilities of the Soviet General Staff.

The present basic peacetime command structure of the military district has existed since 1924. At its head stands an experienced and influential figure in Soviet military administration -- the Commander. Primarily an administrator, he is responsible for the maintenance of combat and mobile readiness, combat and political training, education, discipline, equipment, services, and welfare. The Military Council is the collective organ of military control for evaluation and resolution of basic problems of military organization, training, and command and supply services in the military district. Since 1958 it has played an increasing role in political control over the Soviet Armed Forces. The Head of the Political Directorate, a member of the Council, is still regarded as the ideological watchdog over all military activity in the military district, even though the bulk of the senior political officers at this level have had military training and combat experience.

In the Soviet system there are five levels of legal provision for the utilization of military labor. The Soviets discuss this in terms of a centralized system with five segments. These are: first, the central organs combined in the Ministry of Defense charged with the planning, organization and development of the Soviet Armed Forces: the basic organ among these is the General Staff which directs all central and local military authorities; second, the Military District/Fleet/Air Defense District organs responsible for the military and political training of their forces; third, the direct command line for the ground, air and naval forces which carry the primary responsibility for combat missions; fourth, the local manpower register and mobilization organs (military commissariats -- voyenkomaty) which link the Soviet Armed Forces with their immediate source of induction manpower and reinforcement; and fifth, the garrison commanders and garrison commandants. The commander has responsibility for military life within the garrison and it is he who sees that the mobilization plan is properly carried out, that alert orders are fulfilled, and that deployments are correctly supervised. On the other hand, the commandant has a much narrower responsibility. Within the garrison town and the surrounding area, he must see that good order and military discipline are maintained, organize guards and

patrols, and to some extent handle relations with the local populace.

Garrison service (garnizonnaya sluzhba) is a fairly large consumer of manpower and actually represents the kind of support services the West normally associates with "overhead" or "permanent staff;" however, it is apparent that the Soviets do not consider this facet of the military district organization in those terms. It is difficult to differentiate what garrison services actually are at any given time. Sometimes they are "services" and at times they are not; they are partly civilian and partly military; and (depending upon their particular status) they can be requisitioned to fill out combat formations.

This is particularly important in determining the significance of the so-called "Category II and III" divisions -- a characterization which would be meaningless to Soviet military authorities. If one were to ask them how they would bring their formations up to (Category I) manpower strength, they might reply that they "make them" come up to the required strength. This would be done simply through the principle of podchineniye (subordination). They requisition the garrison service personnel needed and make their formations what they should be in terms of the manpower norms required for combat readiness state number one. It thus becomes clear that they combine what we call "overhead" with "combat services" when justified by the requirement.

Paradoxically, the organizational framework of the military district is both rigid and flexible at the same time. Its rigidity stems from a detailed system of rules prohibiting the arbitrary utilization of manpower. Flexibility results from the subordination principle which allows manpower requisitioning for combat tasks.

The issue of "combat readiness" used to be more or less a cliche in Soviet military circles. It is now taken very seriously and, therefore, justifies the actions which fall under the rubric of subordination. In other words, in an instance which required "Category II and III" divisions to be brought up to combat

strength, they would have to scramble to their guns, but they would do it.

A number of factors, including the Military Law of 1967, the expansion and improvement of military education and the expansion of civil defense efforts have burdened the military district administration with additional responsibilities and added to local manpower problems. A Deputy Commander for Civil Defense has recently been added to the Military District Command structure. Although most civil defense manpower comes from "volunteers," reservists and civil defense troops, the military district itself must allot some of its own resources to Civil Defense tasks in peacetime.

Considerable effort since 1967 has gone into raising training and educational standards of officers joining the Armed Forces. Yet, a much publicized recruiting campaign has created the burden of large numbers of young men to be trained who are unable to "make the grade." It is the Deputy Commander for Military Educational Establishments who is in charge of this vast effort within the military district.

Apart from providing the material and labor for constructing living quarters, modern barracks, weapons systems complexes and military educational establishments, the Deputy Commander for Construction and Quartering is also expected to maintain all DOSAAF and civil defense training facilities within the military district. Depending on considerations of location, agriculture, transport and weather, valuable labor resources may be, and often are, called upon to assist in harvesting, railway construction and provision of food supplies to the civilian population, expressing the Leninist principle of the unity of the front with the rear. Providing labor for civil prestige projects may also drain away some of the manpower of the Moscow Military District, as is presently the case with the preparations for the 1980 Olympic Games.

The Soviet leaders obviously appreciate the military districts' contribution in recent years to the strengthening of Soviet defense capability and their capacity to fulfill varied peacetime tasks. The military district system affords some flexibility in

overall peacetime recruitment and in mobilization during the initial period of a war and may considerably accelerate the conversion of the Soviet forces to a wartime organization.

In terms of the ground forces, the military district framework allows an extensive examination of manpower induction procedures, the time spent on the job, and on-the-job training in a context which is specifically Soviet. We can take the military district to pieces, using a "nut and bolt" procedure. What is needed is a "root and branch" approach to studying the institutions of Soviet military manpower management.

SUMMARY OF PRESENTATION BY COLONEL SCHNEIDER

" Soviet Military Training: The Red People Eater" (Appendix H)

The training of a Soviet soldier does not begin at the moment of actual induction into the Armed Forces. He is the product of a unique society which has conditioned him to eventually fulfill his "duty" to the state. This conditioning process begins when the three-month old infant is placed in the state-run nursery and continues through successive organizations such as the kindergarten, the school system, and Young Pioneers and eventually the Komsomol. All these organizations have a basic aim of orienting behavioral patterns towards a specific socio-political goal: becoming a good Soviet citizen which -- in the Russian view -- amounts to being a well-disciplined defender of the Soviet Homeland.

It can be argued that a child brought up in this system learns to suppress personal aspirations which could lead to conflict and to obey orders during the very early stages of educational development. Military education is introduced in the middle school and reinforced by "intensive basic training" during the Zarnista (Summer Lightning) games. During the same general period, the child may participate in DOSAAF (The All-Union Voluntary Society for Assistance to the Army, Air Force, and Navy) activities and learn a variety of advanced military skills.

Pre-induction training provides the Soviet inductee with skills roughly equivalent to those acquired in Western basic training. The actual induction takes place with great fanfare, oaths, and a general inculcation of the concept that military duty is a "service of honor."

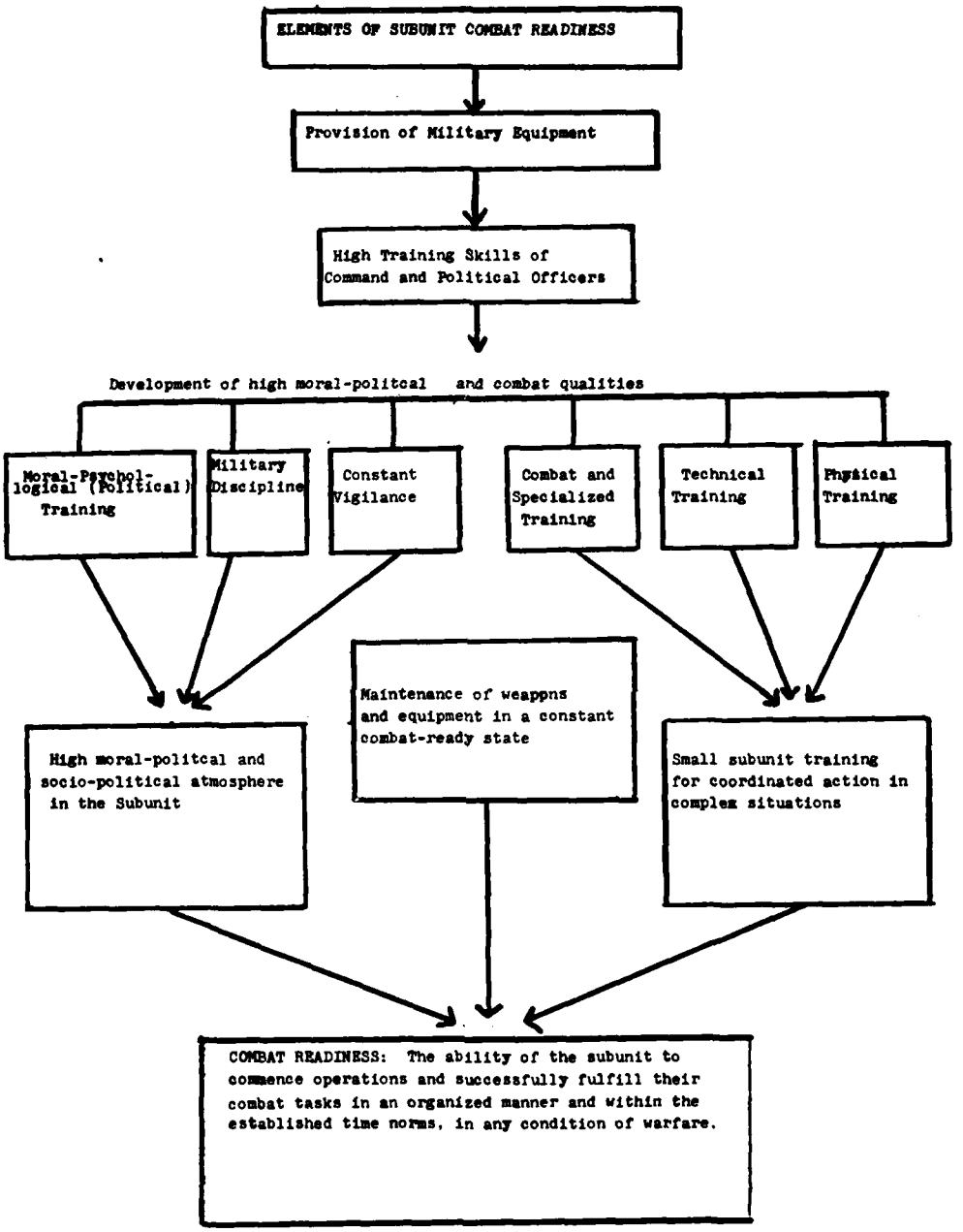
New recruits undergo intensive and rigorous training during which they receive a great deal of both weapons familiarization and political indoctrination.

Training within the Soviet Army emphasizes political awareness and its accompanying morale, training, and individual skills with which one becomes part of the combat or fighting collective. Training effectiveness is evaluated and critiqued during annual inspections and maneuvers. The accumulated data is then used by the Ministry of Defense directorates to establish essentially the same overall training goals and programs for all the Soviet Armed Forces. Military districts and lower organizational entities then issue annual plans which take into account the peculiarities of the organization with respect to location, combat readiness, etc.

Military specialists may be either extended service personnel or new inductees. In the latter case, the military district plays an important role by identifying those with significant DOSAAF or specialized educational experience. Endless repetition is a principal method of acquiring new skills. The nature of Soviet specialist training may inhibit flexibility to even perform similar functions on different equipment.

Officers -- and to a much more limited extent NCOs -- may be subjected to a great deal of military education. There are approximately 140 different military schools, institutes, and academies in the Soviet Union. These include those which take the previously untrained young men through an educational process which makes him an officer. They may be specialist schools which stress the theoretical aspects as well as practical operation of sophisticated equipment, or they may be the higher institutes and academies for selected officers to prepare them for future responsibilities. Civilian universities also provide specialized training for officer candidates as required.

A SOVIET DIAGRAM OF COMBAT TRAINING ELEMENTS



C.S. Alferov, Voyenno-istoricheskyi Zhurnal, No. 12, 1977, p. 48.

The "impact" of training in Soviet society -- therefore, also in the military district -- is positive rather than negative. Reserves and retired military personnel play active roles in the pre-induction training and conditioning of Soviet youths in school activities, politically sponsored organizations, and particularly in DOSAAF.

SUMMARY OF PRESENTATION BY MR DONNELLY:

"Soviet Military Manpower: Aspects of the Man-Machine Mix" (Appendix I)

The Soviet principles of warfare at operational and tactical levels emphasize the achievement of mobility and high speed combat operations while preserving combat effectiveness. The efficiency and, consequently, the performance of the Soviet Army must be improved within existing fiscal and organizational constraints in order to further ensure the fulfillment of these principles of Soviet military art. It is here, as the Soviets see it, that the need arises to make the best possible match of man to job, or man to machine, and to find the best way of matching the soldier effectively to his duties. The increasing sophistication of Soviet equipment does not reduce the importance of the human element controlling and operating that equipment. On the contrary, the role of man in the man-machine mix inevitably increases. Therefore the burden of ensuring the soldier's competence to wage an ever more technological war falls upon Soviet selection, assessment and training methods. The military specialist will thus continue to stand on the top rung -- and no matter how sophisticated the equipment -- he cannot be eclipsed or reduced to a mere servicing unit.

Questions of the man-machine match must be discussed from the Soviet point of view. One must refrain from comparing the individual ability of the Soviet and Western soldier to perform the same task.

The Soviets perceive an overall similarity in the problems of training men throughout the wide spectrum of specialties and tackle them in each case in much the same way. Overall, the Soviets suffer, not uncommonly,

from a shortage of really good available human resources and operate a selection system inefficient in its manpower allocation. Moreover, they are further restricted by the political requirement to mix various nationalities within an organizational entity.

The assessment of the temperament of the individual recruits with a view to matching them to suitable jobs, and the need to obtain a viable temperament mix in crews and teams is seen as being of great significance in the selection process. Yet it appears that actual attention to psychological evaluation and selection usually falls short of the prescribed ideal in actual Soviet practice. During training, the assessment and formation of the capabilities of the soldiers are supposed to proceed simultaneously. The Soviet perception of the psychological aspects of personnel selection and training boils down to the view that capabilities -- which obviously affect efficiency -- are not an innate quality, rather a mix of natural and acquired skills.

It is in this context that the commander and political officer have an important role to play in analyzing the inevitable errors and in structuring training programs to meet the psychological needs of the individual soldier and so improve his capabilities and effectiveness. Political indoctrination, apparently on occasion given less time than considered appropriate, is a concept inextricably linked with ideas of psychological assessment and training and, therefore, with the professional ability of the soldier.

The Soviets recognize that the increasing complexity of the machine may well become self-defeating -- if the operator is unable to utilize his machine's performance. The increasing complexity of modern equipment thus carries significant implications for training methods and procedures, since the aim of combat mastery over the enemy includes total mastery of equipment. Combined with the inculcation of skills by constant repetition and acquaintance with the use of equipment, training must also accommodate the theoretical principles of equipment design and operation. The breadth and depth of training skills must be increased, secondary and supporting technology

must be introduced and command and control improved, if the limits to human capacity are not also to limit the increasing technological capacity of weapons and equipment. Soviet researchers have pointed to the significant amount of training time currently wasted and the need to make better use of the time available within the two-year conscript system.

Soviet military doctrine demands a permanent state of combat readiness; yet, there must inevitably be a significant drop in effectiveness just after every conscript rotation period. Sub-unit commanders come under constant pressure to maintain the level of combat readiness of their men by maintaining a high level of technical skills through the encouragement of success in achieving training norms. Because from 25 to 50 percent of each platoon changes every 6 or 12 months, and it takes 12 months to train a soldier to operate the latest technology, it is possible that around 50 percent of the conscript cadre, or 40 percent of the army as a whole, lack the necessary skills to carry out their designated battle functions.

Soviet measures to improve efficiency, and hence increase combat readiness, include the creation in 1972 of the ensign or warrant officer (praporshchik/michman) rank which is designed to attract and retain regular NCOs as specialist equipment operators. The goal is mastering special skills which cannot be acquired economically within the two-year conscript period. This is perhaps one of the most successful elements within the Soviet approach to the man-machine mix. With the assignment to the warrant officers of low level (platoon) command appointments, officers have more time to concentrate on command and control duties, and the professional officer-specialist can exploit more economically the manpower resources available to him. One can expect an ever increasing percentage of NCOs to become technically qualified Ensigns.

Under the auspices of the Sociological Research Department of Glavpur (Soviet abbreviation of the Main Political Directorate), intense research is being conducted in various areas to develop and improve selection and training processes and assessment methods. The aim is to improve performance by better utilization of human resources through more effective selection (i.e., matching the man to the job).

The Soviet Army faces problems of a cultural nature in its efforts to meet the requirements of the man-machine mix in a time of increasingly complex technology. The Soviet system of boards of honor and socialist competition can be seen as a constant effort to motivate conscripts to perform better and take pride in their jobs. Many inefficiencies, particularly relevant to battlefield conditions of stress and uncertainty, may be partly a product of the Russian mental untidiness and lack of thoroughness. Technical training is hampered by a slip-shod attitude to machinery and a low level of acquaintance with highly technical objects.

Soviet doctrine requires that the main aims of a war be achieved in its initial period, without reliance on additional mobilization. The desired superiority in men and equipment on the main axes of advance must be attained through the fulfillment of continually rising equipment norms. There can be no "manpower slack" to absorb casualties incurred and it may be that there will be no opportunity to immediately replace technical specialists knocked out in the battle. At the same time, the obvious Soviet need for a greater degree of cross-training, and the individual's mastering of more than one complex specialty (difficult in itself), may lead to a reduction in the amount or depth of "automatic" skills that the system gives time to inculcate in the soldier. This, in turn, may increase the risk of the stress conditions of modern combat seriously impairing performance of battlefield functions.

The man-machine problem which the Soviets face is a multi-faceted and highly complex dilemma, and solutions are being sought in many areas of research. Qualitative improvements in equipment and tactics, to which Soviet military manpower does not successfully adapt, may well prove to be counter-productive.

SUMMARY OF PRESENTATION BY COMMANDER GARDE:

"Naval Manpower and the Baltic Military District"
(Appendix J)

In a period of transition from purely coastal to more wide-ranging capabilities and responsibilities,

the Soviet Navy is expanding its operations and receiving new missions. These form an appropriate background against which to consider some of the problems, constraints and weaknesses in manpower training, efficiency, and reliability experienced by the Baltic Fleet and the Soviet Navy. It is convenient to assess the performance of Soviet naval manpower with reference to the six qualities required of Soviet naval officers. In order of priority these are political reliability, discipline, initiative, leadership, training, and a command of educational/pedagogical techniques.

Shortcomings in initiative and leadership in the Soviet Navy have received most publicity. The expanding activity of the Navy requires a greater capability to cope quickly with unusual situations. However, there is evidence of a fear of responsibility and a reluctance to display initiative, a quality relatively suppressed in Soviet society itself. The principle of one-man command does not necessarily mean one-man leadership. The regular Soviet naval officer is responsible for the equipment while the political officer deals with the men's personal and welfare problems, as well as attending to political education. As a result, insufficient sympathetic contact between regular officers and men affects the overall quality of leadership.

The mutiny on board the "Storozhevoy" in 1975 and the Soviet denial of it indicate more serious problems of discipline. Discipline is harsh and very formal. Orders must be obeyed automatically and rules and regulations strictly observed. Yet the Soviets may be aware of the need to relax discipline norms somewhat to attract qualified specialist personnel and seem to recognize that command through respect can be more effective than more traditional and harsher means.

Higher training and educational standards are advocated as ways of improving manpower performance. The majority of Soviet naval officers are well educated, particularly in technical skills. But their privileged and separate education tends to create mental barriers to understanding and communicating with the conscripts originating from outside the naval environment. Ocean cruises are seen as an

increasingly important training method to promote greater understanding between officers and men and the smooth operational functioning of the "single combat family." The proportion of practical, as opposed to theoretical, training of cadets has also been increased in recent years.

The most important qualities required of Soviet officers are considered to be those of political reliability and devotion to the Soviet Homeland. Around 90 percent of Soviet naval officers belong to either the Communist Party or the Komsomol. Loyalty to the Party serves as a means of political control in the Soviet Armed Forces. Virtually all positions of authority and responsibility in the Soviet Navy are held by one ethnic group -- the Slavs. Although the dual command system has been replaced in the Soviet Armed Forces by the principle of one-man command, the relationship between regular naval officers and the political officers (zampolity) continues to create problems since the formal and real leadership do not fully coincide.

In looking at Soviet naval manpower, it is worth noting that the content and priority of qualities required in Soviet naval officers and men vary somewhat from Western naval standards. In identifying solutions to manpower problems intensified by the expansion of its mission, the Soviet Navy tends to emphasize the values, norms, and goals common to most navies as it accommodates itself to the international maritime community. At the same time, the Soviet Navy is a product of the Russian heritage and the Communist system, both of which are basically continental.

SUMMARY OF PRESENTATION BY DR SELLA:

"Patterns of Soviet Involvement in a Local War"
(Appendix K)

Judging by what can be inferred from Soviet sources, and the amount of normal activities occurring within its boundaries, the Odessa Military District is not very different from any other military district in the Soviet Union. Yet, the Odessa Military District is different from a functional point of view, in that it

borders on the Black Sea and contains many important facilities necessary for any attempt to extend the Soviet military activities outside Southwestern borders of the Soviet Union -- the Middle East and Africa.

The use of the Odessa Military District during the Middle East War in 1973 and the Soviet logistical exercise in Ethiopia in 1978 illustrated that, like any other military district, it ceased operating as a peacetime unit of convenience as it lost its formal boundaries and began functioning as something completely different in a combat-type situation.

Particularly during the Ethiopian logistics operation in 1978, the Soviet commanders involved were suddenly faced with an urgent airlift mission. They were given certain objectives to achieve and had to go outside the formal limits or boundaries of any particular military district in order to secure the necessary facilities, materiel, and equipment. Both in 1973 and 1978, many more institutions participated in the activities of the Odessa Military District. Such a wide scope of activities could not have been centralized in the Headquarters of the Odessa Military District. The Black Sea Fleet received considerable reinforcement from the Baltic and Northern Fleets, especially during the 1973 crisis. The railway system bearing the weight of equipment arriving at the harbors and airfields extended on both occasions beyond the Urals, as military stores were relied upon which are normally used for the rear of the Soviet divisions along the Chinese border and designed for entirely different operations. New light has been also cast on the use of the Odessa Military District for operational purposes by the fact that most of the airlift activity was conducted from airfields outside the Soviet Union.

There are three basic patterns of military involvement outside the borders of the Soviet Union which may involve the southern and other military districts: first, Soviet advisers and technicians, as they did in Egypt until 1970, may operate basically on the lines of a military district; second, logistics/airlift operations may be conducted from Soviet airfields; and third, there may be direct Soviet involvement in a possible war (i.e., in the Middle

East). In all three scenarios the quality of Soviet military manpower will undergo rigorous testing.

Soviet criticism of their own activities and achievements indicates deficiencies in the attitude of Soviet commanders toward their subordinates. Indeed, this weakness in human relationships can be seen to be exaggerated even more in cases where the subordinate is a local soldier or officer working under Soviet military personnel present on his territory. The low level of ability to communicate with ground control on the part of Soviet pilots is also criticized. This shortcoming will, of course, become increasingly relevant on occasions when Soviet pilots are obliged to fly over hostile areas or communicate with ground control personnel whose language they do not understand.

DISCUSSION OF PRESENTATIONS IN PART II

A military officer is apt to study the Soviet military district model with specific objectives in mind. He would first want to ascertain the capabilities of the district's military forces in terms of the state of combat readiness, equipment, mission, capabilities, vulnerabilities, and strength. On the other hand, a historian, or manpower specialist, or other academician will consider the same set of data in a very different manner. A third generic grouping might include medical personnel, psychologists, sociologists, pedagogists, or anyone else concerned with either the individual or the individual's role in a particular society.

Our discussion of the military district would not satisfy any of the arbitrary groupings listed above. Nevertheless, it includes elements of special interest to each, though certainly not in the detail required to completely satisfy even one individual within a specific group. That is, however, not the issue.

The real essence of this discussion is to determine the extent to which the military district may serve as a "unit of study" for the specialist -- in whatever discipline -- requiring in-depth information about the Soviet military system. The methodology is,

to put it simply, that of proceeding from the particular to the general. Seen in this light, a manpower specialist equipped with the proper tools, i.e., a knowledge and understanding of the Russian language coupled with extraordinary diligence, can learn a great deal about Soviet manpower practices. A similarly armed sociologist might learn even more; the sum total of all the findings of particular specialists would presumably even satisfy the military officer in his quest for vital information about a potential enemy.

Since the Bolshevik Revolution, the military district has proven to be a reasonably effective organization in which specific criteria can be met in the overall interests of the Soviet state. Of greatest importance is the provision of manpower for a large standing army which serves the political goals of the Communist Party of the Soviet Union. Westerners often fail to understand a basic principle in Marxist-Leninist ideology: the socialist army is political. As such, it is an integral part of the political apparatus of the USSR.

The Main Political Administration of the Soviet Army and its near replica at the military district level ensure that the primacy of politics remains a valid principle among Soviet forces. This becomes, in Western jargon, an overhead to control the overhead. From the Soviet view, it is important to note that it is the primacy of politics, not the primacy of politicians, which governs the political role of the Armed Forces of the USSR.

By registering, screening, training and inducting young men into the Soviet Armed Forces, the military district is performing only a portion of its greater role in manpower management.

In a wider sense, the military district must not only meet the manpower requirements for a standing army, but must also manage reserve affairs and execute mobilization plans, while ensuring that the requirements for a territorial army are also met.

There is no easy answer to the question of whether the Soviet Army in a given military district is an

expeditionary force or a territorial army. In most cases, one could say that it is both or that it is either -- depending upon what the specific circumstances in that military district are at a particular time. Nevertheless, there is a great deal of evidence to indicate that the primary role of Soviet Forces in the more important military districts -- in the western, southwestern and far-eastern regions -- actually comprises field armies with the theoretical strength of approximately 10 divisions. In other military districts, particularly in internal non-Slavic areas, the territorial role of the army probably has greater importance.

The 10 or so divisions of a military district tend to be comprised predominantly of motorized rifle units supported by an air army. None are at wartime strength, or what we call Category I. The 11th Guards Army in the Baltic Military District, for example, is composed of a mix of Category II and III tank, motorized rifle, and airborne divisions. Each has a certain complement of equipment available, but requires extensive manpower augmentation before reaching full combat strength.

Once the order is given to bring these units up to full strength, the distinction between field combat forces and garrison services becomes quite blurred. The combat arms commander, with authority from the Soviet General Staff, can apply the principle of subordination to requisition manpower from the normal garrison service units to help fill out their units.

The administrative organs in the military district must also get into full swing to mobilize the requisite numbers of reserves. With respect to individual reservists, the evidence would indicate that Soviet military authorities have their own "total force" concept. For example, Exercise Dvina concentrated great numbers of forces in the Belorussian Military District ostensibly including Category II and III divisions. One military reporter made the point that a particular division, "like all the others, as you can see, has been reinforced with soldiers and officers from the reserves. These are riflemen, combat vehicle drivers, political workers, and even reconnaissance scouts (razvedchiki)." Moreover, it is claimed that

these reserves can adapt themselves quickly to the existing combat team. The military district apparatus was able to mobilize men from kolkhoz and sovkhov farms, production, and other segments of the economy, put them back into uniform and have them operate "on equal footing with the regular troops."

In addition to -- or as part of -- the field combat force manpower requirements to bring units up to combat strength, the ideal of the socialist militia must be satisfied. This may include militia type units with the mission of rear area security, garrison services, or other specialized functions which separately, or in combination, fall under the rubric of the territorial army to provide the mix with the standing "field force" army indicated in socialist ideology.

If one accepts the figure of 4.5 million men under arms in Soviet Armed Forces, it becomes difficult to believe the protestations of Soviet commanders that they suffer from manpower deficiencies. Nevertheless, in Soviet terms, this is perfectly true. With all the tasks given to military forces in Soviet society, it is not unreasonable to say that for every combat soldier, three other soldiers perform other tasks. If the various military education facilities -- schools, institutes, academies -- are added to the equation, the ratio is probably more than four to one. There are not enough soldiers available to fill up, as it were, Category II and III units.

One observes that when the entire military manpower strength of the USSR is considered, the 75 percent teeth to 25 percent tail ratio claimed for Soviet combat units is essentially reversed. This is, however, a peacetime equation. Under full mobilization conditions this will be altered considerably and in Professor Erickson's words, "they will scramble to their guns." The primary wartime function of the military district will then most likely be optimization of the country's mechanism for mobilization.

Discussion and analysis of manpower in a military district is further complicated by the "chain of command." MVD, KGB, railroad troops, etc., are found in some abundance throughout the Soviet Union but fall

outside normal tallies of military manpower. In addition, air armies, air defense units, coastal watch, and the Soviet Navy all play a role in the military activity of a military district. It would, however, be an incredible task to draw a wiring diagram showing their particular relationship to the military district organization. There are simply other organizational entities such as PVO Strany (Protivovozdushnaya Oborona Strany -- Homeland Air Defense) which are superimposed upon the military district. The Soviet Air Force and the Soviet Navy have other special command arrangements peculiar to their own organizations.

In an operational sense, this is all drawn together through the principle of centralization. Thus, when the Soviet Navy supports amphibious forces or participates in other combined arms exercises, one may be confident that guidance and control -- in some cases even command -- will rest with the Soviet General Staff and/or its representatives. This arrangement is facilitated by the fact that the Military District organization is to a great extent a smaller replica of the Soviet Ministry of Defense.

If the Soviet Union continues its present course of projecting itself as a global power, military districts may acquire new responsibilities in support of that projection. The most striking example of the extension of Soviet military power beyond the borders of the USSR has been the support rendered to the Arabs in the 1973 Yom Kippur War and the 1978 struggle in Ethiopia's Ogaden region. In both cases, the Odessa Military District played an important role in the logistical system utilized to provide the Kremlin's allies with arms and material.

Paradoxically, the rigidity of the military district organization provides great flexibility for interaction between different areas. A division, or other military entity, from one military district can be plugged into another's system with only minor difficulty. Similarly, logistical, and other services are compatible to the extent that emphasis may be shifted from one military distict to another as the situation requires. Of varying strength and status, the individual importance of the 16 military districts is not reflected in their respective sizes. The

potential political role that each can play in an ever-changing international climate is the primary determiner of the relative status and prestige of a particular military district. In this sense, it is safe to say that the transformation of the USSR into a superpower with expanding global interests has given new importance to some military districts formerly of secondary status.

As an organizational entity, the military district has survived the test of time to become the means of meeting specifically Soviet requirements. By Western standards, it is probably not very efficient and manpower management could stand some improving. But it is, nevertheless, most capable of doing what the Soviet military requires of it. Not limited to purely military functions, it has a hand in the civilian economy and serves as a great social integrator through the assignment of men and material.

In the eyes of the Party and military leadership, the training of a Soviet soldier is indispensible to the health and vitality of the Soviet Union. The Soviet Armed Forces are often referred to as the "University of the Nation," meaning that they provide its youth with both specialist and political training which is fed back into society when soldiers return to civilian life. Simply stated, military training is a social process. It is difficult to assess how much time is devoted to military training in the sense of how many weeks are allotted for various tasks. Leaving aside pre-induction training and DOSAAF-acquired skills, it can be said that the Soviet soldier (as opposed to his Western counterpart), spends nearly all his time under the direct control of military authority. Young soldiers do not frequently leave their barracks except for training purposes. When they do, it is to visit cultural or scenic places in a group led by an NCO or junior officer. The mere presence and availability of soldiers under perpetual military control creates opportunities for more training. However, there is evidence that the relative abundance of time does not automatically signify more efficient training or increased combat capability. Brezhnev himself, for example, has called for greater utilization of the individual soldier's time.

Soviet military leadership is keenly aware of the importance of the individual soldier's psychological welfare, particularly as it affects his morale and performance. Therefore, a major share of the efforts toward a better utilization of time in the barracks is assigned to the unit political officer. This means that although actual military training hour norms per se may be increased, the increased time utilization called for by Party Secretary Brezhnev is more political/motivational than actual military training. It must be remembered, however, that in the Soviet system political training is an integral and indispensible part of military training. Even during major maneuvers, Party and political work is constantly carried out at both unit and sub-unit level. Seen in this light, Soviet soldiers probably devote a great deal more time to military training than their NATO counterparts.

The Western view of the Soviet political officer is conditioned by Western cultural experience. In Soviet theory, at least, he is much more than the ominous indoctrinator of troops. And even within that context, it must be understood that "indoctrination" has positive rather than negative value. Because of our suspicions of things political, we are apt to question the reaction of the Soviet soldier to the efforts of the political officer within the framework of military training. Certainly, there is a tiring effect of this aspect of military life which the East Germans have referred to as rotbestrahlung -- literally, being exposed to red light -- in a political sense. But this effect is hard to measure. In the Soviet sense political indoctrination is designed to motivate, to raise morale, and therefore to increase combat effectiveness. While the political officer is always a Party member, he may also be a distinguished soldier, pilot, or naval officer. To perform his job properly, he must be well versed in pedagogic principles and skills. His task is one of the most difficult in the entire Soviet system: motivation.

Soviet military theory has paid meticulous attention to detail in considering the psychology of the soldier. The long hours, under perpetual control, and a steady dose of political motivation may be distracting, but it is all part of the greater whole

for which Soviet society has conditioned its soldiers. In sum, the unity of military development, training, and indoctrination is a pedagogic principle.

Russians do not conceive of peacetime efficiency and wartime capability in the same terms as Western military leaders. The overriding criteria is combat readiness. Therefore, training and maneuvers are theoretically planned and carried out under conditions which are meant to simulate actual combat. The Commander in Chief of the Ground Forces, Army General I.G. Pavlovskiy, has emphasized that combat training in the field -- in training areas, tank parks, and on the move -- must take place under conditions most like those of actual combat. While it is admitted that the extra burden of fear brought on by combat with an enemy and the threat of death is difficult to simulate, the Soviet Army -- in theory at least -- makes every attempt to duplicate battlefield conditions.

Training -- particularly the sort of taxing training experienced during major maneuvers, prolonged naval cruises, and intense flight activity -- is intended not only to secure tactical knowledge and improve individual/collective skills, but also to form psychological stability and internal emotional readiness for battle, i.e., combat readiness in all its aspects.

The Soviet training establishment does not function on the basis of a cost analysis system in any way similar to the managerial approach taken by the Americans. Nevertheless, there is a detailed record keeping system which keeps account of training costs within the context of established norms for the accomplishment of specific training objectives. This system, like that in Western armies, places certain constraints on Soviet commanders and challenges them to achieve combat proficiency within those norms. Soviet commanders, like their counterparts the world over, do not necessarily like these constraints and may complain bitterly; but, aside from fiddling the books a little, they must ultimately give in to the "scientifically derived" norms for training established by the centralized training directorates.

The effectiveness of pre-induction training is disputed even among the Soviets. It therefore becomes very difficult to measure because there is no single cultural framework and an almost unavoidable lack of uniformity from one oblast' to another. With the aid of DOSAAF, pre-induction preparation does appear to produce demonstrably good results. Moreover, each year there is an increase in the percentage of inductees who have special sports ratings and who have received training in various military specialties through DOSAAF organizations.

In contemporary operations and training, Soviet commanders and theoreticians continually exhort young officers and senior NCOs to exercise greater initiative. In their military theory, experience has shown that as the complexity of warfare and the sophistication of equipment have increased, the training emphasis has made a gradual shift from the simple intensification of the activities of soldiers and military collectives to a "comprehensive activation of mental processes." In attempting to increase this mental activation portion of modern soldiering, the Soviet Army has learned that exercises with high mental challenge succeed less often. This has unquestionably indicated to Soviet authorities the requirement for greater individual initiative, which in turn has caused them to express a need for better human material.

As was pointed out in Part I, knowledge of the Russian language is an important factor in assigning draftees to various services and functions. The increasing percentage of non-Russian nationalities in the 18-year old manpower pool must certainly be accompanied by the induction of a growing number of recruits who have not mastered the Russian language. The voyenkomat must, then, identify language capability efficiently enough to avoid a short-fall in personnel qualified for specialized training. The problems posed by recruits with an insufficient command of Russian are difficult to assess; however, it is known that such recruits complicate the training program.

It is difficult to overestimate the role assigned to moral-psychological and moral-political conditioning by the Soviet theory of military training. In a strictly military sense, training seeks to instill automatic responses -- the fulfillment of combat tasks --

even under the psychological pressures of the nuclear battlefield. There is also evidence of a Soviet paranoia about the superiority of Western technology. It becomes an imperative in the Soviet system to place political-psychological reliability above pure capability in matching personnel to job or, in other words, to achieve the best man-machine match.

The further up the ladder of specialization a soldier climbs, the more complex the technology. Thus the specialist enjoys greater prestige but is at the same time placed under an extreme amount of pressure. A single mistake in handling complicated equipment, it is claimed, may delay or lead to the faliure of a crucial combat mission. Moreover, the constant reduction in time alloted for the modernization and incorporation of new combat equipment, together with modifications of existing equipment, have imposed a significant retraining burden for military specialists. One therefore surmises that a degree of flexibility and initiative is required among personnel who have already been trained. It is evident from Soviet statements that this is a more serious problem than in Western armies. Its extent cannot be accurately measured, but it may be compounded by additional constraints -- probably ignored when necessary -- such as the practice of mixing ethnic and language groups so as to preclude ethnically pure, homogeneous units and sub-units. The Soviets admit that the complexity of new equipment and the rapid and collective character of its operation also raises now, as never before, the problem of ensuring psychological compatibility among the members of small sub-units.

Theory demands that the psychology of the "military collective" be taken into account and skillfully guided toward the proper goals. A most important role is played here by the group opinion which is supposed to control, direct, and correct the actions and conduct of each individual in accordance with the military collective's particular military tasks. Praise, judgments, rebukes, and even condemnation are used by the group to ensure proper socialist behavior. In addition, the commander or political worker, as a leader of a collective, is challenged to constantly shape the group opinion and raise its ideological content; in sum, he is to make

group opinion unanimous in conforming to the Party dogma. The psychology of a military collective is controlled in day-to-day activity. Its significance increases under difficult and dangerous conditions such as nuclear war. According to Soviet psychologists, this control is a pre-condition for guaranteeing the actual and necessary conduct of the individual soldier at any given moment.

This leads back to the question of the man-machine match. Soviet ideologues have long feared that over-technologization will lead to a lack of political control. They never tire of repeating that in the man-machine world, man is the most important. Contrary to Western practices, there is little evidence that technology is used to replace manpower -- it is to enhance combat capability. Equipment is therefore designed for particular tasks -- not necessarily people -- following the priorities of military doctrine. As the means of combat improve, the lot of the Soviet soldier may even become more difficult. Personnel assignments will have to be more selective, training requirements to master new technology will increase, and political training will retain its present position of primacy.

PART III

SOME SOVIET PERCEPTIONS OF REQUIREMENTS AND DEFICIENCIES

Requirements

Strictly within the terms of Soviet usage it is quite impossible to discuss the problems of "military manpower" and the "perceived requirement" as such. The starting point has long been and will continue to be the Party -- whether it be the Party and the military structure (voyennoe stroitel'stvo), or the Party and the preparation of military cadres, or the Party and the creation of "an army of a new type." This is neither eccentricity nor humbug, for it represents the reality of the situation. On the other hand, it has the curious effect of inhibiting the emergence of a distinct social terminology to depict manpower problems, or it leads to deliberate ambiguity -- "effektivnost" is a case in point, widely used (indeed, repeated interminably) but lacking a precise meaning. Thus, there are political criteria for "efficiency" and "effectiveness" but no overt objective assessment, where such an assessment or judgment might impinge on political imperatives.

It is impossible, of course, to continue this discussion entirely in Soviet terms, if only for reasons of clarity. By way of abrupt translation, the primary concern of the Party and the military is with the properties and the survival of "the system" -- meaning Soviet society at large as well as its military effectiveness. If the language of requirement means anything, then this is the overriding requirement, one presently assessed in terms of confidence combined with a subdued but persistent sense of vulnerability. Here is a military product which assures the security of the Soviet system by virtue of military weight -- a principle which is most unlikely to be abandoned in the foreseeable future -- and also discharges the legitimate defensive tasks and obligations of the system, including the inculcation of both military and civilian preparedness. To this end, the military must convince the Party that it has properly ordered its side of the house, with a proper arrangement of

military forces, a cogent doctrine which takes account of military and political realities (as well as technology) and that it can effectively command this instrument in terms of battlefield efficiency. At the same time the military must not lose sight of the political and social priorities inherent in Soviet military policies, hence the stern refusal to move away even fractionally from the notion of the armed forces as the "school of the nation" (upgraded now to the "university of the nation"), though this principle has been largely discarded in other advanced industrial societies.

How, then, would the military further elaborate its case?

The Strategic Environment and the "Military Technological Policy of the CPSU"

Though at present Soviet military programs and Soviet military strength have successfully "deterred" the United States, imposing a visible restraint upon its global activities in view of American recognition of its growing vulnerability to Soviet nuclear strikes, this is not to say that the danger of war has now vanished from the scene. On the contrary, the danger of unexpected sudden war is still a very conspicuous feature of the world scene and it may be that while the Soviet Union has made persistent efforts to plan for expected contingencies -- general war between the USSR and the USA -- it could be that in so doing "the system" has become too rigid and is not flexible enough to anticipate threats emanating from different sectors of the strategic horizon. Marshal Kulikov himself made this point with some urgency not long ago and urged greater application of "scientific foresight" in appraising the strategic environment, possibly to detect a new range of threats which remain as yet unappreciated. It is for this and other reasons that the Soviet military command cannot accept the proposition that the strategic environment is stable, to a degree that the Soviet Union can relax or diminish its defensive effort. While accepting that detente as a tactical mode has as its objective the avoidance of nuclear war, above all a nuclear collision with the United States, it is essential to consider those prerequisites and requirements related to waging war at any given time.

While it may be useful for political purposes to debate the issue of superiority, the Soviet military recognizes that all-round, universal superiority is essentially an impossible aim. Rather, the Soviet military aim is to ensure those degrees of relative advantage which will serve both political and military purposes. For example, while it is understandable that political propaganda should suggest that capitalist society will crumble at the first blow from the Soviet strategic arsenal, it is not sensible for the military command to count on this eventuality. The strategic disruptive strike which the USSR would launch -- the resolute rebuff to capitalist threats and maneuvers -- might not cripple capitalist society, might not eliminate all enemy launchers, and might not disable all enemy command and control centers. A more prolonged struggle might ensue, hence the resort to the all arms/combined arms solution involving the several arms and services of the Soviet military establishment. Retaliation as such, absorbing a first-strike but being able to mount a second strike, has little appeal: having suffered a devastating blow (and in 1941 the Soviet Union did indeed suffer a blow of this dimension), the results might well be so catastrophic as to inhibit further action and surrender may be the only option.

A deterrent posture as such would hardly serve Soviet ends, for this offers only passivity and invalidates the principle of seizing the initiative. It follows, therefore, that deterrence has not been and never could be a measure of sufficiency for Soviet strategic forces -- frustrating or breaking up an enemy attack aimed at the USSR is a mandatory operational requirement, where initiative would be at a premium, with Soviet forces committed to limiting potential damage on the USSR and also mounting offensive "time winning strikes," strikes which not only blunt the edge of an enemy assault but which also gain time. This approach disposes of the notion of any absolute superiority, makes any concept of sufficiency relative and places a premium on forces in being, including the rapid deployment of available military technology. At the same time, the Soviet command must consider the "fit" of the several theater operations in relation to the main strategic strikes (including prescriptions for extensive war at sea).

Viewed in terms of operational missions, the ICBMs of the Strategic Rocket Forces (supplemented by the bombers of Long-Range Aviation and the SLBMs of the Soviet Navy) will "ensure the destruction of the enemy's means of nuclear attack," the elimination of military bases, the dislocation of his command and control, the paralysis of the economy and transportation (all a mixture of counter-force and counter-value targeting). The Soviet Navy must contain "aggression from the sea," by inhibiting seaborne strikes directed against the USSR with a massive ASW effort conducted by combined naval forces. The Soviet Navy will also operate against enemy sea lines of communication. The Air Defence Command (PVO Strany) relies on its huge manned interceptor/SAM/radar network to fend off air attack and is presently adapting this system to deal with the cruise missile, while an improved ABM system demonstrates Soviet interest in anti-missile defense. This mode of active defense is accompanied by a growing passive civil defense system, which may not be able to assure the protection of the population at large but which can secure some greater survival for vital command centers and production facilities. Soviet theater forces, with the Ground Forces as their backbone, will also strike out to eliminate enemy nuclear means, enemy formations, and enemy command and control facilities. Surprise and deception can be vastly assisted by electronic warfare (EW) techniques. The rapid concentration of superior force will in turn facilitate the high-speed offensive into the entire depth of hostile territory, an offensive which can be conducted in either a nuclear or conventional mode in its initial phase.

The "numbers game," which is implicit in every aspect of this policy, is not some blind or mindless pursuit, nor even a bureaucratically pre-determined process. Much less is it the acquisition of mass in its own right, for that solution was discredited by the searing experiences of 1941-42. It is true to say that a numerical solution is central to Soviet military problems -- as indeed it is in other systems -- but this should not be interpreted an unreasoning faith in mass. On the contrary, number (or quantity) is related directly to the concept of norms, battlefield norms, or armament norms, which apply to strategic and general purpose forces alike. These norms, plus the adoption

of advanced military technology, dominate the Soviet approach to the modern battlefield. One of the results has been the creation of a whole range of operational typologies which embrace weapons holdings, force structures, expected effectiveness, anticipated loss rates in high-intensity engagements and measurements of operational realities -- taktícheskie raschety.

Numbers, therefore, should not be equated with mass, in spite of popular perceptions to the contrary. The Ground Forces are a case in point. For all the talk of mass, the Ground Forces concentrated on building up comparatively small mobile units, adapting tactics to this type of structure and designing armor with operations on a nuclear battlefield in mind. The high ratio of combat strength to support was achieved by centralizing logistics support, by fitting a great deal of training into operational framework, by keeping down the size of formations and units, and, finally by maintaining a mix of cadre and active divisions. Whatever the impression of gross numbers, in this context it is perfectly understandable that Soviet commanders should complain of a shortage of manpower -- again, not a shortage of gross numbers nor even trained men, but rather the total facility to manage this type of optimization in every operational instance.

Both for strategic and general purpose forces, the underlying principle has been (and will continue to be) the maximum effect application of forces in terms of fire-power (or yield of weapons), weapon mixes and force structures, as well as unit organization. The Soviet military can claim that this type of optimization has been well handled and professionally executed, though there are still problems in implementing "sustained combat capability" (zhivuchest) within its formations; indeed, such has been the success of this optimization that now either the size of formations must be increased or else greater use be made of reserve stocks to maintain this capability. (Further increases in the numerical strength of formations would breach a cardinal Soviet principle, so that the probable solution lies in the direction of reliance on reserve stocks.)

Drawing on the experience of the Great Patriotic War (1941-45), and the implication of the "revolution

in military affairs," the Soviet military recognizes the crucial importance of the initial period (nachal'nyi period) of modern hostilities, the need for substantial forces in being, the requirement for reliable protection of the Soviet state and its economy (or critical sectors), and the need for military and civilian preparedness, in terms of the mobilization of not only material resources but also of the popular will. The political strategy of war-avoidance -- detente, of the relaxation of international tensions -- is sensible in its own right, but this is not to be confused with the requirement to develop and to maintain a war-waging capability which will by its very instrumentation continue to recognize the close relationship between war and politics.

The requirement in military terms thus matches both the Soviet political outlook and political objectives: there is a need for numerical expansion in weapons programs (though this does not mean mass for its own sake), for substantial forces in being, for a ready process of mobilization in terms of military-economic resources and for military and civilian preparedness. All these combined can give the Soviets "useful advantage" for operational purposes and can be converted into the language of overall superiority, or at least the impression of it, should the political climate demand such a formulation either for internal or external consumption.

Force Structures and Cadres

The Soviet military would argue (and does argue) that it has effectively organized its force structures and pursued policies towards cadres which in combination assure sustained combat capability -- all in terms of quality and quantity. In adapting to the demands of the "revolution in military affairs," the Soviet military establishment worked assiduously on relating the nuclear weapon to a specific war-fighting posture and, in the process, built up the Strategic Rocket Forces as a premier arm. The Soviet Navy, impressive in its development of ships and naval weapons, has cause for further congratulations on its manpower policies which have been deftly optimized. In the Ground Forces, thanks to a careful consideration of structures in relation to cadres, the share of support

in relation to combat elements has been progressively reduced. Two other prominent features of the system deserve comment: the first is mobilization capability (and here the military commissariats play a key role) and the other is the pool of reserves, constantly expanding and providing a large number of trained men (that is, those who have undergone military service in the past five years).

Institutional change and structural reorganization are not the favorite devices of the Soviet military (or of the Soviet machine in general). Nevertheless, by constant modification and careful adjustment the Soviet military establishment has managed to modernize and rationalize in its own fashion -- the evolution of the Rear Services is a case in point. Proof of this general viability is furnished by the successful adaptation of the Soviet military establishment to the 1967 revision in the Law on Universal Military Service, which reduced the length of compulsory military service and thus reduced both training time and time in service. At the same time, the military has paid increasing attention to the program for pre-induction military training and attempted to extract a large amount of benefit from it. Thus, while the system appears to be rigid, it has considerable elements of flexibility within which one can initiate certain degrees of organizational change and differentiation in manpower practices. The principle of centralization -- centralization Soviet style, it should be noted -- has proved itself to be indispensable.

In terms of cadres, the key to the Soviet concept of "manpower policy," the military has been generally realistic. Officer recruitment, though giving cause for concern from time to time, has a much improved aspect, while the elite strategic forces have an increasing complement of trained specialists, a process assisted by the general improvement in Soviet educational standards. The warrant officer (praporshchik/michman) program, while undergoing some severe trials in its early stages, has settled into the system; the long-term results, however, remain to be estimated. The mix of regular (or extended service) personnel with conscripts has been managed so far -- with reasonable success, in terms of maintaining present unit organization and structure -- by a system

of maintaining a fixed billet system, with conscript manpower allocated mainly to lower leadtime units. This system also affords a certain flexibility, in spite of its highly centralized aspect: one of the more prominent aspects of the relationship between organizational structure and the cadre/manpower pattern is that the former is retained while the latter involves a deliberate and specific pattern of "undermanning." That is not too much of a risk if the mobilization capability is effective enough to produce the required degree of manning for operational purposes.

In general, the Soviet military can claim a certain genuine satisfaction with the post-1968 situation in terms of maintaining organizational structures, acquisition of cadres, and the relative flexibility in arranging the conscript share of the military burden -- a factor which also contributes to keeping manpower costs low (though discounting opportunity costs). The administrative system for handling conscription has proved itself (in the Imperial as well as in the Soviet regime). The military can probably face a fall in the absolute number of conscripts available annually with some equanimity, because past experience and present practice demonstrates that an optimum force structure can be sustained -- one which does not debilitate effectiveness -- with the application of certain well-tried techniques. The undermanning principle can be extended further, for example, by cutting into sluzhby (support) without immediate damage to military effectiveness and operational efficiency. At the same time, operational manpower levels could be sustained (and possibly increased) by expanding the numbers of regular/career personnel, though this would have considerable social and economic effects in Soviet society as a whole. And, finally, the Soviet military can fall back on its reservist pool, so that undermanning (should this option be extensively utilized) is not too risky when reservists with recent military experience can be called on to round out operational units.

Thus, the military can claim -- though all the while acknowledging the insight and wisdom of the Party -- that it has provided stable organizational structures

consistent with military effectiveness and has gainfully utilized available manpower. In other words, "the system" is sound and while operated in highly centralized fashion can adapt and will adapt.

Efficiency, Effectiveness and Performance

Having stated that "the system" does work, it is necessary now to reformulate the question: will it work under conditions of maximum stress? It is not simply a question of the quality of manpower but a matter of establishing the efficiency of the system in its entirety, particularly its responsiveness in terms of command and control. Here it is important to note the emphasis placed on command and control as a means of maintaining a high state of combat readiness and this, as opposed to a distinction between peacetime efficiency and wartime operational capability, is the fundamental measure of "efficiency" (or "effectiveness"). The military argues that it has made great progress in recognizing this dimension of preparedness, that it perceives the technological implications and requirements -- but not at the expense of putting technology above "the man" (and hence out of reach of politics and political processes). The military has played its part in moulding the new Soviet man and has accordingly looked into the problem of what constitutes a soldier under these complex conditions; again, all within the guidance prescribed by the Party.

The military also puts the case realistically. There are problems with the man-machine match and there is still too much reliance on old methods, but the Soviet military has faced up to the problem of what constitutes "command," what is "military work," and what is the relationship between centralized direction and the requirement for initiative. And even while the trend is increasing towards a technology-intensive military establishment, this has not led to the neglect of political obligations and duties, nor has it negated the insistence on discipline. Indeed, discipline has taken on a very positive character, for no longer is it a substitute for technological inferiority but rather it is geared to the possession of advanced weaponry. The prevailing method relies on "discipline throughout the system" and "realism in training," all at the behest of the Party.

In all the train of argument, the military will insist that its "requirements" derive from the needs of the Party -- which is largely true. The military seeks to demonstrate that in terms of its appreciation of the strategic environment, the persistence of threats and its consequent development of force structures and manpower practices it has met "requirements" and on this basis should have the means to continue to do so. Aware of demographic trends in Soviet society, the military can make a formidable claim for a proper share -- and could adjust itself by modifying over-training and over-manning, all without impairing military effectiveness. Above all, the case would be made in terms of political objectives and ideological imperatives, but in the last resort and appealing to its past record the military could just say: if not us, then whom will you seek out to assure survival? That is, the basic requirements for the Soviet system in its entirety and the military will insist that its own record here justifies preferential treatment, be it a question of money, machines, or men.

Deficiencies

In 1967 when the Supreme Soviet revised the Law on Military Service, it was reacting both to social change and to the so-called "revolution in military affairs." In so doing, it was attempting to match manpower requirements to what had become a technology-intensive military establishment as well as recognizing the social implications of military manpower policies. Thus the length of conscript service was cut to two years, accompanied by the challenge of providing higher quality conscripts who could better meet the requirements of what was fast becoming a technologically oriented army. This difficult task was to be achieved by improved training (especially technical), increased through-put of trained personnel, enhanced reserve training, and enlarged military and paramilitary training for the civilian populace. This included the revival of pre-induction military training for all Soviet youth. These fundamental changes in manpower practices were a result of a concensus between the military and political leadership that greater realism was required in military policy to close the gap between requirements and capabilities. This also included a rationalization of manpower policies in view of their implications for the whole of Soviet society.

Training, Education and Combat Readiness

With the reduction in the period of conscript service from three to two years, greater attention had to be given to accelerating the process by which the young soldier could become a useful (polnotsennyy) serving soldier. One of the difficulties faced by the Soviet authorities in achieving this goal can be traced to pre-induction training. The great variety of local conditions, the disparate nature of resources, and the fact that the brunt of the training burden is borne by the local instructors in schools, factories, and farms, imparts an often haphazard character to the whole process. As a result, pre-induction training suffers from different weaknesses of varying intensity. For example, the partly improvised, partly systemized military-political-patriotic component of this pre-induction training varies in effectiveness from place to place. This deficiency in political training must later be rectified when the young soldier comes under the full-time control of the army establishment. Apathy, student disinterest, and the lack of essential equipment are related factors with which pre-induction training personnel must contend. Similarly, complaints have been voiced about the relevancy of the training provided by older ex-colonels with out-of-date precepts. Another perhaps more relevant shortcoming in the system is imposed by their high degree of bureaucratization which characterizes the military district manpower apparatus and impedes the efficiency of selection for specialized training and assignment.

The Soviet Armed Forces no longer represent an educationally deprived group. The present high educational level of conscripts -- it has been reported that 90 percent have completed some form of secondary or higher education and 70 percent have had technical or specialist training -- is an obvious advantage to the Soviet Army. However, while the period of conscript service has been cut by one-third, the training time available has decreased by approximately half -- if one accepts the proposition that a soldier must be "fully trained" if he is to be an effective element of the military sub-unit or team.

The strain of operating the revised manpower system has largely fallen on the lowest entities of the

armed forces. With less time available for training, Soviet authorities have consistently pushed for greater utilization of time and an improvement in the quality of training. A problem of constant note has been the heavy burden in sub-unit training and leadership which has traditionally fallen upon the junior officer. The extremely heavy workload he is forced to shoulder has caused ripples of discontent throughout the system as young officers have complained that they not only have officer responsibilities but also perform additional functions which they feel should properly be executed by sergeants and NCOs. Much of this problem is now being tackled by the introduction of the new warrant officer (praporshchif/michman) rank to provide technical expertise and leadership, freeing junior officers from an excess of responsibility and narrowing the skills gap. The Soviet Command has evidently placed great hope on the benefits of the new warrant officer scheme and it appears to be working quite smoothly even though additional evaluation time is required to solidify the role of the praporshchik within the overall unit and sub-unit system.

"Combat readiness" (boyevaya gotovnost') has become a theme in the Soviet Armed Forces which is no longer a slogan to which one must pay proper lip service, but a yardstick against which every commander's performance is measured. Because the basic essentials of combat readiness are training and equipment, Soviet commanders are confronted with the two-fold problem of training time and equipment costs. Nevertheless, most major commanders remain convinced that combat readiness can only be achieved through practice in major field exercises which "simulate" the conditions of actual combat.

Considering the military gargantuanism which appears to prevail in the Soviet Union, it may appear ludicrous to those who specialize in "bean counts" to speak of insufficient military manpower, yet this is a continuing concern to the Soviet military establishment. The Soviet perception of external threat requires great quantities of manpower and equipment not only on the Central Front but on the Sino-Soviet and Persian borders, not to mention NATO's northern and southern flanks. Moreover, the political nature of the Soviet Armed Forces requires a huge

military force with which to project power as an instrument of foreign policy.

Several recent studies by Soviet demographers have shown that the number of potential draftees (18 year-olds) will reach its lowest ebb in approximately 1978. If present international relationships and trends continue, the Soviets will have to maintain their current level of military manning to ensure fulfillment of their perception of defense requirements and the political dictates of Soviet ideology as a world power. This may mean a conscious political decision with accompanying enforcement measures amid popular discontent and demands for a more consumer-oriented society.

Technology, Ideology, "Kultura" and Questions of Initiative

Inherent in Soviet military ideology is the principle that technology does not replace personnel but rather assists man in the performance of military tasks. Indeed, political ideologues have long harbored the fear that over-technologization will ultimately decrease the political control exercised over the armed forces. Thus a new spate of literature is appearing which both emphasizes the primacy of man in the technology-intensive establishment and serves as an "apology" for technology -- particularly data processing -- while testifying to its necessity.

Technology, then, intensifies manpower requirements in the Soviet system. DOSAAF programs continue to provide initial specialist training thereby partially meeting many of the military's manpower needs. But there is great diversity in the qualifications of DOSAAF trained "specialists," which again affects the commander's ability to field a combat ready force. Thus the cry is often heard for more stringent quality standards for military technicians. Consequently, military districts (voyenkomaty) and the conscription process at large meet with criticism and the accompanying challenge to be more selective.

The introduction of data processing equipment into the planning and decision-making echelons of the Soviet Armed Forces has led to considerable concern over troop

command and control (upravleniye voiskami). The Soviets consider the time required for decision-making and the aptness of decisions to the combat situation to be major deficiences. Marshal Kulikov -- presently Warsaw Pact Commander -- is explicit in stating the requirements for introducing military systems engineering and the need for automation in the decision-making process. Moreover, Kulikov's position is that command and control (upravleniye) is equally (or more) important than the equipment with which one engages an enemy in combat. The Soviet command and control question has two important aspects which impinge on the problem of military manpower. The first is the question of technological expertise, i.e., the acquisition and training of military specialists who program, operate, and maintain the advanced computer technology required in a modern command and control system.

The second, and more fundamental question, concerns the moral-psychological, moral-political aspects of exercising command. Part of this question relates to the achievement of the desired political-military-technical unity (yedinstvo) in the commander which enables him to make the right decision in the minimum amount of time to successfully complete the combat task assigned him by the centralized control apparatus. Another element this question is concerned with is initiative (initsiativa) and the ability to act independently when communications and contact with centralized control have been disrupted. It can be reasonably argued that initiative in the Soviet forces is at a lower level than in Western armies at the individual, unit, and formation levels, although it would be excessive to claim that the Soviet system eliminates all individual initiative. In many cases, "initiative" remains a word or concept to be strived for, but not a sufficiently widespread quality in the Soviet officer and soldier in practical terms of actual performance as portrayed by exhortations in the Soviet military press for the exhibition of greater initiative.

The Soviets are, undoubtedly, aware of the need for greater initiative in an ever more technology-intensive army and there is indeed a very slow shift towards greater reliance on persuasion in Soviet

society at large. They stress "politically-controlled" initiative and the concept of initiative within a framework of conscious decision, a concept which contains a high degree of initiative. In short, initiative as a desirable quality is perceived by the Soviets as self-controlled action by highly competent individuals.

The Soviet answer to nearly all problems often appears to be massive doses of education; this is particularly true in the case of officers. The Soviet officer training system is the largest in the world. The "military-technical revolution" and the Soviets' perceived need for a large stock of officers lead to the demand for a large number of specialists, i.e., technically qualified officers who cannot be produced or replaced by short, emergency courses. Yet the Soviet military schools have been the subject of much criticism on the part of receiving unit commanders for failing to provide an adequate technical background. They point out an obvious need for improved teaching methods and training aids, up-to-date equipment for training and a better system for turning young officers into good unit instructors. Nevertheless, in the Soviet view, a thorough understanding of military-political and technical theory coupled with practical experience is a prerequisite for the exercise of the initiative to which senior commanders continually exhort officers, particularly at the sub-unit level.

As the soldier becomes an "operator" and part of a man-machine mix, military work can be divided into various aspects, which prompts the identification of the "military-technical" and the psychological aspects of military activity. There is, as a result, some conflict between the "professionals" and the "political administration" over the relative emphasis to be given to purely military-technical and moral-political aspects of, and approaches to, the training task. Nevertheless, continuous emphasis is given to the importance of a good general educational background (kultura) which includes both a good technical grounding (technicheskaya kultura) and a proper style of staff work (shtabnaya kultura). The continued emphasis on proper educational preparation for the Soviet soldier indicates Soviet concern with their perception of educational deficiencies in the military establishment.

The transition to a technology-intensive establishment has also given rise to internal problems related to the role of the specialist within the military structure. There is the problem of recognizing varying degrees of social change which are relevant to such questions as what ought to be the disciplinary mode for handling better educated soldiers. The increasing "technical culture" -- to use the jargon -- within the military is less amenable to the crude "hurrah-patriotism" often practiced in motorized rifle units.

Developing Soviet Perceptions of Discipline and Morale

The Russians have traditionally relied on excessive discipline as an essential factor in combat effectiveness. The long-standing internal contradiction between the requirements of professionalism and political reliability is no longer the basic problem for the Soviet Army. There is evidence of tension between a very high degree of rigid discipline and the requirements for the introduction and mastering of delicate, highly complex, technology-intensive equipment. The new Disciplinary Regulations (1975) emphasize the importance of persuasion and encouragement in maintaining and enhancing military efficiency. It will obviously take time for the new regulations to work their way down through the system, overcoming the old problem of entrenched habit, manifested in the failure (as reported in the Soviet press) of some officers to observe the spirit of the new regulations. Engels compared the Russian and Prussian Armies of the 1860s in terms of military effectiveness. He saw the reliance of the more democratic Prussian Army on persuasion as dysfunctional to military strength. Indeed, in general terms, strong discipline is a strength, rather than a weakness. Combat effectiveness is a function of training, equipment, technical skill, physical fitness, and motivation.

Soviet authorities must now grapple with more fundamental -- and paradoxically complex -- problems such as: what is discipline and what is morale? The motivational aspects of individual performance and the role of the political officer are being reexamined. Attempts to turn the armed forces into a kind of

ideological correctional school have often proved counter-productive. Other attempts to focus attention on the patriotic aspects of military service have likewise met with a mixed reception. Perhaps the most successful methodology yet employed is the appeal to the principle of loyalty to one's "buddies" within the so-called military collective where the political and patriotic are combined with collective esprit.

Efforts are also underway to increase the level of devotion to one's particular specialty. Agitational propaganda is directed at fostering a belief in the power and reliability of Soviet weaponry and its superiority over that of NATO. According to Soviet spokesmen, the high level of sophistication in military equipment, together with the increased requirements in the personnel who use and service such equipment call for the perfection of existing methodology and a search for new ways of inculcating the specialist with the inner discipline which traditionally would have been forced upon him from higher levels. Much of this is concentrated in an acknowledgement of the need to raise the role of the human factor in the man-machine mix; this is to be largely achieved by raising the level of intellectual development. In addition, the importance of such things as human factors engineering, the scientific organization of work, and thorough competence in technical matters, military pedagogy and military psychology are being stressed as important facets of a commander's or political officer's professional expertise.

In the main, Soviet perceptions of their own deficiencies are real and perfectly valid when evaluated in the light of the ideology, doctrine, and military requirements. These "deficiencies," however, do not automatically translate into "vulnerabilities" in an exploitable military sense. Much of what has been discussed can best be understood in terms of a general dilemma facing Soviet planners. Manpower deficiencies are in many instances related to both economic and societal shortcomings which are more the vestiges of history and endemic to the system. The dilemma is one of ensuring the defense of communism -- thus pursuing political goals -- and attempting to achieve the economic promises of communism. Both horns of this dilemma require enormous manpower resources.

Only the future will show how the Soviet Union deals with manpower questions; it does, however, appear most likely that the military will get what it requires to fulfill its defensive role and the projection of political power.

PART IV

CONCLUDING REMARKS BY THE SEMINAR CHAIRMEN

ADMIRAL OF THE FLEET SIR PETER HILL-NORTON, G.C.B.*

This is really a desperate attempt at an almost impossible task. This serial is called on the program "Concluding Remarks;" it is not called a summary because it would be impossible and a waste of time to summarize what has been stated. I am going to try to redirect attention to some, but obviously not all, of the highlights of what has been discussed. I also intend to draw attention to some areas in which we clearly need answers which are not readily available; in short, areas in which we can perceive that new work -- or more work -- needs to be done. I very much hope that the academics here will bend their minds to how we can take this work forward. It would be tragic if this were not merely encapsulated in a report where it would be lost or forgotten. That, I am sure, would not be a good outcome of this study conference.

We have examined, as John Erickson put it, a Soviet system for manpower problems by using as a tool the military district as a unit of study. This has not informed all our discussion, of course, but was a continuous thread running through it all and I do not believe that it was wrong to select this unit of study. Indeed, I think, as a piece of methodology, it is certainly worth pursuing. As John Erickson has remarked, the military district is a microcosm. It will adapt itself and change itself to whatever requirements are put upon it. The Russians do not like change and if they have an institution, they prefer to adapt it to changing needs rather than inventing a new one. So it seems to me that the military district as a unit of study is a sensible way of tackling the problem. It does not produce nice, tidy answers or balance sheets; however, all would agree that we have got away from what is described as the "bean count" techniques, which is valueless for our purposes, although it may be interesting for some other purpose.

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*Adapted and edited from the original presentation given by the chairman at the final session of the seminar on 7 April 1978.

We have not been able to take this as far as we should have liked. Therefore, we must not leave this study conference as the end of the book, but rather as the end of a chapter. How to start the next chapter is not for me to decide, but further study is called for and I urge you most strongly to do so.

Now I am going to range backwards and forwards chronologically, and perhaps by subject, because I have not had time to glue together a coherent set of concluding remarks which could be printed, bound and issued as the thoughts of Chairman Sir Peter Hill-Norton. I think the first thing to say about the military district is that in the light of what I have just said a moment ago, it has been going for 116 years and it has had experience during that time of mobilization, of training, of the deployment, and in the widest possible sense of managing military manpower. We found that there are some things we do not know about the miltiary district. To me the most important is, in spite of some remarks which John Erickson made, that we do not know the interface between the civilian and military management of resources in a military district. We do not know precisely what happens when there is the threat of war, rising tension, or even the onset of war. We have spoken about filling up undermanned divisions. We have talked as a sort of sub-culture of this, about categorization of forces in terms which the West uses for convenience, and which I think mean something to us even though the terms would not be recognized by a Russian. This must have something to do with our perception of the Soviet manpower problem. We have spoken about the support forces and the degree to which they are civilianized in peacetime. I do not think we know what happens during the gradual process of what I have called the onset of war. We do not know what happens to those people, in military terms, who are in a sense the tail of a military district; whether they are put into uniform at the onset of war and thereby suddenly degrade the very high teeth-to-tail ratio which is characteristic of the Soviet Army. (The term "Army" being used to mean the Soviet Armed Forces.) Nor do we know, I judge, what happens to the civilian sector in a military district at this period of time. Because we do not know, this is the first -- and perhaps the most important -- of the areas to which I

wish to redirect attention as being the supreme example of an area where either fresh work or much extended work needs to be done by analysts: by the intelligence community, by the military, and by accommodation of all three because it leads across to two things that have occupied our attention for quite some time. One of them is the time into action, if I may so describe it, of divisions which are in a military district. This time into action has a direct bearing -- for example in the Baltic Military District -- on the security of Schleswig-Holstein and the central region of NATO. This, of course, informs the whole staff apparatus in the West -- if that apparatus is working properly. It informs the planners; it informs the operators; and it should, but usually does not, inform the intelligence community and the logistics community. The staff is indivisible and it is for them that we need to know that aspect of the answer to this civilian/military interface of management of a military district before we can begin to answer the question of how soon these Soviet divisions will be available on the road, provisioned, supplied, equipped, and thoroughly manned to take on the second echelon battle. Remember that the Soviet forces are manned -- historically and presently -- for defensive purposes in a way which is entirely respectable intellectually and entirely normal for a Soviet general. Therefore, when talking about the shock of contact, I believe that it must be in the Soviets' minds that this shock may very well be defensive. I feel bound to observe that the question of whether Soviet forces are expeditionarily oriented (in the sense of extra-European adventures), whether they are indeed politically aggressive and supported by the military capability to be so, whether their military machine must now be tailored to global ambitions, or whether it is in defense of Mother Russia, may affect any studies we may provide about manpower.

The shape and the size of the Soviet forces will depend critically upon what they are trying to do with them and in the military district we have this microcosm. Soviet forces are not presently manned and equipped, ready to move forces like the Group of Soviet Forces in Germany (GSFG). But the very presence of the forces in the military districts enables the Soviets to contemplate the possibility of a war which will last

for more than a few days. It may not be like that, and we have heard it well described that the Soviet military has the ability in equipment terms and in manpower terms to sustain a longer war although not without effects in the overall economy. That is an introduction to the unit of study that we chose as a method of work for the seminar.

I think it is important that all of us understand the complexity of the Soviet command and control system. It is a very busy wiring diagram and, if you really tried to draw it, it would look as though you had ripped a telephone switchboard out by the roots. We have not attempted to draw it; rather, what we have isolated is the fact that within the military district there is a man called the commander. He has along side him an apparatus which to me is grey and blurred, which runs the civilian sector. The military district commander is not an operational commander. Depending upon the particular military district, he may have co-located with him, or superimposed upon him, a frontal command organization. There will be operational commanders who will deal with field forces subordinate to the Soviet General Staff. However, as John Erickson has suggested, in the case of the Baltic Military District Commander, because of his character, he may indeed assume an operational function. But this is not typical and so we need to understand that military district commander -- through his sub-agencies -- enters, inducts, trains, allocates to units, formations, arms, branches, and services the intake of 18 year-old males. There are other people connected with this enterprise both above and below it with whom we are not concerned at this conference, but we should make a note that they exist. They are, of course, the central direction from the Ministry of Defence and the sub-direction of operational command of units and formations. It is not possible to draw this mesh, although there are diagrams in the papers with which we have been supplied which give a very good idea of how it works.

The military district staff is its main organ and is designated to have the prime responsibility for the operation, mobilization, and training, as well as to supervise and have responsibility for the command line -- although the field forces are not actually commanded

by the military district commander. There has been some discussion as to where responsibility lay for the activities within the military district which lead to the production at the end of battle-ready formations. John Erickson said earlier (and it was a fresh idea to me, although I accepted it at once), that it is a Soviet characteristic to give various individuals and various organizations responsibility for a whole quantum of tasks. At the worst, this could be a recipe for disaster because it is an absolutely cardinal principle of Western organizations that you never ever give more than one individual responsibility for a particular activity unless you actually wish to foul it up, and that does sometimes happen. Nevertheless, this is a Russian way of doing business, and it obviously does work because they have been doing it for centuries. This must be taken into account in our notions about the Soviet usage of manpower.

Having laid a groundwork on the military district, I would now like to offer a short commentary on what has been presented to this conference. For my money, Mr Goldich's paper was an uncompromisingly honest look at the common failings of most manpower analysts; having been done by such an analyst, it carries much more weight. We do make mistakes and we in the West -- especially manpower analysts -- do attempt to look at the Soviet notion through our eyes. In the general context of the ideas encapsulated by Mr Goldich in his paper, we are faced with the general problem of whether a small, well-trained, professional army with first-rate NCOs and junior and senior officers compares well or badly from a Soviet point of view with a mass army with poor and few noncommissioned officers, a large number of junior officers who are not particularly well-trained, and a small number of more senior officers who are probably real professionals and the equal of those in Western armies. Obviously no conclusion has been reached, but here is something that we need to tackle a bit harder.

As has been explained to us, there is an enormous range of issues concerning the Western manpower analyst to which little attention is paid because they are outside of American -- and generally Western -- range of experience and nature; I refer specifically to ideology. We were brought back sharply to earth by

Professor Bebler on this question of ideology because it is so important. The neglect of the ideological factors in manpower study as presented by Professor Bebler is an enormous term in the equation which, if missing, is bound to make that equation non-convincing.

Turning now to the particular area of Dr Feshbach's paper -- Soviet demographic trends --, anyone who has not read that paper thoroughly should do so. The accompanying charts in the paper are required reading and indicate to me extremely clearly, the problems and concerns which must face Soviet manpower -- planners and indeed the Soviet leadership -- political to the extent that there is a politico-military interface as we have heard. I would accept straightaway that the military in the Soviet Union is subordinated to politics, where there is a right and wise distinction drawn to subordinate politicians as in the West. But, nevertheless, the leadership, whether it be political, military, or politico-military, is faced with problems which Dr Feshbach's paper -- especially the charts -- illuminate. I think the size of the problem is not resolved but depends upon, to some extent, the ability of the Soviets to rationalize, to re-order their priorities, and to deal with demographic changes. It has been the subject of some disagreement within the conference, but not deep disagreement.

Dr Sella referred to demographic concern when he spoke about constraints and vulnerabilities. He said that if the figures were as we have been told (and we do not disagree with the figures but what they mean) the Soviets have two potential solutions: there is a political solution and a military solution. The Soviet leaders' political solution means deciding whether they will face the same threat in those years as they do today. If the Soviets wish to pursue the same policies around the world as they do today, Dr Sella suggests more resources will have to be made available. This means that the achievement of the consumer society will have to be put off and goes on to mean, in his view, that this will not be readily or lightly accepted by the consumers who will be thereby deprived. Colonel Hansen, on the other hand, voiced the opinion that in the long run a squeeze of available numbers -- available for military and economic purposes -- is

going to concentrate the minds of the Russian leadership to a point where they may become more efficient in their manpower management practices.

I now note the second thing that we have not resolved -- just how are they going to do this? One or two speakers cited the Soviet solution in these terms: "Don't worry, we are all Russians talking together. Comrade, it is a difficult problem but we will solve it." And the Soviets will use, almost certainly, the historic apparatuses that we have used for study by changing their role. This is entirely possible and indeed, a likely situation. Of course, it is not enough to say, "that it is O.K. comrade, we will solve it," unless you also say that this must be a constraint on their ability to manage manpower smoothly and in an orderly way because there is an interruption here which I may describe colloquially as a "hiccup." We have a sort of sub-culture of this demographic problem -- a potential shortage of men to support the military and civilian sectors, referred to, spoken about and discussed a little, with 100 to 140 different ethnic groups and a large number of different languages. And as has been stated, we may find in 20 years time that one-quarter of the available military draft population are Muslims. I would not want anybody to think that that means that they cannot be turned into respectable and indeed highly efficient soldiers. There are people -- and I include myself among them -- who know that you can turn Indians and Pakistanis into extremely good soldiers. Indeed, in the golden days of the British Empire, the Indian Army was probably one of the largest and most efficient land forces in the world. It is within the experience of Brigadier Simpson, I know, that you can create modern soldiers from what the Russians would regard as religious or ethnic minorities. Without diminishing that this might cause difficulty as between one lot of people and another lot of people, I am suggesting that the presence of one in four of the population of military age would be likely to have a profound effect on how the management, political and military, handles it. I would therefore say that this is a constraint, though it is not an unsuperable one which -- if I were a Soviet planner -- would keep me awake at night. Nevertheless, I think it must be true that the language problem deserves possibly more consideration than we have given it. It

is extremely important and pertains to the command chain relationship between officers, NCOs and private soldiers. If you cannot communicate in that sense, then you are in trouble, and if you speak a different language, then it must be more difficult -- particularly where the educational attainments are on the whole low. We have heard chapter and verse for the fact that, on the whole, the educational attainments of the Russian conscript at age 18 are probably lower than they are in his opposite number in the West. So it must be a constraint too. Not a big one, but one which should be noted.

If I may, I will turn now to look at Colonel Schneider's words about training. As I said yesterday from the chair, it is very important to be clear about what you mean about training before you start discussing it. What was discussed was training in the sense of collective training, largely because we also discussed what in the West would usually be described as instruction from the cradle to the primary, to the secondary and, if it happens, to the tertiary education. A large portion of the training referred to by Colonel Schneider would probably be called indoctrination -- political indoctrination. What I think came out of all that was two or three points. First, not chronologically but in my order of importance, is the tendency to produce a single skilled soldier as opposed to the tendency in the Western armies to produce a soldier with four or five skills. I must say that I do not accept that without further argument and harder evidence. I have read and I have been told by other people that the Soviet truck driver -- who either Colonel Schneider or somebody else admitted at the beginning was less likely to be successful than an American young man who had grown up with engines since he was a baby -- would have to pass a test which American truck drivers might fail. Within my knowledge, if that truck breaks down, that same truck driver will get out and mend it. And a Soviet soldier operating a radar set which breaks down is quite capable of repairing it too. I say this in a very side sense obviously. It is not true in Western armies and I think we must be very careful not to sell ourselves an over-optimistic bill of goods by supposing that this is a constraint, this single-skill training. It was said that if there is a three-man bridging team and one

died or broke his leg then the whole thing comes to a standstill unless one of the three can do the other's job. I should be amazed if that were so; it does not seem likely to me from a professional body -- and they are professionals. So, this training needs putting through a finer sieve, and I would like to compare the skills of a Russian conscript at one year's service and two year's service with the conscript in the Western armies, particularly those who have all volunteer forces or are moving in that direction like the Belgians, at one year's service or in the Danish case at the end of eight month's conscription.

There are two other facets of training which I wish to mention. The first is the pre-induction training. Now, there is a disagreement of sorts about the value of this. We have been told, on the one hand, that it is giving them a flying start -- a six-month's start was referred to -- over the Western inductee. Nevertheless, in the GE Tempo report of the seminar held in January 1977, it is said that pre-induction training is an organized waste of time. Somewhere between the two the truth must lie. I merely offer my personal view that it must be useful. I would not be at all surprised if it were worth six months, given that it starts very early and goes on remorselessly day after day. If someone were to say to me that it is not worth anything, I would have to ask him to prove it. I said there were two further points on training, of which that is one. The other is whether they over-train or under-train. Now, I think it was Professor Erickson who said that on the whole Soviet officers would think that they did not have enough time, and yet, by Western standards, they have a tremendous amount of time. You have heard that a constraint on that training is penny-pinching in the bureaucracy which sets norms for the amount of miles trucks can drive and tanks can drive and the number of practice rounds that a tank gunner can fire and presumably an artillery soldier can fire. These norms appear to be unrelated to reality, unrelated to what is required to produce an efficient man at the end, deemed and laid down solely by bookkeepers who say that a particular formation is only allowed "X" thousand rubles. Once that is spent -- never mind whether the man is any good or whether he is not -- his training has to stop. This is a serious concern, but I would say parenthetically

that there is precisely the same thing in our own countries. Within my knowledge every single NATO country suffers from precisely the same restrictions. But we are not examining NATO manpower; we are examining Soviet manpower.

There is an additional point to be made about life style. The Soviet soldier has, by Western standards, a ghastly time. He enters the Army for two and a half years and we are told that he is lucky if he gets out of the barracks twice. If he does get out of the barracks, he wishes he were back in because he is so miserable outside that he would rather be inside. This does not quite tie up with the view expressed by a couple of men who have managed to get out unexpectedly through East Germany. Nevertheless I think we know what this means. We are told this did not give them a psychological block because their conditions were so unsatisfactory there was no particular urge to leave them. This must have some effect on their motivation which I do not think we know too much about, not on their skill of hand, not on their skill at arms, not on their response to leadership, not on their response directly to discipline, but indirectly. This is a term in the manpower equation: we do not know how heavy it is.

We have not said much about the other than land force elements although we heard a very useful contribution from Commander Garde. May I pick out possibly two or three things, merely to put them before you in these concluding remarks. There have been shortcomings in leadership in the Soviet Navy to the point of a mutiny, which is a word from which sailors cringe and hardly ever use if they can possibly avoid it. Nevertheless, there was one only a couple of years ago, and there must therefore be residual disciplinary problems. The natural and normal reaction is an effort to eradicate them. Any leadership would tend to over-correct them. We must not therefore be surprised that discipline in the Soviet Navy or certainly in the Baltic Fleet must be stricter than is consonant on the whole with what we call in the Royal Navy "good order and naval discipline."

The second point which struck me about Commander Garde's remarks and subsequent discussion was the

importance of the Baltic area in the maritime sense, and I use the word maritime deliberately. There are amphibious responsibilities in that area. It is customary for, even in peacetime, quite large numbers of soldiers to be ferried backwards and forwards along the Baltic in amphibious ships. More so, of course, in wartime when they have now quite an extensive amphibious capability compared to a few years ago. Also, of course, from an air superiority point of view and it is strongly guarded by the maritime forces.

Finally, the Baltic is a training ground, or a forcing ground, for the navies of the East German and Polish forces which are now, in all respects, integrated with and almost indistinguishable from, the Soviet forces. It is also a proving ground for the most modern weapons systems coming into naval service. I will just go sideways for a moment to Dr Sella's first intervention on the subject of the Odessa Military District, where what struck all of us I am sure was that this military district is in all respects one in which it is possible to compare with others similar in structure, organization, in role, and in task. But he added that it was -- on two occasions at any rate the Yom Kippur War in 1973 and the Horn of Africa War this year -- used as a launching pad for intervention by Soviet forces outside the Euro-Asian land mass. This is a role which could very well become quite normal for any military district. Note what Professor Erickson said that the basic shape of a military district lends itself to an adaptation for use as, what I have best described, a launching pad. It can be adapted because it has the necessary infrastructure in the way of communications and staff and superstructure in the way of command echelons in both the civil and the military sector. That was really the significant disclosure about the Odessa Military District. It was also during the course of that intervention that Dr Sella made the point about poor relations between officers, including noncommissioned officers and the troops.

It appears to me that we have left one or two important points unresolved. I have already mentioned the civilian/military interface for management in the military district and I have already mentioned the demographic problem. But I have not yet mentioned the

special aspect of it; that is, how are they going to manage when the quality requirements become higher and the availability of that quality becomes less. Something is going to have to give. We also did not run through to a conclusion how -- in Russian eyes -- combat effectiveness should be best defined. Is this a term for the steady state in peace; is this a term for battle; it this a term for war? We do not know. I suspect John Erickson would say that the Russians do not have a term like this, this is just something that "you" in the West have dreamed up and on which "you" are trying to pin a label. Alright, if he says that, I will believe it. But in their "secret, tiny hearts" the Soviets must have a perception of what we mean by effectiveness, even if there is no appropriate Russian word for it. I suggest it must be how good are they at that at which they wish to be good. And what they wish to be good at is what I am going to talk about now.

What is this all about? They have an extensive and growing defense task, their security is guaranteed primarily and finally by military power and this is a respectable view which we should not deny. All their efforts have been devoted -- and still are devoted -- to avoiding a repetition of the events of 1941, which was a hammer blow (which John Erickson likened to a medium-sized nuclear attack). Now within that objective the role of the Soviet Armed Forces having recently been redefined by Marshal Grechko himself as being a global role, indeed the role of projecting their concept of socialism on a world-wide basis. In addition to the defense of the homeland, the subversion and final destruction of the capitalist society gives them a built-in requirement in that a global role for military forces brings totally different needs from those required for just home defense. This role may or may not change, depending upon changes which are inevitable in the leadership -- if for no other reason than age. Whatever comes out of that new perception of the role will influence and indeed entirely structure the shape and size of the forces. On the whole it seems that it is unlikely that there will be a change in what I might be allowed to call the theology. There will be a modernization of the total weapons mix. There will probably be a change in the shape and size, but this is a Soviet procedure of which they are quite conscious and quite able to take care. We must not

confuse that process with the Western perception of it. I started this passage by saying that what they would judge to be "effectiveness" would be how good they are at doing what they want to do, and indicated to you what they might want to do. I believe that their definition of effectiveness -- for which there is apparently no Russian word -- would be how good they are at defending their homeland, at not repeating 1941, and at being able to project their concept of socialism on a global basis. That is a far cry from a Western perception of effectiveness. Before we start, if we are going to measure their manpower processes against a Soviet yardstick and not some Western yardstick that we have arbitrarily imposed upon them, I think we ought to be extremely careful to try and arrive at a definition of what they might regard as effectiveness. I must mention -- because it is an important point -- this question of whether they are indeed seeking gross superiority, adequate superiority, or simply sufficient advantage to be able to carry out the tasks I have just outlined. John Erickson says, and I am certainly inclined to accept it (although it is contrary to what I have said publicly many times in the last two years), that they are not seeking massive superiority for the sake of it. I had supposed that they were. This is important as a measure perhaps of the pressures they will put themselves under, if and when the demographic crunch really comes. It may be that we should settle for this broad definition of "a sufficient advantage to carry out their own tasks."

There are two or three other points only that I have the time or the inclinations to mention. I think it would be wrong if I did not mention, in the demographic context (although not chronologically right to put it in here), the question that was raised of the economy and the military competing for a small pool of high technicians. There is a problem which may be -- from a Soviet point of view -- a quite different problem from that in the West. It probably is something to do with the question of the role of the military in the Soviet society which could lead possibly to a larger military voice in political councils. This could also lead to a certain degree of loss of the tight political control which has for many years been exercised over the Soviet Armed Forces. If

the military did get all they want, then it must seem almost inevitable that they will get some of it at the expense of the civilian sector. This is bound to create strain in the body politic.

I must refer briefly to Professor Bebler's presentation. I said earlier, and I will repeat it now, that this was an immensely helpful intervention for plugging up and indeed plugging into our subsequent dialogue. He reminded us by more than one quotation from Engels of the importance of ideological questions in manpower studies. It simply will not do for Western analysts to pursue such studies until they really do take account of these Marxist strands of thought which are deeply embedded in the conscious and the subconscious conduct of life in the Soviet Union. They are also deeply embedded in the policy formation business, in the decision-making business, and in the manpower business. If we make the mistake of not taking account of the points which he made, then we shall be doing ourselves a disservice and our work will be incomplete. It is not easy to avoid this because you cannot put it on a computer and it is very difficult -- particularly for an American -- to put himself into the heart of people who have absolutely in their flesh and bone and that of their fathers and grandfathers this ideological background to all their planning and thinking. We went on to mention the overriding importance of the fact that the Main Political Administration and that Soviet manpower policy cannot be examined properly if it is neglected. We talked a bit about this but not to any conclusion. We heard about the constraints from Dr Sella and I have mentioned the demographic dilemma, as he called it, the teeth/tail ratio is exceedingly important and the professionalization versus discipline dilemma, which I think I have already covered. And he mentioned finally vulnerability, and quoted Field Marshal Montgomery's wise words that "nobody but a lunatic would try and conquer the Soviet Union." None of us are trying to do that.

It was remarked during discussion of this point that someone had inquired from one or two of the military officers present whether they had heard anything in the last 24-48 hours which would actually affect what they did in their commands and the answer

is "no, it would not." I would not expect it to, but I would expect it to make them better commanders. What I would expect is that what we have said to each other and which I very much hope we are going to go on saying to each other, will affect the managers of policy, who do not work in field formations; they work in bureaucratic institutions of government. They are the people who need to know the results of our work and the work which will follow this conference.

In conclusion, we have not reached very many hard conclusions in the sense that we have uncovered some hitherto unknown facts. This is what manpower studies should be for -- better to inform the policy-makers of our countries, better to inform our General Staffs. That is what I feel it has all been about, and what I very much hope it will continue to be about.

PART V

SHTO DELAT? : RESEARCH PRIORITIES

It is impossible to encompass all the problems of Soviet military manpower within a single study conference. Equally, although we have confined the subject to a specific "unit of study", several questions remained unanswered. This is partly because there is a dearth of material and partly because of incomplete research. While it is possible to draw certain conclusions, albeit of a limited kind, from a confined study such as an investigation of the military district, much remains to be investigated in depth and to be explored in breadth. At least a number of points have become plain. Combat readiness, for example, is really the measure of effectiveness as opposed to an arbitrary distinction between a peacetime establishment and a wartime capability. So much we know. However, within the confines of the military district study it is now possible to delineate a number of issues which urgently require further exploration.

THE MILITARY DISTRICT/MILITARY COMMISSARIAT COMPLEX AS AN ADAPTIVE SYSTEM

While the General Staff plays a key role in the acquisition and management of draft quotas (as indeed it did under the Imperial system), it works directly with the next subordinate echelon. The military district, with its associated basic territorial unit, the oblast and the chain of military commissariats. Here we have regional authority for the processing of conscripts and mobilization measures. How far can this system (or complex) adapt to change and innovation in terms of reduced numbers and alterations in the conscript flow? How will the oblast military commissariat conduct its policies in terms of selections, drafts, and numbers? Is there not a place for closer observation by Western military attaches of what might appear to be on the surface routine matters but which command greater interest? Can briefings on general manpower issues be improved, so that observation at first hand might be made pertinent? Do we really know how a military commissariat works? And to take this further, what consistent investigation is there of the military sociology/"social function" aspect of Soviet manpower practices drawn from Soviet sources? How much more can we extract by more detailed institutional investigations. Do we know all that we need to know?

THE INTERFACE BETWEEN THE CIVILIAN AND MILITARY MANAGEMENT OF MANPOWER RESOURCES

This is particularly relevant in the transition to operational status. In view of the extensive practice of "subordination", (podchinenie) and its various forms, how does the system work and what, if any, is the borderline between "civilian" and "military", even allowing for the legal prescriptions which are intended to demarcate?

"SUPPORT" (SLUZHBY)

This is a subject in itself, but what numbers (and categories) are critical for the "support" of the field forces with the onset of operational conditions--for example, how does a garrison force convert into a field force--and what elements of sluzhby must be held back to ensure the further functioning of the system (at military district level)? What examples do we have of the types of degradation of teeth/tail ratios under operational conditions and how valid is the oft-quoted 75:25 proportion (or is it not true that under operational conditions there is a rapid inversion of accepted figures of teeth/tail?). And what is the general level of manning with these sluzhby? Is it true to say that while the agencies and institutions connected with sluzhby are considerable, the actual manning level is quite modest?

"TIME INTO ACTION" FOR MILITARY DISTRICT DIVISIONS

This is self-explanatory, with its direct bearing on mobilization/reinforcement capability. Though this may appear to be the province of highly classified and arcane intelligence material, it would appear that academic investigation can arrive at certain reasonable conclusions about "time into action" for a given military district order of battle and reinforcement rate.

THE "SECOND ECHELON"

Given some examination of "time into action" (above), the problem of the military districts and the second echelon proves to be one of the key questions. It is made more interesting in the light of Soviet statements (for example, Voennaya Mysl) that the second echelon in the future will not take the form of field armies. What form, then, will it take? What will be the composition

of the reinforcement echelon and what part does the military district play? What is the "time into action" co-efficient and might this affect targeting? What is the connection between military district reinforcement capability and the Soviet concept of echelons for operational purposes? What will be the composition of the military district's "contribution"? Here the Baltic Military District can furnish some pertinent material, with the assumption that the "second echelon" will not be the totally mobilized 11th Guards Army but, let us say, a mobile reinforcement strike force. What does that Soviet statement mean (in relation to military districts) that the second echelon must not be construed as a "field army"?

COMMAND AND CONTROL

If we follow the above through, then it follows that much attention must be paid to the "command and control" aspects of significant military districts, essentially for two purposes:

- The organization of high speed reinforcement/ intervention forces not simply as field armies (and we know that General Maiorov in the Baltic Military District is adjusting the command and control procedures in this direction)

- the support of operations at extended range (the Horn of Africa...)

What happens in a military district under these circumstances, in terms of command, troop disposition, and logistics? What additional forces or agencies are involved and how does the face of the military district change?

EXTRA ENTITIES

Under the question of "command and control", there is the problem of extra agencies being involved in operational activities. How do all the "parts" (coastal watch, air defence, naval elements, sealift, militarized security) fit? How many parts should we account for?

APPENDIX A

AGENDA OF

SOVIET MANPOWER SEMINAR

PROGRAMME

5 April

Serial I	1800	Wine and light refreshments in the University Staff Club.
		'Pictorial View of the Soviet Union'

6 April — **ESTABLISHING A COMMON DATA BASE**

Serial II	0900	Introduction - Professor J. Erickson
	0905	Opening Remarks - Admiral of the Fleet Sir Peter Hill-Norton
Serial III	0915-0930	Method and Mystique in Manpower Analysis - Robert Goldich
	0930-0945	Soviet Population Trends and Military Manpower - Murray Feshbach
	0945-1030	The Military District: Structure/Function in Manpower Management - Professor J. Erickson
		* * * * * * * * * *
	1030-1045	Break
		* * * * * * * * * *
	1045-1130	Discussion of the Military District
Serial IV	1130-1145	Military Training - W. Schneider

	1145-1230	Discussion of the Impact of Training on Manpower
		* * * * * * * * * *
	1230-1330	Lunch in Refectory, David Hume Tower
		* * * * * * * * * *
Serial V	1330-1345	Man and Machine Interface - C. Donnelly
	1345-1415	Discussion of the Impact of Equipment on Manpower

Serial VI	1415-1430	Naval Manpower in the Baltic Military District - Commander H. Garde
	1430-1445	Discussion
		* * * * * * * * * *
	1445-1500	Break
		* * * * * * * * * *
Serial VII	1500-1545	Odessa Military District - Dr. A. Sella
	1545-1645	Discussion

Serial VIII	1645-1730	Some Interim Conclusions
		* * * * * * * * * *
	1730-1800	Break
		* * * * * * * * * *
Serial IX	1800	Reception hosted by the Dean of the Faculty of Social Sciences in the University Court Room, Old College.

	1930 for 2000	Dinner in Mural Lounge, University Staff Club
7 April		IMPLICATIONS, DEDUCTIONS, AND CONCLUSIONS
Serial X	0900-0930	Capabilities - Professor J. Erickson
	0930-1000	Discussion
Serial XI	1000-1030	Efficiency of a Soviet Army - Professor A. Bebler
		* * * * * * * * * *
	1030-1045	Break
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	1045-1115	Discussion
Serial XII	1115-1145	Constraints and Vulnerabilities - Dr. A. Sella
	1145-1215	Discussion
		* * * * * * * * * *
	1245-1400	Lunch in Private Dining Room No. 3, University Staff Club (Special Guests at Caledonian Hotel)
		* * * * * * * * * *
Serial XIII	1400-1530	Chairman's Concluding Remarks - Admiral of the Fleet Sir Peter Hill-Norton
		* * * * * * * * * *
		Dinner to be announced

APPENDIX B

PARTICIPANTS

IN

SOVIET MANPOWER STUDY

CONFERENCE

SOVIET MANPOWER STUDY CONFERENCE:

PARTICIPANTS AND ADMINISTRATION

CHAIRMAN	Admiral of the Fleet Sir Peter Hill-Norton, GCB, Former Chairman of NATO Defense Committee
Federal Republic of Germany	General Ernst Ferber, Former Commander, NATO Central Region
	Dr. Peer Lange, Stiftung Fur Wissenschaft und Politik (Institute for Science and Politics)
Holland	Lt Gen R. J. W. Heslinga, Commandant, NATO Defence College, Rome
Denmark	Commander Hans Garde, Professor, Danish Defence Academy
Yugoslavia	Dr. Anton Bebler, Chairman, Department of National Defense Studies, Faculty for Sociology, Politics and Journalism, University of Ljubljana, Yugoslavia
Israel	Dr. Ammon Sella * Hebrew University, Jerusalem
Belgium	Major General R. Close, Commandering Genral, 16th Mechanized Division, Belgium Forces in Germany

United Kingdom	Brigadier J. J. H. Simpson, Director, DPS, Ministry of Defence
	K. W. B. Gooderham, Civilian Section, DIS, MOD
	Richard Woff, Soviet Research, Foreign Office
	Christopher Donnelly, Senior Lecturer, Royal Military Academy, Sandhurst
	Professor M. Hammerton, Department of Psychology, University of Newcastle
USA	Andrew Marshall, Director of Net Assessment Department of Defense
	Dr. Murray Feshbach, Demographical Analysis Division, Department of Commerce
	Robert Goldich, Defense Analyst, Library of Congress
	Colonel William Schneider (USA, Ret.) University of Nebraska
	Lt Col Mitzi Leibst Office of Assistant Chief of Staff, Intelligence Headquarters, USA
University of Edinburgh	Professor J. Erickson, Director, Defence Studies, University of Edinburgh
	Lt Col L. M. Hansen, USAF Research Associate, Defence Studies University of Edinburgh

Major Thomas O. Cason,
Directorate of Concepts,
HQ USAF

Dr. R. E. Sargent, *
Professor, US University, Rome

Miss K. U. Brown,
Executive Secretary,
Defence Studies,
University of Edinburgh

David C. Scrivener,
Postgraduate Student,
Defence Studies,
University of Edinburgh

Administration

Rex Minckler,
Manager, GE Tempo
Net Assessment Programme
Washington, DC

* Doctoral Graduates
Defense Studies
University of Edinburgh

APPENDIX C

METHOD AND MYSTIQUE IN MILITARY MANPOWER ANALYSIS

By Robert L. Goldich

METHOD AND MYSTIQUE IN MILITARY MANPOWER ANALYSIS

By Robert L. Goldich

The purpose of this essay is to provide some guidelines for "how one goes about undertaking military manpower analysis," in John Erickson's words, from the perspective of an American defense manpower analyst whose primary field is US military manpower rather than Soviet military affairs.[1] Rather than discussing specific aspects of military manpower systems, this paper examines several major methodological problems in manpower analysis, with special reference to identification of the proper questions to ask about military manpower, based on the analyst's intellectual purposes and goals. For policy analysts who do not have the time or money to ask irrelevant questions, keeping one's eyes on the final product is especially important. Academics must do so also, however, for the sake of clarity of thought if nothing else.

The first question a military manpower analyst must ask when commencing research is whether he is interested in investigating (1) the economically and bureaucratically efficient management of a peacetime armed force operating on a steady-state basis, or (2) the combat effectiveness of that peacetime force upon mobilization for war. These would appear on the face of them to be very different things, yet it can be argued that few American manpower analysts trouble to differentiate between them.

In fact, it can be argued that the biggest single mistake of US manpower analysts is to equate these two objectives, and assume that peacetime efficiency, in terms of economy of motion, smoothness of effort, and conservation of resources, is an end in itself rather than a means which should be related to preparation for war.

Thus, when we study various military manpower issues, we all too often study them in terms of their financial or budgetary efficiency, their fairness and equity along the lines of a democratic society, or

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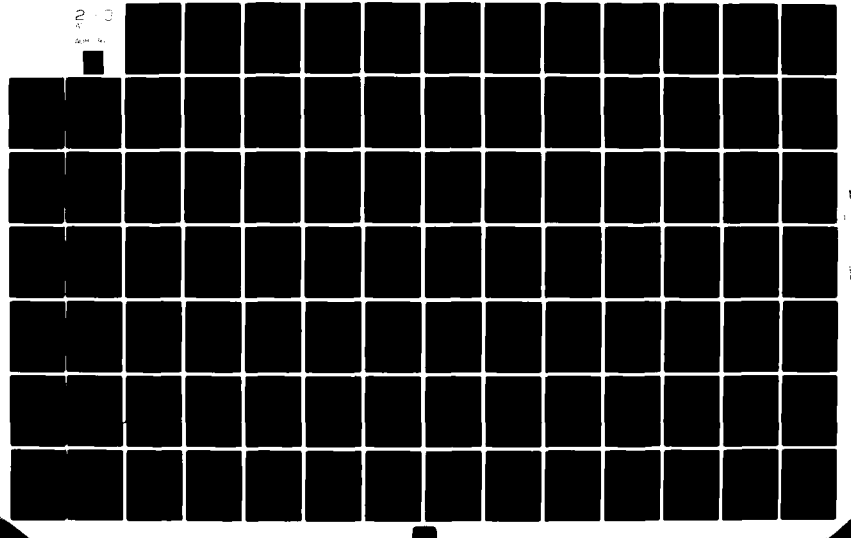

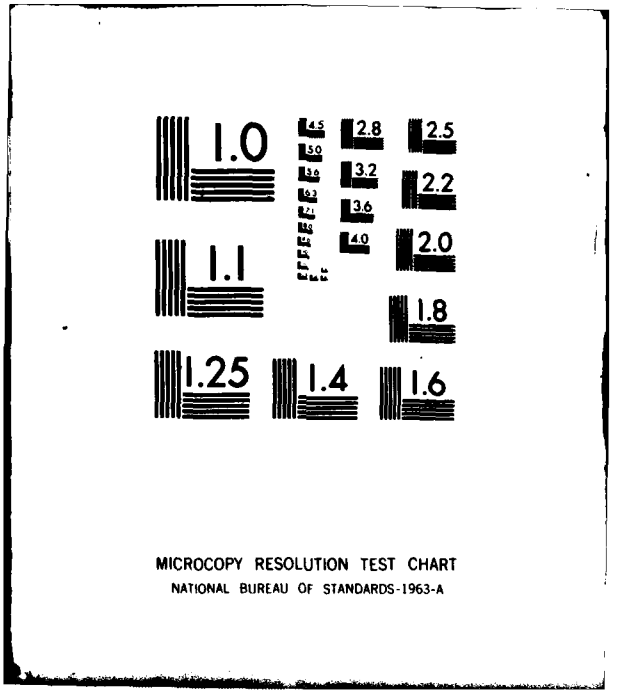
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their facility of peacetime operation, rather than their contribution to combat readiness and wartime mobilization potential. This tends to be an American sin, but there is a good chance the British are also guilty of it. Continental Europeans may be less so, especially those from Warsaw Pact countries.

Some examples which reinforce these assertions include:

- The penchant of Western manpower analysts for arguing the superiority of small, well-trained, technology-intensive armed forces, manned by long-service volunteers and with a high proportion of career personnel, as opposed to larger, less well-trained manpower-intensive forces manned by short-service conscripts and a smaller proportion of career personnel. While the former may use the taxpayers' money more efficiently, it provides a far smaller mobilization base for high-intensity and perhaps protracted ground combat than the latter. As Captain Cyril Falls stated of the pre-1914 British Army, "Military critics talk airily of the superiority of small professional armees d'elite over 'armed conscript hordes'. Very good, but...small armies feel losses more sharply than big. Armees d'elite would be invincible if wars were fought without casualties. Things being what they are, armees d'elite are unlikely to remain so long."[2]

- The characterization of the Soviet reserve system as "colossally incompetent and gigantically expensive" during the GE-TEMPO sponsored Soviet defense manpower seminar in Washington in January 1977.[3] The Soviet reserve system is no doubt all of these things, due to its sheer size if nothing else, but historically it appears to be unsurpassed in delivering immense numbers of prior service reservists to the battlefield under desperate circumstances. The US reserve system provides a smaller number of better trained units operated on a much more efficient basis per capita, but with a much lower probability of deploying in time to affect the outcome of early and perhaps decisive battles. Which system, therefore, is more "incompetent", or ultimately more "wasteful", than the other?

- Western armies rely much more on long-service NCOs for small-unit leadership and administration than do the Soviet Armed Forces. The Soviet system fills a much higher percentage of such billets with junior officers instead. The high percentage of career NCOs in Western forces unquestionably provides an edge in the training and readiness of forces in being. However, during wartime mobilization, this cadre of NCOs will be rapidly depleted by casualities and thinned out to support force expansion. Under such circumstances, a profusion of junior officers may be more useful than a smaller number of more effective and experienced NCOs.

There is a second important decision a manpower analyst approaching a topic must make. He must determine whether he is interested in (1) factors which directly affect the immediate combat readiness and effectiveness of forces in being; or (2) factors which provide great insight into a country's military manpower system, have an impact on mobilization for a prolonged conflict, illuminate the relationship between the military and society of which it is a part, and are very interesting, but which affect immediate combat readiness indirectly at best.

In the first category can be placed the state of unit training (including headquarters staffs); the strength of combat and support units and headquarters staffs (both in an overall sense and in key officers, NCOs, and specialists of the proper skill and grade); the availability and readiness of material; and the operational readiness of command, control, communications, and intelligence systems.

The second category includes the operation of individual training and education; military compensation and non-monetary benefits; military personnel management (including career development and career patterns), and the theoretical and organizational aspects of command and control systems (as opposed to the efficacy of whatever systems are in existence).

This does not mean that studying these latter subjects cannot provide the analyst with invaluable perspectives on a military manpower system. However,

their relationship to immediate combat readiness and effectiveness is so indirect as to make linking the two extremely difficult. For example, if simple, untutored observation shows that the individual training and education system of a miltiary force provides its graduates with enough expertise to operate effectively (i.e., the riflemen know how to function in TOE rifle platoons; the tank crewmen can be integrated into TOE tank crews without great difficulty; and the officers can function in the appropriate command and staff positions for their grade), it is very difficult to draw any more precise conclusions about the relationship of that system to immediate combat effectiveness. On terms of military compensation, the soldiers of a "loincloth republic" may revolt or refuse to obey orders if not paid enough or on time, as soldiers have throughout history; if they are in the ranks of a developed country's army, they will be paid enough and on time, and the fine points of their meal allowances and retirement pensions do not affect the combat readiness of the units and staffs they serve in. Finally, US officers appear to be rotated from one assignment to another much more often than are Soviet officers. Each practice undoubtedly has advantages and disadvantages, and each has great sociological implications, but how can one precisely identify the difference to the point where it helps the brigade commander, destroyer captain, or wing commander -- or even the academic analyst?

The irrelevance of many of these topics to immediate combat readiness is something we manpower analysts do not like to acknowledge. We frequently spend much time researching the fine points of military retirement and widows' survivor benefits, whether captains should be promoted to major after 10 or 12 years of service, or what the comparative costs of officer commissioning programs are. These things must be studied, to obtain a complete picture of a military manpower system. For the intelligence analyst with limited resources and a short-run, critical interest in the immediate combat readiness of forces opposing him, however, they are simply not that relevant.

To these two distinctions a caution must be added. In studying the military manpower system of a nation, the analyst must be aware that he is looking at that

nation's soul in microcosm. Nothing reflects a country's particular history, culture, character, and geopolitical circumstances more than the way in which it recruits its young people from civilian life, arms and trains them, and sends them off to war. This is a truism which economists and operations research/systems analysis specialists, who dominate manpower analysis in the United States, repeatedly fail to take into account in their work.

For example, the published debates in the US Congress over those provisions of the National Defense Act of 1916 relating to reserves, military compensation, and conscription are virtually identical in tone and substance to the 1971 Congressional debates on legislation creating the current US All-Volunteer Force. The personnel problems of the all-volunteer US Navy in the 1970s bear an astonishing resemblance to these of the 1840s Navy as depicted in Herman Melville's 1850 autobiographical novel, White-Jacket, or the World in a Man-of War. The problems, structure, and methods of the Soviet Army today are direct descendants of those of the Imperial Army from the time of Peter the Great (if not earlier) through 1917, as illustrated in both fictional and nonfictional treatments of the pre-revolutionary Russian Army. Examples can be found in John Shelton Curtiss' The Russian Army under Nicholas I (which John Erickson specifically commended to Soviet defense manpower analysts during the January 1977 seminar),[4] Richard Pipes' discussion of Russian conscription in his Russia under the Old Regime, and even in Mikhail Sholokhov's depiction of Russian Army life before and immediately after 1914 in And Quiet Flows the Don.

In short, the military manpower analyst must be as aware of historical, psychological, sociological, and philosophical factors as much if not more than of economic, managerial, or administrative ones. Not taking these considerations into account can lead to useless or misdirected expenditure of effort. It can lead, for instance, to proposing policy changes which stand little chance of being adopted -- such as abolition of the dual state-federal role of the US National Guard, in which military reserve forces have been the only heavily-armed US internal security force since the first settlers got off the boat in 1607. Or,

if examining the military manpower policies of a foreign country, one can err in evaluating those policies in light of one's own national idiosyncrasies. We may, for example, waste time wondering how the Russians manage to extract efficient work from their personnel, given their ferocious discipline, while the Russians may wonder how we Americans manage to extract efficient work out of our personnel, given our comparatively slack external discipline. It should be enough for analysts on both sides to note that efficient work is forthcoming.

Once the manpower analyst has sorted out these different angles and viewpoints, he can turn to an actual examination of the structure or the function that he is interested in. Here it is important to remember that military manpower analysis requires the static consideration of the individual aspects of a dynamic process. Some components of a military manpower system are actually functions which affect the individual military member in chronological order, such as recruiting, retention, and some aspects of training and utilization. Some are functions which begin to affect the individual from the moment he enters the armed forces until he is separated; these include personnel management, compensation and benefits, and, again, some aspects of training and utilization. Finally, some are managerial and administrative functions and structures which do not directly affect the individual military member (although the indirect effects, while unquantifiable, are great), but which are vitally important in the overall management of military manpower and in the maintenance of combat readiness and effectiveness. Formulation of manpower requirements and personnel quality standards, unit and staff organization, and force structure fall into this latter category. All of these components must be juggled simultaneously by a department (or ministry) and its subordinate services, and all aspects of the procurement, training, utilization, and management of military personnel are highly interdependent. There are many variables in the military manpower process. Changing one can drive changes in the rest of the system; other aspects of the system constrain changes in any one particular aspect.

The task of the manpower analyst is to take a structural component of a manpower system (a Soviet

military district, or the US Army Reserve), or a functional component (the Soviet conscription organization from local military commissariat level to the receiving Soviet Army unit, or the US military compensation system), and follow its threads forward and backward throughout the entire system until all of the inter-relationships of the structure or function with other subsystems have been identified. He can then proceed to more detailed analysis of specific problems.

Manpower problems frequently result when all of these loose ends are not run to earth before a policy is instituted, or from making a policy change with the knowledge that one will not be able to do anything about them. An example from American experience is lengthy, but instructive enough to warrant its inclusion here. The Individual Ready Reserve (IRR) of the US Armed Forces consists of individual reservists serving the remainder of their six-year military obligation after leaving their voluntarily-enlisted tour of active duty. They serve as fillers to bring undermanned units to war strength upon mobilization and provide replacements for casualties until draftees can be provided in sufficient quantity. Since the advent of the American All-Volunteer Force in 1973, individual reserve strength has declined from 1.3 million to a current level of slightly under 400,000, compared to mobilization requirements of 750-900,000. Individual reserve strength has declined for several reasons, all of them related to the abolition of conscription in the United States. First, large numbers of Vietnam-era draftees who spent only two years of their total six-year military obligation on active duty, and the remaining four in the IRR, completed their six years of service between 1973 and 1978 and left the individual reserve pool. Second, the advent of the All-Volunteer Force resulted in longer active duty enlistments, shortening the time remaining out of the total six-year obligation to serve in the IRR. Third, a greater proportion of persons leaving active duty were recruited for the paid-status, organized Selected Reserve with regular training obligations. Fourth, longer active duty enlistment terms and lower active duty military strengths have reduced recruiting requirements and hence the number of persons leaving active duty and entering the IRR.

There is no indication that the maintenance of adequate numbers of individual reservists for mobilization purposes was debated during the lengthy discussions that preceded the abolition of conscription in the United States in 1973. Nor is there any indication that this problem, which began in that year, was addressed by the US Department of Defense (at least publicly) until early 1976, when it was mentioned in the annual defense budget proposals submitted for Fiscal Year 1977. Even if American manpower analysts and policy makers had recognized the problem earlier, however, there is no indication that they could have done anything about it, given the overwhelming public pressure for abolition of the draft. In short, the negative consequences for mobilization readiness of one aspect of the US military manpower system (resulting from policy changes reverberating throughout the highly interdependent components of that system) were (1) not foreseen by US manpower analysts, and (2) could not have been dealt with if they had been foreseen, due to external pressures. It may be that many of the effects of the 1967 reduction in Soviet conscription terms on the training and readiness of Soviet military personnel were similarly unforeseen, or inescapable if they had been foreseen.

Summarizing, the manpower analyst should ask two questions before beginning his work:

- Is he interested in the peacetime efficiency of a stable force, or the relationship of peacetime manpower policies to warfighting capability?

- Is he interested in the immediate combat readiness and effectiveness of forces in being on the one hand, or mobilization potential, military/sociological significance, and organizational roles on the other?

He may be interested in both sides of these two coins, or in analyzing the relationship between both sides and a particular structure or function, but he must keep the distinctions between the two clear in his own mind. American manpower analysts, constantly under pressure to get "a bigger bang for the buck," frequently do not. It is doubtful that Soviet analytical vision is similarly blurred, given their past track record.

The manpower analyst is also encouraged to keep his eyes on the intangible disciplines of history, psychology, sociology, and philosophy, as well as the more concrete ones of management, administration, and economics/finance. In dealing with human -- as opposed to material -- affairs, a predisposition for the humanities is useful, to assist in understanding the unpredictability, seeming irrationality, and frequently emotional roots of how a country raises and uses its armed forces.

Finally, the manpower analyst should be aware that each time he isolates a single structure or function within a military manpower system, he is freezing a dynamic process in stasis to facilitate his analytical work, much as a still picture of something in motion captures the situation as of a single moment rather than the entire motion from beginning to end.

This essay is not sanguine about the availability of easy answers to questions about a country's military manpower system. The manpower analyst is often tempted to repair to the more glamorous disciplines of military strategy and tactical operations, or the more concrete ones of science, technology, or finance. For the imaginative manpower analyst, however, there is the consolation that the most prosaic aspects of his work illuminate every aspect of human behavior far more than any other subject area of military affairs. Good manpower analysis, as well as being technically proficient, truly involves "the study of Man in all his aspects, his capacity for love and for violence, his desire to dominate and his willingness to serve, and his passion for knowledge."[5]

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APPENDIX D

EFFECTIVENESS AND EFFICIENCY IN SOCIALIST ARMIES

By Professor Anton Bebler

EFFECTIVENESS AND EFFICIENCY IN SOCIALIST ARMIES*

Let me begin by explaining myself and my position, so that my stance is plain. I am a sociologist, a socialist and a Yugoslav -- perhaps the order does not matter, but this should help to clarify my approach and my interest in presenting an objective study. In terms of the present study conference at Edinburgh, there has been some visible bias but what is perhaps more serious is that the proceedings thus far have failed to highlight a major aspect of Soviet manpower policies, namely, the role and impact of ideology. For example, Marxism-Leninism in general exercises an influence over pre-military induction training, the distribution and employment of manpower, training, promotion procedures, and retirement practices and so on: there is, of course, the official Soviet view that ideology is 100 percent operative, while another somewhat extreme non-Soviet view holds that ideology is virtually irrelevant. My own view is that both of these views in themselves are untenable, for ideology is obviously important but it is not an absolute answer or explanation.

Nor within the overall context of the Socialist countries is there a single answer to the question of the relationship of ideology to manpower practices and usage: for example, we can compare and contrast Yugoslav military doctrine with Soviet military doctrine and the manner in which these affect manpower policies -- all with differing results. There are other factors which affect this ideology-manpower policy relationship -- the size of the country, the trend of foreign policy, alliance commitments (or the lack of them), the level of technology, the existence (or absence) of an extensive territorial-militia component, the national-integration function of the armed forces within the given society, though social integration is practiced in all Socialist countries. To these factors we must add an economic function (the self-sustaining capacity of the armed forces) and, finally, ideological variations in the interpretation of Marxism-Leninism.

*This paper was adapted from the presentation given by Professor Bebler at the Edinburgh Conference.

However, let us now look at this problem in a much wider context, returning to the prescriptive elements in Marxist ideology which have influenced (and continue to influence) manpower policies at large in the various Socialist states. A number of key names spring to mind at once -- Engels, Jaures, Mehring and Lenin -- all of whom have made fundamental contributions to the discussion of military organization and manpower within a socialist framework. Put briefly, all this effort involved looking at and investigating a special and new way of organizing armies and administering manpower policies, epitomized in the title of Jaures' own book, L'Armee Nouvelle (to take but one example).

Already in 1865 Engels formulated some of the main directions of this new view of organizing armies within a socialist society and administering new manpower policies. He pointed out that social change was ushering in new methods of waging war. One of the most obvious consequences of change would be the increase in the share of the population available for mobilization, bringing this figure to an unprecedented one-half/two-thirds of all adult males -- the gradual disappearance of the class struggle would continue to widen this mobilization base. However, this expansion must be contained within the framework of a strictly defensive military doctrine, though at the same time socialist armed forces would have much higher motivation and morale compared with bourgeois armies. Such socialist armies would be strictly mission oriented, resulting in plain military formations without the gallimaufry of epaulettes, ostentatious show and stultifying drill (or what Marx castigated as the regime of the "sabre, moustache and the bivouc,"all exemplifying the worst elements of militarism). There should also be a proper mix of territorial forces with standing armies, though that mix could not be predicted exactly, for much would depend upon separate circumstances. However, only the developed Socialist state could abolish the standing army and rely on a territorial system.

The basic principle would be universal military service based on conscription; there would be neither deferment nor exemption, nor privilege of any kind. In addition, there must be a well-developed system of

pre-induction military training in schools and here Engels recommended for Prussia the wide-spread use of retired officers to conduct this program of military instruction in schools (even as he urged the mobilization of clerics so that they should have no exemption from the system of universal military service).

Lenin proceeded to provide his own gloss on these ideas. His ideas of military organization and manpower practice centered on a highly "de-bureaucratised" system, one which would be efficient but also inexpensive. In brief, the armed forces should also be geared to civic action and the discharge of social services functions, with the armed forces combining the functions of an army (in the accepted sense), the police, and the civil service. The armed forces must become a "school of civilization" for the whole of socialist society. Taking this idea further, both Franz Mehring and Mikhail Frunze argued that the effectiveness of a socialist army is an expression of the efficiency/effectiveness of civil society at large, or more pertinently, much depends on modernization and civic efficiency.

Now we must look at the present relevance of this residual Marxist (and Marxist-Leninist) outlook. Obviously, much of this is still present in Soviet policies and attitudes, where some elements are still emphasized while others have lapsed. Here, for example, we can also observe certain deviations: there is a high level of authoritarianism, together with pronounced military-technocratic tendencies (the Strategic Rocket Forces, for example) where weaponry is seen as a decisive factor in its own right and the move away from a strictly defensive military doctrine, a deviation which is of commanding importance in its own right.

On the other hand, certain features of this legacy have been preserved. There is a form of egalitarianism and simplicity which is deliberately encouraged in the Soviet armed forces. However, this is overshadowed by one major aspect -- that of the primacy of politics -- which does not mean the "primacy of politicians" (as it is so often seen in

the West). This is an all pervasive feature, running through every aspect of manpower policies and practice. Here we must look at once to the operation of that key organ, the Main Political Administration (MPA)of the Soviet Army and Navy, which is responsible for so much in the administration of Soviet manpower policies.

The MPA is charged immediately with indoctrination and is responsible for increasing the effectiveness of the armed forces as a whole. The MPA is concerned with manpower policies at almost every level of Soviet operations: it influences the pre-induction training program, the induction of conscripts, officer selection and training, upgrading (promotions) within the armed forces, retirement and/or retentions. Indoctrination, however, remains of crucial importance and must be regarded as a specific function of increasing effectiveness, intensifying motivation (and thus impinging on the issue of the quality of manpower) and -- equally important -- controlling deviations. In addition, the MPA exercises great weight in the military schools and the military academies, it has considerable influence in the distribution of the graduates (officers) of the military schools, it is concerned with the improvement in the performance of NCOs and officers and it can make great use of retired personnel.

Looking at the wider social context (including the Soviet context), it is essential to appreciate manpower problems against the background that there is no isolated "military" concept of the armed forces. Here we return to the primacy of politics. The armed forces remain now what they have always been in this social context, a tool developed to attain certain goals, goals which cannot be defined as being exclusively "military" as non-socialist societies understand that connotation.

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APPENDIX E

SOVIET POPULATION TRENDS AND MILITARY MANPOWER

By Murray Feshbach

SOVIET POPULATION TRENDS AND MILITARY MANPOWER*

by Murray Feshbach

INTRODUCTION

Given the demographic imperatives confronting the Soviet Union in the next few years major policy decisions will be required to cope with the resulting manpower problems. The growth rate of the population at the end of the century will drop to about one-third of the rate at the middle of the century. This will mean a slower rate in the labor force, as other sources of supply have been exhausted, and the new entrants in the working age population are the only numerically significant new supply. The continuing overall labor shortage is fully appreciate by the Soviet central authorities as is evident from the fact that they call for productivity gains as the key to achieving the economic growth expected during the cureent 5-year plan period. The problem of labor shortages appears even more acute when one looks beyond the aggregate figures at the regional differentials. In the absence of mass migration, past and current regional birth differentials will mean that most of the new labor supply will not be generated in the areas where most of Soviet industry is now located or where future expansion is planned. In addition, the military manpower shares that will come from the southern tier, or non-Slavic belt of the Soviet Union, may also have a major impact on the armed forces of the future. By the end of the century about one-third of the 18-year-old cohorts will be in this region.

This paper incorporates analyses of both population and manpower in the Soviet Union. Because of limited space and time, however, only basic population and manpower trends can be covered here. A preliminary examination is made of military manpower, not to derive new

*The paper is exhacted and updated from the article by Murray Feshbach and Stephen Rapawy, "Soviet Population and Manpower Trends and Policies," in Congress of the United States, Joint Economic Committee, Soviet Economy in a New Perspective, 94th Congress, 2nd Session, GPO, Washington DC, October 1976, pp 113-157.

estimates or to confirm previous estimates, but to try to determine the impact of the precipitous drop in the size of increments to the able-bodied ages in the 1980's. Because of the indicated regional birth differentials, regional and ethnic factors will become more important in the potential supply of new recruits. An alternative working hypothesis related to various noncombat troops is propounded here to reconcile the varying estimates of the size of the armed forces. A model projection of the potential supply of 18-year-old males indicates that unless changes are made in the term of military service, the length of the workweek, or some other aspect of manpower allocation demographic, educational, and military factors oblige the Soviet Government and the Party to reduce the size of the armed forces.

For the present paper, the publication of the results of the 1970 U.S.S.R. census of population and the new annual population statistics volume is invaluable. Projections of population prepared by the Foreign Demographic Analysis Division are given to the year 2000 to show the sweep of demographic changes during the remainder of the century. The labor force projections have been prepared for the period up to 1990, whereas annual employment estimates are for the current period, extended somewhat on the basis of the plan for the current 5 years. This paper also presents for the first time a series of man-hour estimates by branch of the economy and by branch of industry, which cover the period 1950-74. These data are indispensable for more precise measures of productivity and of human capital.

POPULATION

Population Growth

The assessment of the basic dynamics and structure of the population of the U.S.S.R. given in the previous Joint Economic Committee volume remains essentially unchanged.[1] There had been a decline in fertility leading to a marked decrease in population growth; presumably the rate is generally stable. The age and sex distributions of the population are still returning to normal as the effects of the terrible losses during the Second World War recede. However, as a consequence of the slowdown in the overall growth rate, there is at the same time a serious increase in the proportion of the

population in the pension ages. Nationally patterns of birth differentials are maintained. Although there was a drop in the actual level of crude birth rates in the Central Asian region, the differentials remain high. As a result, there will be both a drop in the aggregate supply of new labor and a geographic shift of labor resources to the south.

After continued and sustained growth during the 1950's, the rate of growth of the total population of the U.S.S.R. began a deceleration in the middle 1960's (Table 1). Because of the drop in the annual average rate of increase from 1.7 percent in 1951-55 to only one-third that rate in 1996-2000, the absolute size of the annual increments will also drop to about half of its peak during the 1950's. Although not following the Soviet pattern precisely for the entire period 1950-2000, the U.S. population's rate of increase drops similarly from 1.7 percent per year during 1951-55 60 0.6 percent during 1996-2000. Between 1950 and 2000, the total populations increase almost at the same rate--the U.S.S.R. by 73.4 percent and the U.S. by 72.4 percent.[2]

The aging of the Soviet population reflects the changes in vital rates and the demographic catastrophes which have occurred since the First World War. Thus, as can be seen from Table 2, there will be a virtual doubling of the share of the older population (i.e., in ages above the able-bodies, as defined in the U.S.S.R.), from 10.4 to 19.2 percent. However, there are major differences in the proportion of older persons by region. In Central Asia and Kazakhstan, the share of persons in the pension ages will decrease from 10.2 percent in 1970 to 9.4 percent in 2000.[3] In the remainder of the country, therefore, the proportion of the population in these "overaged" categories will more than double.

Regional aspects of the Soviet population, as will be seen throughout this study, are to play an even more significant role in all aspects of population and manpower trends and policies. Changes in regional distribution over time are due in large part to continuation of birth differentials, and in part to net migration within the country. If massive movement out of Central Asia were to be mandated or otherwise achieved, many of the problems described herein would be moderate appre-

TABLE 1.--ESTIMATES AND PROJECTIONS OF U.S.S.R. POPULATION AND AVERAGE ANNUAL PERCENT CHANGES: 1950-2000

(Absolute numbers in thousands)

Year	Total population	Absolute change	Average annual percentage changes
1950	180,075	(1)	(1)
1955	196,159	16,084	1.7
1960	214,329	18,170	1.8
1965	230,936	16,607	1.5
1970	242,757	11,821	1.0
1975	254,462	11,705	.9
1980	267,057	12,595	1.0
1985	280,383	13,326	1.0
1990	292,324	11,941	.8
1995	302,746	10,422	.7
2000	312,215	9,469	.6

(1) Not applicable.

Source and methodology: Estimates and projections of the Foreign Demographic Analysis Division, prepared in March 1976, which were based on the age-sex distributions from the 1959 and 1970 censuses and official figures for total population, births, and deaths for the years 1950-74. The projections for the years 1975-2000 were based on the assumptions that fertility will decline by 7 percent between 1975 and the year 2000, that mortality will decline by an amount equivalent to an increase in life expectancy at birth of approximately 2.5 years.

TABLE 2.--PERCENT DISTRIBUTION OF THE POPULATION BY AGE GROUP IN THE U.S.S.R.: 1950-2000

(Based on the population. Figures may not add to 100 percent due to rounding)

Age group	1950	1960	1970	1980	1990	2000
0 to 15 years	32.2	31.8	30.7	26.1	27.0	25.2
16 to 59/54 years	57.4	55.7	54.2	58.3	55.4	55.5
60/55 years and over	10.4	12.4	15.1	15.5	17.6	19.2

Source and methodology: Same as in Table 1.

ciably. But we doubt that major shifts will take place in the pattern of births and settlements by nationality before the end of the century without strong administrative measures. Extreme measures are not anticipated but obviously cannot be dismissed as impossible.

Natural increase for the country as a whole is expected to drop to 5.8 per 1,000 population in the year 2000, about one third the level of 1950 (Table 3). This is a result of the decline in the national crude birth rate from 26.7 to 16.0, a decrease of about 40 percent, over the same period. Due to the aging of the population, the crude death rate began to increase by 1970, and by 1990 it will exceed the level at the beginning of the period. There has recently been an unexpected but significant rise in infant mortality, which has increased from 22.9 to 27.9 per 1000 live births in the years 1971-74.[4] Not all of this increase can be explained as due to improved reporting in the Central Asian republics. In Lithuania the rate increased by 20 percent between 1971 and 1973 and in Latvia by 10 percent between 1973 and 1974.[5] Why this is occurring and how long it will continue is not known. According to Soviet official statistics for 1971-72, there is a difference of 10 years between the life expectancies of males and females at birth (64 years from males and 74 for females). According to statistics given in the United Nations Demographic Yearbook for 1974, with the single exception of Gabon, there is no other country in the world in which life expectancy of males is as much as 10 years less than females. This gap will persist throughout the remainder of the century. It is no longer possible to explain such an extreme differential as a consequence of the aftereffects of World War II. An extraordinary jump in the crude death rate occurred in 1975. According to the published data, the rate increased by 0.6 per thousand in 1975 to 9.3 deaths per 1,000 population.[6] More research on aggregate and regional differences in death rates by cause and by sex is necessary before a satisfactory explanation can be offered.[7]

It is only in the past several years that concerted national policies have been adopted to encourage births. In July of 1974, it was announced that in addition to the "mother-heroine" designation, women who have given

TABLE 3.--VITAL RATES FOR THE U.S.S.R.: 1950-2000

(Per 1,000 population)

	Births	Deaths	Natural increase
Year:			
1950	26.7	9.7	17.0
1960	24.9	7.1	17.8
1970	17.4	8.2	9.2
1980	19.2	9.3	9.9
1990	17.3	9.8	7.5
2000	16.0	10.2	5.8

Source: TsSU SSSR, Naseleniye SSSR (chiselennost', sostav i dvizheniye naseleniya) 1973; statisticheskiy sbornik, Moscow, Statistika, 1975, p. 69 for 1950-70, and estimates and projections fo the Foreign Demographic Analysis Division, prepared in March 1976, for the remaining years.

birth to and raised ten or more children would be eligible for a "Glory of Motherhood" order and a "Motherhood Medal."[8] More substantial incentives were provided by a directive "On the Introducation of Aid to Children in Low-Income Families,"[9] which was to go into effect on November 1, 1974. Although the aid is a nominal 12 rubles per child per month until the age of 18, it amounts to a substantial percentage for families whose income is less than 50 rubles per capita per month. Although not explicitly described as a measure to encourage larger families, this law could well have that effect. A proposed regulation would provide for partial payment of a woman's salary during a period of 1 year's matenirty leave to care for her child.[10]

The current and projected vital rates for the USSR and for the republics indicate that an increasing share of the net population growth in the future will occur in Central Asia, Kazakhstan, and the Transcaucasian republics (Table 4). The natural increase for these regions, despite some reduction in crude birth dates, will remain at about two-and-one-half times the national rate for Kazaknstan and the Transcaucasus and five times for the four Central Asian republics. (The disparity would obviously be much greater if one were to compare these ratios with those for the remaining seven republics alone.)

The female fertility rates for the prime child-bearing ages (15 to 49 years of age) by republic provide further evidence of regional fertility differentials (Table 5). Although the differences seem to be generally diminishing, the four core Central Asian republics in 1973-74 still have no less than twice as many births per 1,000 women as the U.S.S.R. average, and in Kazakhstan, although the Kazakhs are a minority in their own republic, the female fertility rate is 41 percent higher. Once of the leading commentators on the Soviet demographic scene, V. Perevedentsev, estimated that each 1,000 women in Latvia will bear 1,986 children on the average over their lifespan, but in Tadzhikistan, the number of children will be 6,071.[11]

MANPOWER

As indicated in our paper published by the Joint Economic Committee in June 1973, the labor shortages

TABLE 4.--SOVIET POPULATION GROWTH RATES, 1950-2000
BY MAJOR GEOGRAPHIC SECTIONS

Section	Natural Increase/1000 People (Births-Deaths)					
	1950	1960	1970	1980	1990	2000
Russian Republic	16.8	15.8	5.9	6.5	2.4	.1
Baltic Republic	7.7	10.2	6.1	4.7	3.4	1.7
Belorussia	17.5	17.8	8.6	9.5	6.9	4.0
Ukraine	14.3	13.6	6.3	5.6	2.6	.8
Moldavia	27.7	22.9	12.0	13.9	10.5	8.3
Transcaucasian Republic	19.4	28.0	17.4	18.1	17.6	14.2
Kazakhstan	25.9	30.6	17.4	19.3	21.7	14.7
Central Asian Republic	17.0	32.6	27.3	30.3	31.3	29.1
USSR as Whole	17.0	17.8	9.2	9.9	7.5	5.8

TABLE 5.--FEMALE FERTILITY RATES IN THE U.S.S.R., BY REPUBLIC: 1958 TO 1974

(Rates are number of births per 1,000 females 15 to 49 years of age)

Republic	1958-59	1965-66	1969-70	1972-73	1973-74
U.S.S.R.	88.7	70.8	65.7	66.4	66.8
Baltic Republics:					
Estonia	59.9	55.3	59.3	58.5	57.9
Latvia	59.2	51.9	53.5	53.8	53.4
Lithuania	82.8	68.6	67.2	63.1	60.9
R.S.F.S.R.	82.9	59.0	53.4	54.9	55.3
Belorussia	91.0	67.1	61.3	59.7	58.9
Ukraine	70.7	57.1	55.2	56.2	55.7
Moldavia	111.7	79.2	71.6	75.6	75.1
Transcaucasian republics:					
Georgia	85.0	78.2	73.3	69.0	69.4
Armenia	159.2	122.4	92.9	87.3	84.7
Azerbaydzhan	163.3	165.8	134.6	111.4	108.0
Kazakhstan	143.0	107.9	96.1	93.6	94.1
Central Asia:					
Uzbekistan	158.8	165.3	158.5	156.0	156.8
Turkmenia	161.6	176.6	165.6	159.3	158.6
Kirgizia	140.1	137.2	134.7	132.9	131.6
Tadzhikistan	123.5	166.2	166.4	168.0	170.6

Source: 1958-73: TsSU SSSR, "Naseleniye SSSR (chislennost', sostav i dvizheniye naseleniya) 1973; statisticheskiy sbornik," Moscow, Statistika, 1975, pp. 137-138. 1973-74: "Vestnik statistiki," No. 12, 1975, p. 80.

as the supply precipitously. Labor shortages will be exacerbated by competing demands among the civilian and military sectors for skilled young people.

Labor Supply Problems

According to our projections prepared in June 1974 for the U.S.S.R. and for eight subdivisions of the country a significant upturn in the annual increments to the population of able-bodied ages has been taking place since 1970 and will continue throughout the present decade. It is expected that persons in these ages will constitute over 92 percent of the new additions to the labor force during the 1971-75 plan period.[12] With all other major sources exhausted, the dependence on the able-bodied age group is total. In the 1980's there will be a downturn in the size of the annual increments to the able-bodied ages to just over one-fifth of the numbers in the first half of the current decade and the increments in the latter half will be only slightly larger (Table 6). In the 1990's the increments will increase again, but the increase in the latter half of the decade will still be less than three quarters of the total for 1971-75.

The projections indicate that the increase in the able-bodied ages in central Asia and Kazakhstan will actually exceed that for the U.S.S.R. as a whole during the 1980's. The Transcaucasus also will supply a positive increment to the net growth over the entire period. A net decrease will occur in the R.S.F.S.R. and the Ukraine beginning in 1980 and in the Baltic Region after 1990. Although there will be a reduction in the share of the Central Asian region and Kazakhstan during the 1990's, and that of the Transcaucasus will decline from 1985 onward, the contribution of these areas to the national increase in the able-bodied population will continue to be much higher throughout the latter part of the century than it was during the 1970's. These prospects pose serious problems relating to mobility, the ability to speak Russian, urbanization, and industrialization. Before long it is likely that the Soviet Union will be obliged to undertake a crisis management approach involving various legislative and administrative expedients to cope with the labor, investment, political, and military implications of these changes.

TABLE 6.--ESTIMATED INCREMENTS TO THE POPULATION IN THE ABLE-BODIED AGES IN THE U.S.S.R., CENTRAL ASIA AND KAZAKHSTAN, AND THE TRANSCAUCASUS, BY PLAN PERIOD: 1959 TO 2000

(Based on data as of Jan. 1, in thousands)

Plan period	U.S.S.R.		Central Asia and Kazakhstan		Transcaucasus	
	Total increase	Average annual increase	Total increase	As a percent of national increase	Total increase	As a percent of national increase
1959-65	5,173	739	NA	X	NA	X
1966-70	7,808	1,562	NA	X	NA	X
1971-75	12,726	2,545	3,551	27.9	1,231	9.7
1976-80	10,408	2,082	3,495	33.6	1,148	11.0
1981-85	2,687	537	2,823	105.1	701	26.1
1986-90	2,830	566	2,938	103.8	531	18.8
1991-95	4,020	804	3,565	88.7	628	15.6
1996-2000	9,012	1,802	4,999	55.5	1,082	12.0

NA -- not available.
X -- not applicable.

Source and methodology: Estimates of the Foreign Demographic Analysis Division, March 1974. The projections for the years 1973-2000 were based on the assumptions that fertility will remain constant at the estimated 1972 level, that mortality will decline by an amount equivalent to an increase in life expectancy at birth of approximately 2.5 years, and that net migration will be insignificant.

There are no real indications that the Soviets hope more pensioners can be induced to return to work, if only part-time.[13] As on January 1, 1974, only 12,500 of approximately 4 million working pensioners were working part-time. Many nonworking pensioners however, have expressed a preference to work part-time.[14]

Despite the fact that the Soviet Union desperately needs to improve agriculture and to increase sharply the productivity of farmers through additional inputs of labor as well as capital, as of January 1, 1968, they have lowered the pension age for collective farmers to that for workers and employees in the state sector. As of April 1, 1975, they have lowered the pension age for female farm machine operators even more in an effort to make work more attractive to them.[15] Thus, the authorities appear to have a fundamental ambivalence in their treatment of collective farm workers.

The first indications of a policy to import foreign labor to help solve shortages in bottleneck areas and to bring in scarce specialties were discernible in 1973.[16] Since then this program has been expanded to cover a wide variety of activities and forms. Among the most interesting of the projects involving foreegn labor is the building of the Orenburg pipeline, designated portions of which are to be built by the East European countries using their own labor and capital. It is expected that at the peak of the effort some 20,000 foreign workers will be engaged in building the pipeline and associated production and support facilities.[17] Approximately equal sections of 550 km each will be built by workers from Bulgaria, Czechoslovakia, East Germany, Hungary, and Poland (Romania will send money but not men). Work is to be completed by the third quarter of 1978 according to the original plan. Several other important construction projects carried out within the U.S.S.R. also involve the joint efforts of several countries. The Ust'-Ilimsk pulp and paper complex is being built in the Irkutsk region of Eastern Siberia with Bulgarian, East German, Polish, and Romanian assistance. Two thousand foreign workers are scheduled to be part of the 26,000 building the complex.[18] The Kievembaysk Asbestos mining and enriching complex in the Orenburg Oblast of the R.S.F.S.R. also involves workers from the six East European countries.[19]

Another means of obtaining labor from foreign countries is in barter exchanges of materials or products for labor. Bulgarian workers were employed at 23 different sites in 1973, and by now may number some 30,000 throughout the country.[20] As indicated in our 1973 study, 7,000 North Koreans were engaged in cutting timber in the Khabarovsk Kray, and there are reports that their numbers are increasing.[21] Labor to supplement domestic resources also comes from Western countries. Finland has contracted with the Soviet Union to build a hotel and a hydroelectric dam and to cut timber. Late in 1973 it was reported that 3,000 Finns would participate in the building of an iron ore mine and concentrating plant.[22] A Soviet-Finnish Treaty signed in 1971 contained references to ten joint construction projects (including some of Finnish territory).[23] Italian workers participated in the building of the Togliatti plant, the French are to provide labor to build hotels in Moscow, and, if any of the gas and oil deals being negotiated in "above-plan" agreements between the U.S.S.R. and American and Japanese firms are consummated, foreign labor will undoubtedly be required in other than supervisory roles.

The emigration of Jews, ethnic Germans, Armenians, and others has reduced the available labor supply to the extent that these individuals were economically active. Taken together, the 125,000 Jews who emigrated in the post-war period, the 5-6,000 ethnic Germans who left each year, the annual exodus of a small number of Armenians, and the "other nationalities [who] left at the rate 3,800 annually," are only a small fraction out of a labor force of 125,000,000, and therefore do not add significantly to the severity of the labor shortage.[24]

In all, then, the demographic picture bodes ill for the future labor supply until the end of the century. Not only will the increase in the total numbers be constricting, but the picture afforded by examination of the regional components underscores the necessity for improvements in productivity and efficiency if past or current economic growth paths are to be followed in the future.

The Labor Force

From the discussion of the basic tasks for the current 5-year plan period in the introductory section

of the "Basic Directions for the Development of the National Economy of the U.S.S.R. in 1976-1980",[25] it is clear that the Party and Government are seriously concerned about their labor force problems. The leadership is considering a wide range of possible solutions--mechanization of auxiliary and subsidiary work, reduction of the share of mannual labor, restricting employment growth in existing enterprises, more rational utilization of labor, especially those employed in the nonproductive sphere, improving the norming of labor, reducing labor turnover, raising labor discipline, more efficient use of worktime, elimination of idleness and all other irrational uses of labor inputs, improvement of training and skills of cadres, and providing more amenities in the Siberian and Far Eastern regions of the country.[26]

Again because of limits in space and time, the present article deals primarily with the size of the labor force, its rate of growth, its overall structure, the annual average employment, and its distribution by branch, and provides estimates of man-hours of work. Man-hour data afford a more precise measure of labor inputs than do other kinds of labor force data and are much more useful for temporal and spatial comparisons of labor productivity. Only brief mention can be made here of various new developments in the manpower area, including the issuance of new-style labor booklets and the expansion of activities of the State Committees on Labor Resources Utilizations. Some indication of the proportion of engineering graduates from part-time (evening and correspondence) schools is also available. Most of the estimates and projections of labor force, annual average employment, and man-hours given below are from a forthcoming report by Stephen Rapawy,[27] the detailed notes and methodology for which will not be repeated here.

The total Soviet labor force is estimated at 125,612,000 persons in 1970 (Table 7). This figure represents 51.7 percent of the total population of the U.S.S.R. and 95.4 percent of the population in the able-bodied ages. If persons of able-bodied and pension ages in private agriculture are excluded, the latter proportion is reduced to 89.9 percent. The labor force participation rates are at a very high level at this time and there are no significant untapped labor resources that can be drawn on for future needs. The

TABLE 7.--ESTIMATES AND PROJECTIONS OF THE LABOR FORCE IN THE U.S.S.R.: 1950 TO 1990

(In thousands, as of July 1)

Year	Total	Armed Forces	Civilian labor force		
			Total	Nonagricultural Sectors	Agricultural Sectors
1950	97,641	4,600	93,041	42,796	50,245
1955	104,937	5,800	99,137	49,753	49,384
1959	109,264	3,900	105,364	57,780	47,584
1960	110,132	3,973	106,159	60,723	45,436
1965	116,494	3,380	113,114	73,077	40,037
1970	125,612	3,535	122,077	84,577	37,500
1971	127,672	3,675	123,997	87,028	36,969
1972	129,722	3,675	126,047	89,609	36,438
1973	131,610	3,725	127,885	91,977	35,908
1974	133,600	3,835	129,765	94,388	35,377
1975	135,767	4,005	131,762	96,916	34,846
1976	137,987	4,005	133,982	99,666	34,316
1977	140,140	4,005	136,135	102,350	33,785
1978	142,214	4,005	138,209	104,955	33,254
1979	144,201	4,005	140,196	107,473	32,723
1980	146,068	4,005	142,063	109,870	32,193
1981	147,753	4,005	143,748	112,086	31,662
1982	149,215	4,005	145,210	114,079	31,131
1983	150,521	4,005	146,516	115,916	30,600
1984	151,672	4,005	147,667	117,597	30,070
1985	152,647	4,005	142,642	119,103	29,539
1986	153,466	4,005	149,461	120,453	29,008
1987	154,207	4,005	150,202	121,725	28,477
1988	154,950	4,005	150,945	122,998	27,947
1989	155,734	4,005	151,729	124,313	27,416
1990	156,555	4,005	152,550	125,665	26,885

NA -- not available

Source: Stephen Rapawy, "Estimates and Projections of the Labor Force and Civilian Employment in the U.S.S.R.: 1950 to 1990," U.S. Department of Commerce, Bureau of Economic Analysis, 1976 (forthcoming). Variant 1.

growth of the labor force is estimated to be slightly larger between 1970 and 1990 than it was between 1950 and 1970 (30.9 million as compare to 28.0 million) but because of the larger base the rate of growth by 1986-90 is only about one-third the level of 1950-58 (Table 9). The labor force estimates given here are based on the population projections described earlier, rates of economic activity by age and sex, and assumptions about trends in the agricultural sector. Given the problems in Soviet agriculture, the assumption that labor may be drawn from the farms without commensurate productivity gains may perhaps be too "optimistic."

According to the estimates given here the share of the labor force in agriculture drops from 54.0 percent in 1950 to 30.7 percent in 1970 and to 17.6 percent in 1990. The agricultural labor force figure for 1970 is different from the Soviet 1970 census figure. According to the published census report there were only 1,823,499 persons "engaged in the private subsidiary agricultural economy."[28] This figure is patently incomplete. If one were to compare the annual average figure to 4.9 million persons working solely in this activity in 1969 reported in the statistical yearbook for that year[29] with the corresponding 1970 census figure, it is obvious that the latter is far less inclusive. The explanation appears to be relatively simple. In October 1964, between the 1959 and 1970 censuses, a law was passed authorizing payment of state pensions to collective farmers effective January 1, 1965.[30] By the end of 1965, 7.0 million persons on collective farms were receiving old-age pensions.[31] There is no doubt that a very large proportion of these people continued to work on their private plots and orchards.

The armed forces figures given in Table 7 will be discussed below.

Annual average employment of workers and employees in the State sector was scheduled to increase by 11.1 million during the 5-year plan report just completed.[32] From information in the plan fulfillment report for 1975, it is possible to estimate that state sector employment reached 102.2 million persons, and increase of 12.0 million during the period, which was 8 percent higher than what was projected in the plan.[33] The

absolute level in 1975 is 13.3 percent higher than in 1970. However, the rate of increase is somewhat less than that for the previous 5 years, and the aggregate growth is only about half that in each of the three previous 5-year periods.[34] Information available about the Tenth Five-Year Plan, 1976-80, does not permit an estimate of the expected increase in the number of workers and employees. However, based on the midpoints of the production/productivity relationships given in the "Basic Directions" of the plan, it can be estimated that the rate of industrial employment growth in 1976-80 will slow to half the rate of 1.5 percent during 1971-75.[35] The 1.5 percent rate of growth was less than half the rate of the previous period, which in turn was markedly lower than the rates of the preceeding 15 years.[36] If a rate of growth of national income similar to that in the past is to be achieved, labor productivity must rise sharply, hence it is no surprise that the plan calls for "special attention to be concentrated on accelerating the growth of labor productivity."[37]

The proportion of agricultural employment in the state, collective farm, and private sectors has been steadily declining, though it remains very high compared with the proportion employed in agriculture in the United States. According to our estimates, agricultural employment in the U.S.S.R. has dropped from 53 percent of total annual average (civilian) employment in 1950 to 32 percent in 1970 and to under 30 percent in 1974. The absolute level, however, has remained at over 35 million persons, more than 5 times the Soviet official estimates of American agricultural employment and over 7 times the unadjusted American figures.[38] Services in the Soviet Union have grown from only 16 percent of total employment in 1950 to 25 percent in 1970 and close to 30 percent in 1974. As the figures in Table 8 show, employment in services has grown more than twice as fast as overall employment since 1959.

MILITARY MANPOWER

Perhaps the most vital question that concerns us here is the size of the armed forces in the Soviet Union. In Table 8, a constant figure of 4,005,000, the estimate for 1975 obtained from the International Institute for Strategic Studies of London, England, is used for the years 1976-90. Since the late 1950's, the Institute's estimates of armed forces for all countries of the world have been considered to be the most authoritative available.

An effort is made here to place the size of the Soviet Armed Forces in some perspective, not to derive a new figure per se. The implications of varying numbers and their connection with the impending labor shortages in the 1980's also will be discussed briefly.

A lively debate has recently broken out as to the "actual" size of the Soviet Armed Force. Alternative figures range from a total of 4,000,000 given by Mr. William Colby, former Director of the Central Intelligence Agency, in June 1975 to one of "6,000,000 or more" cited as a possible number by Mr. William Lee,[39] a student of Soviet military affairs. Within this range, falls the figure of 4.5 to 5 million given by Lt.Gen. Daniel Graham,[40] former Director of the Defense Intelligence Agency, and a figure of 4.8 million put forward in a study for the Senate Armed Services Committee.[41] The figure of 6,000,000 seems the least likely of the various estimates regardless of the definition of "armed forces" used. While there is no doubt that the Soviet Armed Forces have grown since the low of 3,325,000 in 1961 because of efforts to meet perceived threats from China, the replacement of Czech forces by Soviet forces in Warsaw Pact formations, and the growth of the Navy. However, 6,000,000 would seem to be inconsistent with any reasonable assumptions about the balance of numbers between officers, warrant officers, and extended services enlisted men who comprise the career service personnel and the numbers of males inducted each year. Given an average of about 2 years service at the present time for all draftees,[42] and assuming that 25 percent of the armed forces are cadres, then, in order to achieve a total of 6,000,000, conscription would have to absorb an impossibly high proportion of the annual

TABLE 8.--GROWTH RATES OF SELECTED POPULATION AND MANPOWER MEASURES

(In percent per year)

Indicator	1950-58	1959-65	1966-70	1971-75	1976-80	1981-85	1986-90
Population:							
of able-bodied ages	1.8	0.5	1.2	1.9	1.5	0.4	0.3
of pension-age	3.6	3.2	3.3	1.3	1.2	2.3	2.1
18 years of age	2.0	-3.6	5.8	2.3	.4	-4.0	.7
19 years of age	1.7	-7.0	9.0	2.4	1.4	-4.4	-.1
Labor Force:							
Total	1.4	1.0	1.5	1.6	1.5	.9	.5
Civilian	1.5	1.0	1.5	1.5	1.5	.9	.5
Nonagricultural	3.3	4.0	3.0	2.8	2.5	1.6	1.1
Agricultural	-.1	-3.1	-1.3	-1.5	-1.6	-1.7	-1.9
Annual average employment:							
Total civilian	1.9	2.0	1.9	1.7[1]	(NA)	(NA)	(NA)
Nonagricultural	3.7	4.5	3.5	2.5	(NA)	(NA)	(NA)
Industry	4.0	3.9	2.9	1.5	.7	(NA)	(NA)
Services	3.0	5.5	4.3	3.3	(NA)	(NA)	(NA)
Other	4.8	4.3	3.4	3.0	(NA)	(NA)	(NA)
Agricultural	.1	-1.3	-1.1	-.4[1]	(NA)	(NA)	(NA)
Man-hours:							
Total civilian	1.7	.9	2.0	1.9[1]	(NA)	(NA)	(NA)
Nonagricultural	2.9	2.8	3.6	1.9[1]	(NA)	(NA)	(NA)
Industry	3.2	2.2	3.1	1.4[1]	(NA)	(NA)	(NA)
Other	3.1	3.3	4.1	3.3[1]	(NA)	(NA)	(NA)
Agricultural	.4	-1.7	-1.1	.3[1]	(NA)	(NA)	(NA)

[1] 1971-74

NA -- not available.

Note: Rates for each period were calculated on the basis of data for the terminal year of the preceding period.

Source: Population: Unpublished estimates and projections of the Foreign Demographic Analysis Division made in June 1972 and March 1976. Labor force: Table 8. Annual average employment: 1950-75, Table 10, 1976-80: "Izvestiya," Mar. 7, 1976, p.3. Man-hours: Table 13.

cohorts of potential draftees.

The Institute's figures for armed forces plus para-military troops are used here for several reasons. First, they are internally consistent. Second, and more significant, it is our hypothesis that the construction, medical and railroad troops, at least, and perhaps also those few troops assigned to work on military state farms, are already included in the "civilian" employment figures, and hence should not be added to the armed forces figures used here in order to avoid double-counting. Reasons for making this inference are given below.

The armed forces figure for 1975 and subsequent years given in Table 8 is 20 percent lower than some of those offered by other analysts cited above. This 1975 figure appears to be in line with the 1959 Soviet census figure of 3,623,000 for the armed forces. It is our present conclusion that there is ample evidence to indicate that our earlier interpretation of the 1959 figure as the total armed forces was incorrect. First, the figure of 3,623,000[43] is suspicious in that, although it is supposed to be the sum of the armed forces figures for the 15 republics, which are given to the last digit, it ends in three zeros, a highly improbable circumstance. The term used in the census volume to define the coverage of the figure is nakhodyashchikhsya v ryadakh Sovetskoy Armii (which translates literally as "located in the ranks of the Soviet Army"). However, the same figure is identified in many other sources as Vooruzhenyye sily (armed forces). The use of the latter term should have been a warning sign that the coverage of the figure needed more careful examination. Instead of including all categories of military-related personnel, the term may refer only to combat-type troops (including their command and staff personnel) and excludes non-weapons-bearing troops.

Another suspicious circumstance is the fact that only 632 females were reported to be in the armed forces according to the census results. If we look at "civilian" health services according to the non-census current statistics, we find that females comprised 85 percent of the workers and employees in this sector at the time of the census.[44] During

World War II, two-thirds of all Soviet military medical personnel were females.[45] Hence it seems unlikely that the sex composition of the military medical services at present would differ so radically from that in the civilian sector and in the military during World War II. A military service of 3.6 million would require perhaps 50 to 100 thousand medical troops. Even if the figure of 632 represents only uniformed women doctors, it would seem to be too low. Is it possible that apart from the 632 women, the military-medical service is comprised solely of civilian workers and employees (volnonayemnyye - voluntarily hired personnel)? The suspicion that medical personnel serving the armed forces are included under the civilian health services sector is strengthened by Abraham Becker's conclusion in 1964 that the "sharp increase in the unidentified 'health' residual in the Union budget reflects a transfer of military medical outlays from 'defense' to 'health'."[46]

There are somewhat more definite indications that certain "military" personnel may be included in "civilian" employment statistics. In the reference book edited by A. G. Gornyy and published in the Officer's Library Series, it is explicitly stated that the service of military construction troops is "structured on a somewhat different basis" than that of the regular troops.[47] Although they are in uniform, they must have a different official status, otherwise why is it necessary to stipulate that they are authorized to obtain "the same benefits established for ordinary (ryadovogo) troops who are on active duty (nadeystvitel'nuyu sluzhbu), and that the payment for their work is "made on the basis of existing labor legislation", i.e., on the same basis as for ordinary construction workers.[48] General of the Army A. Komarovskiy, the Deputy Minister of Defense of the U.S.S.R. for Construction and Billeting of Troops, seems to acknowledge the similarity between military and civilian construction workers in his statement that "military construction workers are an integral part of the multimillion army of Soviet construction workers", which may be an indication that they are counted in the civilian construction sector. Assuming that the Bulgarians have very closely copied the Soviet system, it is perhaps significant that all young persons have the option of serving full time

either in the Bulgarian Armed Forces or in the Construction Troops.[49]

Among other troops possibly included in the civilian employment figures are the railroad troops and those assigned to military state farms. According to Kruzhin, there were 55,000 persons assigned to the railroad troops contingent when they were first organized in 1932.[50] The number serving in this capacity at present is not published, but it is known that they continue to work on the Baykal-Amur Mainline Railroad presently under construction and undoubtedly do guard duty as well as construction work. Military state farms, which employ troops and civilians, have in "recent years" yielded a profit in the "millions of rubles" according to the head of the Food Supply Administration of the Ministry of Defense.[51] If it were known to what extent uniformed troops perform activities of the voyentorg (military retail trade supply) system, then their numbers could also logically be included in the civilian employment rolls, since it can be shown that the value of trade turnover in this system is included in the civilian total in the standard Soviet statistical yearbooks.[52]

In sum, there is a broad range of military support (non-weapons bearing) activities in the U.S.S.R. which could easily employ about 800,000 persons, roughly the difference between the International Institute for Strategic Studies' figure and the recent estimates referred to above.[53] They may not be included in the lower figure given by the Institute. If one adds up the force component figures given in annual The Military Balance for the Soviet Strategic Rocket Forces, the Air Defense Forces, the Army, the Navy, the Air Force, and the paramilitary security and border troops, these add exactly to the totals shown by the Institute for the Soviet Armed Forces plus the paramilitary troops, which leaves no room for the support troops.[54]

When we turn to the question of how the Soviet military forces compete with the civilian economy for the available manpower, the discussion becomes much more tenuous. If we assume a baseline figure of 4.5 million persons under arms for the future, a number of questions arise as to the possibility of maintaining

a force of this magnitude and in addition the construction, farm, railroad and other support troops without placing severe pressure on the manpower resources available for the civilian economy. What about the quality of those to be drafted? What about their proficiency in Russian, the lingua franca of this multinational country's armed forces? What about the size of the career cadres (officer and enlisted), and the draft rates necessary to maintain the military forces at a given size? The changing size of the cohorts of 18-year-olds, the changing regional distribution, and the different levels of educational attainment, all complicate the military manpower questions.

No figures on numbers of cadres or draftees are available from Soviet sources. Nonetheless we can postulate ranges within which the proportion of career cadres and draft rates probably fall. Erickson estimates that the officer corps is about 20 percent.[55] If 3 to 5 percent of the armed forces in any given year are re-enlisted NCOs and soldiers, then about 25 percent of all military personnel are retained from year to year.[56] This would mean that conscripts would account for 75 percent or 3,375,000 draftees, assuming a total force of 4.5 million. With an average of 2 years service, the call-up rate would be 1,687,500 men per year. If there were 4.8 million in service, of whom as few as 20 percent were cadres, it would be necessary to draft 1,920,000 recruits per year. This latter figure would amount to 85 percent of the cohort of 18-year-olds in 1970, 75 percent in 1980, 90 percent in 1990, and 75 percent in 2000. In 1987, the year with the smallest cohort of 18-year-olds, 2,012,000 males, a draft of 1,687,500 would entail a call-up of 84 percent. Even at first glance this seems an improbably high rate. Writing in Air Force Magazine, Col. William F. Scott (USAF retired) indicates that less than 30 percent are exempt.[57] Although more precise figures are not available, it is possible that all the various exemptions and deferments may add up to no less than 20 percent of the cohort at the present time. There are medical exemptions, which may be more or less easily granted at different times, but probably never fall below 5 percent, and family exemptions for sole supporters of invalid parents, and fathers of two or more children, which must add at

least several more percentage points. Other exemptions are reportedly granted to those who have jobs in sensitive industries. Graduates of voyenfak's (military faculties) of universities get deferments and apparently some get exemptions. Legally in the reserves as an ofitser zapasa, these ROTC-equivalent graduates may be called up if needed to fill deficit military specialties. Others receive deferments when attending vocational-technical and specialized secondary schools. Indirect evidence indicates that specialized secondary schools also have an ROTC program, therefore some of their graduates would not be drafted. The significance of educational deferments may grow as higher education expands. It is understood that persons who served in prison for more than 3 years are also exempt. Perhaps some deferments may be obtained by bribery by individuals wishing to avoid the draft until they pass the age 27, the upper age of conscription. In sum, exemptions and deferments constitute a sizeable diminution of the available pool of potential draftees. However, some persons who receive deferments become available again upon completion of school, upon the death of an invalid parent, upon the correction of a medical disability, and so forth, adding to the manpower pool.

The regional distribution of population also affects the number and quality of recruits and their suitability for service in units requiring technical skills. In 1975, it is estimated that 16.8 percent of the cohorts came from the five Central Asian republics (including Kazakhstan), or 22.9 percent if the Transcaucasus is included. By the end of the century, the shares are projected to be 27.4 and 34.6 percent, respectively. According to the 1970 census, some 24 percent of the national population do not speak Russian fluently.[58] How fluent the remaining 76 percent are may be open to question, since fluency for census purposes is not determined by testing, but by taking the respondent's word for it. Hence, the 76 percent claiming fluency may be taken as a maximum figure.

Increasing the level of competence in Russian among the population does not seem to be easy. At the time of the XXII Party Congress in 1961, it was stated that the "Russian language has become in

reality the overall language of international communication and co-operation of all peoples of the U.S.S.R."[59] However, several years ago the Party Central Committee of Kirgizia admonished the local Ministry of Education to improve the teaching of Russian.[60] Michael Parks says that he was informed in 1973 that graduation from School was made "virtually conditional on becoming fluent in Russian." Nevertheless, 3 years later, at the Republic Party Congress held in Frunze on January 17, 1976, prior to the national Party Congress, it was necessary to remind the delegates of the importance of this issue, implying that success was limited. Similarly, the Lithuanian, Georgian, and Armenian congresses made direct references to the need to upgrade training in the Russian language for "international" (internatisional'nyy) communication and to its political and practical significance.[61] Knowledge of Russian plays a part also in the assignment of draftees to various services. Central Asians are frequently assigned to construction troop units because they do not speak Russian well enough to be assigned to any of the elite troops, such as the strategic rocket forces.[62] Even in the midst of the Second World War, when the military manpower situation was desperate, the three slavic nationalities comprised almost 90 percent of the personnel of 100 rifle divisions.[63] In the future, the language problem may be expected to become more serious as the share of the non-Slavic cohorts grows.

To understand the manpower problems facing the Soviet Union, even a crude hypothetical model of the manpower pool and the effects of the various demands upon it may be helpful. Assuming a military force of 4.5 million and accepting the estimates and projections of population prepared by the Foreign Demographic Analysis Division, the future supply of 18-year-olds can be calculated. Withdrawals for educational purposes, natural losses, permanent exemptions due to medical, family, and hardship reasons, and other subtractions can also be estimated. Table 9 indicates approximate the sum of those allocations. The allocation for education ranges from 20 percent in the year with peak cohort size, 1978, to 26.5 percent in the year in which the cohort is at its nadir, 1987. Deaths are few at this

age level but must also be accounted for. Emigration is an even smaller factor, and can be ignored here, but it might under some circumstances become significant in the future. Exemptions for noneducational purposes are estimated here to amount to 10 percent of the cohort in any given year. Expired deferments, which are in the order of 8-11 percent of the cohorts during the period, are include. In making estimates for this category it must be remembered that ROTC-type studies in both higher and specialized secondary education offer an avenue of escape from conscription unless the student has obtained a specialty which is required by the military.[64] Table 9 indicates that until 1983, when the figure for males available for the economy turns negative, it will be possible to meet the needs of the military if the draft quota is no different than is assumed here. After that year, however, there must be some alteration in the system if a force as large as 4.5 million persons is to be maintained.

This might include changing the length of service obligation from 2 to 3 years, as was the rule before the 1967 draft law, drafting or enlisting more women, eliminating or reducing the numbers of construction and other kinds of support troops under direct control of the military, and so forth. However, releasing construction, medical and other support troops from military service constitutes no real addition to the labor force as long as they continue with their present work; only a reduction in combat-type troops would increase the pool available for the civilian labor force. For the present we will continue to use the 4.5 million figure and assume that all other institutions and policies remain the same. It is only until 1983 that there will be a sufficient number to cover draft requirements of 1,638,000 persons per year. This model shows that the manpower constraints on the Soviet economy and military are even more stringent than the previous discussion would imply.

The numbers of 18-year-old males available for the civilian labor force will vary widely in the next 15 years according to the model, ranging from 399,000

in 1973 to 204,000 in 1987. During these years, according to our estimates, based upon population projections and labor force participation rates, the annual labor force increments will drop to one-third of the level during the current 5-year plan period. (According to estimates derived from Table 9, the average of the annual increments in the period 1976-80 is 2,060,000 persons per year, whereas in the Twelfth Five-Year Plan period of 1986-90, it will be only 787,000 on the average.) The need for more labor is beyond doubt unless labor productivity rises to three times the present level. During the last two decades the long-term growth in labor productivity for the four basic sectors has averaged about 6 percent per year. If the current average labor force is considered to be the demand level, with perhaps some minor adjustments for changes in productivity and output, then it can be estimated that there will be a labor shortage of about 800,000 persons per year during the next 5-year period and about 1,300,000 per year during the period which follows, assuming that output will grow at 7 percent per year and productivity at 6 percent, so that the labor force would have to grow by about 1 percent per year. These estimates include not just 18-year-olds but all ages of both sexes. Thus, in sum, the results of this examination would indicate that the Soviet Party and Government are faced with an increasingly acute competition for manpower between the civilian economy and the military.

More research is needed on the structure, organization, and activities of support troops before a conclusive evaluation can be made of their economic significance and definite answers can be given as to whether all support troops are included in the "civilian" employment figures, whether the structure of the military forces requires support at such a high level, and where the support troops appear in the budget. Also, consideration should be given to the possibility of a major change in the role of women in the military. Moreover, since there are regional differentials in educational attainment, or school continuation, a study of school enrollment by republic is necessary to ascertain whether the nondeferred supply of manpower for the military is in the less well educated regions of the country, and how the

quality of this supply will match the needs of a modern, technologically advanced military force. The trends in population and manpower discussed in this paper have crucial significance for Soviet economic and military policy in the future. All of the choices open to the Soviet authorities have their costs. A reduction in the size of the combat forces would seem to imply some reduction in military capabilities. A continued increase in higher educational attainment would diminish the numbers available for military service at age 18 and reduce the term of service of those entering the military upon completion of their education. It is hard to see how the present control structure with its Great Russian dominance can continue while the new manpower increments come increasingly from the non-Slavic republics. Whether and how the Government and Party will address and resolve these issues remain to be seen.

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APPENDIX F

THE MILITARY DISTRICT: STRUCTURE/FUNCTION IN MANPOWER MANAGEMENT

By Professor John Erickson

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There is an impression abroad in some circles that present Soviet military programs are alarmingly and startlingly new, all to stun an unsuspecting world, or else that they originate in some indeterminate process and like Topsy, "just grow'd." The management of military manpower is avowedly a case in point. The prevailing Soviet system -- based on the military district (Voennyi okrug:VO) -- is derived from those Imperial Russian arrangements set in train in 1861. The military district system was designed to be and remains even now the core of a method to rationalize the mobilization, training, and deployment of military manpower and, as such, presents itself as an intrinsic "unit of study." The advantages of lighting upon such an entity are self-evident: here is a Russian/Soviet military-administrative unit which has wholly prescribed limits, it has formal territorial delineation (both in geographic and administrative terms), it discharges particular functions in relation to a given structure and its characteristics are known (or, at least, they are amenable to identification and to a form of measurement, be this in terms of gross numbers or select ratios). We need not obtrude a single Western perception or preference in order to appraise this manner of manpower management: what is required is identification (institutional arrangements), description (procedural sequences and relationships) and analysis (simple counting, or if you wish, counting by categories or by arms and services or yet again by function -- combat, support, administrative -- consonant with the configuration of the VO itself).

It is a central submission here that an investigation of the Soviet military district can assist the identification of particular structures and thus elucidate certain functions, all without recourse to what has been essentially an exercise in

comparative terminology and semantics, hindered from the outset by the difficulty of finding precise meaning for our own terms, much less those employed (or not employed) in Soviet manpower and organizational practice. There is now, for example, a Soviet term readily identifiable with "combat support": the rubric of "specialist troops" (spetsialnye voiska) includes engineer, chemical and signal troops, together with railway, motor-transport and "road movement troops" (dorozhnye voiska, made up of movement control elements, road and bridge-building units) -- clearly a "support" function but not classified in those terms. And what should one make of the avtoktraktornaya sluzhba (car and tractor/automotive service) introduced in 1949 at MD and divisional level to deal with combat and transport vehicles?

While it is generally true to say that our knowledge of particular segments and entities of the Soviet Army (used here, as it is in Soviet writing, as a synonym for the Soviet Armed Forces as a whole as well as for the Ground Forces) is considerable, the workings of the Soviet system at large have tended to elude us. Here it seems to be usage which is the problem, the whole business of managing and administering manpower in a process which has become overlaid with institutional arrangement, bureaucratic procedure and certain forms of vested interest. The key point is very obviously the degree of effectiveness the Soviet authorities seek to extract from this arrangement and, by the same token, what they perceive as loss in present circumstances. Here at least we may be able to formulate some judicious view of what is involved in the concept and the operation of "overhead," or, to put it colloquially, how many men (and what resources) are needed to "produce" viable first-line forces?

The Soviet Military District does not, of course, stand alone and should be considered first within the framework of the entire Soviet military apparatus and its military-administrative elements (voennoe upravlenie and voenno-administrativnoe delenie, to use two relevant Soviet terms). The apparatus as a whole is made up of five distinctive elements (or segments), each with its own

institutional identity and legal status in military matters at large and manpower in particular:

(1) Central organs combined in the Ministry of Defence, linked in turn to the constituent republics and with legally vested authority within the territory of the Soviet Union and extended to those areas beyond Soviet frontiers where Soviet military forces are present in accordance with international agreements treaties and agreements on the territory of other states. With the Minister of Defence at its head, the Ministry of Defence is charged with planning the organization and development of the Soviet armed forces in peacetime, with improving troop organization and armament, securing the supply of the armed forces, the direction of combat training and under the Law of Universal Military Service may legally establish the manpower roll for those liable for military service. The collegiate (or board: kollegiya) of the Ministry of Defence, charged with adjudicating "major questions," is a "consultative organ" acting under the chairmanship of the Minister of Defence, while its composition is confirmed by the Council of Ministers/USSR. The "basic administrative organ" for the whole of the Soviet armed forces is the General Staff of the Armed Forces of the USSR, headed by a First Deputy Minister of Defence who simultaneously holds the post of Chief of the General Staff: the General Staff is charged with the direction of all central and local military organs, with securing the concordance of the work of the Main Staffs of the several arms of the Soviet forces, the staff of Rear Services as well as the main and central administrations of Ministry of Defence. The central direction of Party-political work within the Soviet armed forces is vested in the Main Political Administration of the Soviet Army and Navy, so charged by the Central Committee and operating with the status of Central Committee Department (otdel) in its own right.

(2) Military District/Fleets organs (involving the Military Districts, Air Defence Districts for the

Soviet Army and Fleets for the Soviet Navy, as well as Groups of Forces abroad and Flotillas) are responsible for the military and political training of their forces: the Military Soviets are responsible to the Central Committee of the CPSU, the Soviet Government, and the Minister of Defence for the state and combat readiness of forces, while the staff represents the main administrative agency.

(3) Formation, unit, naval formation, naval base and ship organs -- a direct "command" line sometimes described in Soviet terms as komandno-stroevoe upravlenie, in "special organs" composed of formation/unit/ship commanders with their staffs and associated services.

(4) Local organs of the military apparatus, "manpower register and mobilization organs" (uchetno-mobilizatsionnye organy: voennye komissariaty) operating as duly empowered agencies of their respective Councils of Ministers at the level of Republic and Autonomous Republic as well as of the local Soviets of Workers Deputies: military commissariats (voennye komissariaty) come under the control of the General Staff and in MDs themselves under the MD commander the military commissariat is the essential local administrative-organizational agency or entity responsible for linking the Armed Forces with their immediate source of manpower as well as reinforcement, with the reserve forces and with the populace at large: the military commissariat is thus linked with local Party, Soviet (administrative) and social organizations (the trade unions, voluntary bodies...)

(5) The final "echelon" is that of garrison commanders (SNOs: senior naval officers) and garrison commandants, charged with the ordering of military life in all the garrisons of MDs -- garnizonnaya sluzhba -- while having specific responsibility for the "garrison mobilization plan," the supervision of deployment, the fulfillment of alert orders, whereas the garrison commandant has a narrower responsibility for good order and military discipline, guards and patrols.

The very complexity of the Soviet terminology to describe even the bare essentials of this apparatus is a reflection of its intrinsic complexity: what adds to this problem and possibly confirms the relevance of insisting on usage as a key factor is to consider yet another feature of this arrangement, that of the importance of subordination (podchinenie) with all its variants -- "'operational subordination", "direct and indirect subordination" and "subordination in special contexts" (podchinenie v spetsial'nom otnochenii), in short, varieties of re-arranging arrangements! It should be said in all seriousness, however, that there is demonstrably much scope for closer observation of Soviet usages and here military attaches might well be briefed to annotate and observe more acutely: in many instances (and here I am interjecting a personal note) what is often retailed as an anecdote relating to seemingly bizarre Soviet behavior is an insight into the forms of podchinente.

However, amidst this melange--or is it morass--the military district occupies a singular place. Indeed the initial concept of the military district system in Milyutin's reforms initiated in 1862 aimed at rationalization, first separating tactical organization from administration and introducing some standardization of procedures: military administration and logistics would be detached from the tactical units themselves, thus providing for continuity in peace and war and relieving the commander of a gross administrative burden, so that he might better devote his attention to troop training. Under the MD system, the MD commander commanded all forces and military installations within his district area. In place of the corps as the basis for military administration and arrangement based on order of battle, Milyutin introduced the MD as a territorial military-administrative unit in which the division became the highest tactical entity. Two questions of major import intruded at once, even as the outlines of Milyutin's plans were adopted: the relationship of the MDs to the central War Ministry and the rights, duties, and prerogatives of the MD commander himself. In brief, some argued for the retention of the rights of the older corps commander for the new MD commander; Milyutin insisted on the revision of this view, whereby the MD commander could not "transfer" his authority outside the MD boundaries and would, within his district, shape general policy in a fashion to maximise the means at the

disposal of the formation/troop commanders.

In effect, this invested the MD commander with the powers of an inspector, namely, supervisory rather than executive. It followed, therefore, that real power was to be found in the Military District Councils and it is not surprising that fierce controversy raged over their composition and functions, but the vital point was that these Councils should serve as the link between the several District administrations and secure their effective co-operation. In economic matters, the District councils remained virtually supreme, being charged with the supervision of logistics: as for that perennial problem -- supplies and provisioning for the field forces --the divisional intendant (commissary) was responsible to the District intendant but his immediate task involved provisioning his own division. Thus, with its own intendance, the division--as and when it moved--could 'plug into' the intendance of any other MD, since the divisional intendant was part of the 'field forces' and went into action with his formation.

It remained also to dispose the artillery and engineering resources at MD level. The initial plan called for centralizing all artillery (and engineer) units, then to decentralize them in systematic fashion by placing them under 'chiefs of artillery' at MD level. The recommend solution involved placing all active and reserve artillery forces under the MD commander (through his chief of artillery) though this did not remove them from the overall control and supervision of the artillery arm as such. Engineers presented complicated problems of their own, involving the distinction between engineers and sappers, who pleaded for the recognition of their special functions as opposed to the military-construction role of the military engineers-- MD engineer commanders could not properly handle both. In practice, construction and sapper units had worked under one command, so that in a sense the arguments about the abolition of the artillery brigades and the sapper brigades were the same--"trade unionism" and the preservation of demarcation. However, in spite of these little local difficulties, the Tsar on August 6, 1864 signed the decree which brought the MD system into full operation within the Russian empire--the principle of stationary forces, for territoriality of the military-administrative system, the liquidation of the Domestic Watch and the institution of garrison/guard duty forces.

The structure of the MD soon coalesced. In addition to the MD commander, the District Council was formed from the heads of the various administrations within the MD together with a representative of the central War Ministry: the administration included a HQ staff, intendance (commissary), artillery administration, engineering administration, military-medical administration and an inspectorate of military hospitals (soon to be merged into a single MD military-medical administration).[2] This is neither the time nor place to prolong a history lesson, but it should be said that here are the essentials of the MD and the MD system--largely unchanged in its fundamental organizational form--and there can be little justification for the observation that we do not understand the 'system' of the Soviet Army at large when we fail to investigate its procedures and practices, not to mention usages rooted in familiar tradition and tested modes. After all, the MD system (as well as the whole Milyutin reforms) had its roots in problems not at all unfamiliar today--the difficulties of over-centralization, budgetary considerations, the readiness and flexibility of tactical units/field forces, flexible supply, rational utilization of local resources, the relationship between the active and the reserve forces and the provision of effective 'support.'

Though the Soviet government in 1917-1918 dispensed with the Imperial Russian Army, being intent on building a 'new' socialist army, it failed to dislodge the old Tsarist military-administrative system as a whole--a fleeting attempt on this was made during the first feversih months of revolution, but it was slowed and finally stopped by the need to find men for the Red Army and by the urgency of mobilization. Men "flocking to the colours" is a fine literary phrase, but as the Bolsheviks soon discovered, it is almost the natural tendency of men to do the opposite: men have to be listed, processed, inducted, and sent in orderly fashions to units. In January 1918 the all-important Tsarist MD Councils were formally disbanded and their functions vested in the 'military departments' (otdel) of the Soviet of Workers-Peasants Deputies: more immediately these Councils had been "bolshevised" with new men and new designations, such as the "Soviet of commissars for District Administration" in the Kazan MD or more simply the "Soviet of Commissars" in the Petrograd MD. The "military departments" and the high-sounding Soviets

of commissars could churn out manifestoes but they could not garner the men. The Soviet government also went about dismantling the local military-administrative apparatus--the local brigades (in the regions of the MD)[3] and the "district military chiefs"--but had to find some effective substitute for the registration and call-up functions discharged by these bodies. Under the pressure of raising a regular army--the Red Army--the Soviet government returned almost unnoticed to the old system. On 19 March 1918, a decree enacted the dissolution of the Petrograd MD, and on the following day, 20 March, the Petrograd MD of the Red Army came to life, Petrogradskii voennyi okrug RKKA, precursor of the Leningrad and the first of eleven Red Army MDs, set up by governmental decree on 4 May, 1918.

The MD as a military-administrative (and operational) entity had survived and went on to prosper. The other major institutional re-enactment or re-invigoration lay in the establishment of the military commissariats (voenkomaty) on April 8 1918, which took over not only from the temporary device of the 'military deparments' of the Soviet of Workers-Peasants Deputies but also from the network of Tsarist local military-administrative agencies--the local brigade (mestnaya brigada), the district military chiefs (uezdnyi voinskii nachal'niki) and the guderniya and uezd prisustvie po voinskoi povinnost (examination boards for military service at guberniya and uezd level). This apparatus was quickly re-fashioned into the voenkomat, concerned with the registration, call-up and draft contingents at all levels, okrug, guberniya, uezd and volost levels (the latter being a small rural district): by the end of 1918 the Soviet Republic could count 7 okrug, 39 guberniya, 395 uezd and 7,000 volost military commissariats, all processing manpower for the Red Army.

It was this symbiosis of the military district and the military commissariat which established the basic pattern (and both, or the combination, derived essentially from the Tsarist mode). The MD as a military-administrative entity went on to survive the Civil War, though its fate hung not a little in the balance during the fiery debates on post-war organization. With ideas of a "militia army" much in vogue, partly out of the flush of victory and partly from ideological preference, a

scheme of "divisional districts" (divizionnye okrugi) was proposed, whereby the 45-rifle and 6-cavalry divisions would be deployed within these 'divisional districts' as a main military force. Two types of administration would be activated, one for the voenkomats and the other for the "militia districts." The professionals (ex-Imperial officers) in the Soviet command laughed this to scorn, pointing out that the scheme was nothing but a copy of the French divisional territorial district as it existed on the eve of the Franco-Prussian war. Pushing their arguments--and their luck, in view of their past--these same professional officers suggested a system based on the "military-administrative structure" of the Soviet Republic and taking account of deployment and force distribution problems with the military district as the basic entity--one army to each district and 9 districts in all. In sum, the fundamental structure--front-field army-MD-- remained intact, for all the Sturn und Drang brought on by the post-war re-organization and the regular army versus militia controversy.[4] By the mid-1920s the entire military-administrative structure had settled into a recognizably modern form,[5] June 1941, there were 16 MDs in the Soviet--three of them 'Special' (osobyi) MDs, the Baltic, Western and Kiev on the western frontiers, the designation 'Special' indicating that these MDs were capable of immediate transformation into operational wartime fronts and could sustain their own operations for a month or more. In addition, there was the Far Eastern Front (Dal'nevostochnyi front), a self-declared operational entity.[6]

With the coming of war the three "special MDs" converted at once to operational fronts -- Northwestern, Western and Southwestern respectively: the Leningrad MD became the Northern Front and the entire Moscow MD staff and administration hurried south to form the Southern Front. The internal MDs acted as mobilization bases and reinforcement centers for the field armies, dispatching no less than 291 divisions and 94 brigades to the Soviet-German front between July-December 1941. As the war progressed and Soviet fortunes varied, the number of MDs fluctuated, reaching a maximum of 32 shortly after the end of the war. After 1945 the number of MDs declined steadily until it returned to the 1940-41 profile of 16 MDs, which is the present tally.

The only major modification, if it can be called that, has been the addition of two Air Defense Districts (Moscow and Baku), though these too had wartime precursors and it is likely that the Soviet Union has its separate network of some 10 air defense districts, with their zones and sectors.

Enough, then, has been said to demonstrate the fundamentality and the viability of the MD system in relation to general Soviet concepts and practices of manpower management in the widest sense--institutional arrangements related to an established structure, a structure consonant with the requirements of overall deployment, mobilization and training--as well as certain readiness states--and a notion of the relationship of tactical units, field forces, to support, both within and beyond the confines of the MD itself. None of this, however, is complete without further reference to that other element in "the system" the military commissariat (voenkomat). The Soviet voenkomat--with two military commissars and a "military director" (an ex-Imperial officer) at its head in its primary form--fused the old Tsarist "local brigade" and "attendance board" functions into one body, that is, nominal rolls, call-up, drafting and personnel matters, such as pensions, deferments, family allotments and so on.

The present voenkomat system, operating under the overall supervision of the 3rd Section of the General Staff of the Soviet Armed Forces and at district level under the aegis of the MD commander, is charged with responsibility for mobilization and for call-up procedures. The voenkomat also assumes responsibilty for the preparation of Soviet youth for call-up, induction into the armed forces or for training exercises; it organizes "mass-defense" work and "military-patriotic education" among conscripts and those about to be conscripted. The voenkomat also compiles rolls and registers of resources (human and material) related to military requirements and deals with the resettlement of officers, the pension rights of warrant officers and long-service soldiers, the selection of candidates for military schools, as well as the civilian labor intended for military installations and military units. Not least, the voenkomat also deals with family allotments, pensions and war pensions, widows' pensions and disability pensions.

In general terms, the more important Soviet MDs--those in the western, southwestern and far eastern regions--comprise one "field army" (a combined-arms formation) with an average of the elements of ten divisions (predominantly motor-rifle), supported by one air army or 1-2 air divisions. There is an air army order of battle which corresponds to the MD pattern. That is, the strongest concentration of combat aircraft is understandably 16th Air Army with GSFG--a combat-ready formation which is near war strength. The same might be said both for the smaller Northern Group in Poland with 37th Air Army and the 57th Air Army in the key Carpathian MD. In very brute terms--and they are demonstrably brute--this MD-type organization (including the Groups of Forces abroad, which are assumed to have divisions at higher readiness states but without including SAF manpower) holds about 1,500,000 men "on tap."[7] Here I should add that I have distinguished the four lower strength MDs (Urals, Volga, North Caucasus and Siberia) and used only the rough measure of men in divisions. This overall figure is intended to be nothing but a very approximate guide to or indication of the scale of the manpower holding.

The apparatus required to sustain this body of men is considerable and complex. There are four basic structures, each absorbing its own ("permanent staff") and the sum of which can be described as the overhead: these are commander/staff, political administration, induction/mobilization, and "support" (sluzhby). Obviously all of these structures overlap or inter-lock so that "structure" cannot be a wholly adequate explanation. The central organ, if it can be so defined, is the MD staff, but military, political and "managerial" supervision is exercised through the Voennyi Soviet, the District Council which assumed its present shape in 1958--with the MD commander as chairman and membership made up of the chief of the MD Political Administration, the Secretary of the Republic CP Central Committee, or the secretary of the Party obkom (or kraikom). Followed by the First Deputy Commander of the MD, the Chief of Staff, arms commanders and others who might be co-opted (for example, the chairman of the MD Committee of People's Control, Narodnyi kontrol, which acts as the watchdog over expenditure or money, fuel and machines, or select Party officials). The MD Soviet works on the principle of unanimity, with any member having the

right of presenting his dissenting view either to the Central Committee or the Ministry of Defense. The meetings of the District Soviet appear to follow the cycle of MD activity, including the training cycle, the political program, exercise patterns and special Party activities, while individual members of the Council--the head of the MD Political Administration or the First Deputy Commander--will hold 'sub-sessions' to consider specific programmes and policies.

Not surprisingly, the MD staff is recognized as the main "organ" of the MD for it has the prime responsibility for operations, mobilization and training and thus runs the MD in a direct sense: a separate politotdel (political department) is attached to the "staff administration" with its own political officer. The GOC (General Officer Commanding) has the First Deputy Commander, Chief of Staff, Deputy Commander/Rear Services, Air Force Commander and arms commanders directly subordinated to him: recently a new post, Deputy Commander/Civil Defense, has been established in a number of MDs. The Staff supervises the "command line"--komando-stroevoe upravlenie --but it is reasonable to suppose that the 'field forces' earmarked for possible operations are not 'commanded' by by the MD GOC, but rather come under direct General Staff control (with the same principle applying to the Soviet Air Force units for operational purposes). It could well be that in many instances the First Deputy Commander is the "battle commander," that is, head of, or closely linked with the General Staff operations/battle staffs. The present operational MDs--the Groups of Soviet Forces abroad and the "alert" MDs such as the Carpathian MD--are under General Staff control in the operational sense; the Staffs in these entities are shadowed by General Staff command and battle staffs. The MD Staff, therefore, does not have immediate responsibility for operations, which have already been prescribed by the Operations Directorate of the General Staff (and where the territorially distributed MDs--northern, western southern, and so on--are supervised by the GS napravlentsy, "theatre planning specialities"). The same principle applies to the deployment and operational use of SAF units.

In sum, the MD Staff is responsible for the readiness, mobilization, preparation, and good training state of the forces within the MD. The MD Staff has

its own mobilization-organization section and maintains control over and supervision of the voenkomty, the military commissariats, for mobilization purposes. In addition, the MD commander has two deputies, Combat Training and Deputy Commander/VUZy (military-educational institutions),[8] each with its own sub-administrations. And as might be expected, the MD Staff has its own cadres/personnel department. The air commander/MD is subordinated to the MD commander (GOC), while the PVO Strany forces--the air defense command--will overlap the MDs with their own districts, zones and sectors, but comes under the independent command of the PVO Strany itself.[9]

The "field forces," the component divisions, come under the immediate direction of the arms commanders (who are themselves members of the MD Voennyi Soviet). In brief, the MD is organized like a minature Ministry of Defense (precisely as in the 19th century, when the MD was a smaller version of the War Ministry), with its own commander for armored forces, artillery/missiles and also for specialist troops. Again in good 19th century fashion, the commanders of arms and specialist services (engineers, signals, etc.) remain under the general supervision of their arms/branch administrations. In terms of the organization of field forces, let us take the Baltic MD as an example: it is essentially organized along the lines of the administration and combat components of the 11th Guards Army with its HQ at Kaliningrad (formerly Konigsberg which fell in 1945 to the assault of 11th Guards, fighting with other Soviet formations), though Baltic MD HQ proper is at Riga: two major formations are deployed in Kaliningrad (1st Tank Division and 1st Guards MR Division one of the most famous formations in the former Red Army), with 6-MRDs and 2-tank divisions elsewhere in the District, plus 2 airborne divisions. There are also two artillery divisions (129th and 344th) at Konigsberg. The Baltic MD also accommodates the 30th Air Army. In round terms, this gives a ground strength of some 100,000 men in divisions, for none of the formations in the Baltic MD are at full war readiness (or Category 1, to use that terminology).

The Political Administration--with its Chief/First Deputy Chief and Deputy Chief at its head--requires less explanation. Once again, it is a

miniaturized version of the MPA as such, with the requisite posts for chiefs of organization, agitation-organization, Komsomol work and its own administrative sections, as well as press and publications service. However, in addition to the political organs throughout the military formations and units in regular style, there are the various politotdel (political departments or sections) with the spetschastei attached to garrisons, as well as to the MD staffs and administrations. Here is a case where structure is less illuminating than an examination of functions, which tells a much more expansive tale.

Yet another extensive organization is that of the voenkomat, the military commissariat(s) distributed throughout all the administrative levels of the system --oblast, rayon... At the head of this network stands the Military Commissar (Voenni komissar)at oblast level, or as chief of the kraivoenkomat -- usually a major-general, though this post can also be held by a colonel, depending on the location. In the MD itself, the voenkomats come under the immediate supervision of the MD commander and his staff, an obvious liaison in view of the mobilization requirement, but also dictated by the call-up/induction procedures and also the general commitment to pre-call up military training and the hand which the voenkomats have in the more specialist training conducted by DOSAAF. The voenkomats look both ways at once toward military and also toward the local Party organs. The voenkomats also carry on much of the business of personnel, in terms of re-settlement (for officers and warrant officers), pensions and allowances. Nor should it be forgotten that the voenkomats handle the processing (if not the recruitment) of civilian labour to military installations, so that this civilian labour comes under a double jurisdiction --that of the military for work purposes but under civilian conditions of employment as regards the observation of the labour laws including hours of work, holidays, work safety, etc. (I am inclined to the view also that the voenkomats will have a large hand in processing the work-force in military plants and factories, as well as base workshops, depots and stores.) These manpower tentacles reach in many directions--into pre-call up training, the specialist pre-call up training with DOSAAF, into the

supervision of the special university military courses (which prepare officers), into the civilian labour market and into the more specialist industrial work force. There is a paradox here; in part, the civilian work is "militarized" and the military work force (such as construction troops) "civilianized", if only by the device of paying them civilian rates for the job.

At this point it is necessary to look quickly at the oblast civil defense organization, with the present system dating back to 1961. The MD commander now has his own Deputy for Civil Defense, responsible for civil defense planning, for the Civil Defense officers distributed at unit/ship level and also for Civil Defense troops (companies). The passive defense of rear installations in the MD seems to be the joint responsibility of the military and the Civil Defense Staffs, resulting in a mixture of forces--troops, civil defense staff and civilian agencies (medical, communications, voluntary bodies and factory/farm personnel). It is likely at the moment that there are relatively few civil defense battalions, though military units and heavy equipment from military holdings are available for civil defense tasks to support what Soviet sources describe as the "non-militar"' (nevoenizirovannyi) elements of Civil Defense.

Now we come to that most vexed and contorted question--support, or sluzhby, combining military resources and civilian labour. The Soviet pattern appears to fuse both support and overhead into one, with much of what we term "combat support" included in the Soviet concept of "specialist troops", including transport (road/rail) troops. And even before embarking on this discussion, it is worth remembering that this is not solely a one-way traffic, civilian resources directed to military purposes, for the military also renders "services" to the civilian community and construction troops, for example, are employed alongside the building trades[10]. Yet another feature which requires constant notice is that Soviet formations and units do all their own housekeeping; that is, they are responsible for their own upkeep (barracks, buildings, etc.) and handle their own supplies, off-loading and storage.

First, the MD maintains its "central services" under its Rear Services (logistics) organization, under a Deputy Commander/Rear Services: the MD commander also has his own Deputy Commander/Construction and Billeting. All this can be subsumed under the description of voiskovoe khozyaistvo--the internal military economy, if you wish--comprising the kvartirno-ekspluatatsionnaya sluzhba (billeting/quarters/barracks and the operation of the kazarmenno-zhilishchnyi fond); food supply and the military rations system; uniforms and special clothing (including chemical cleaning and laundry); torgovo-bytovoe obsluzhivanie (military trade, military shops and supplies); fuel supply; military communications (road, rail and air); sanitarno-gigienicheskoe obespechenie (troop hygiene; water supply and food hygiene, work hygiene and sanitation); financial control and organization; the supply and servicing of equipment for political classes (projectors, duplicators, etc.); and the proper calibration and correct functioning of all instrumentation in military units (supervised by inspectors and senior inspectors from the Ministry of Defense Instrumenta-Committee of Standards). There are standard procedures for auditing and inspection--proverki-- as well as the checks enforced by the committees and groups of narodnyi kontrol (Committees at MD/fleet level, groups with units).

The "central services" of the MD can be divided generally into logistics as such[12] and construction and billeting: a third element might be construed as the military-financial services (coming under intendance). This, however, does not dispose of the range of military-economic activity conducted within the MD, which extends to trade and tourism (leave centres, organized sport ...), the military farms (sovkhozy) as well as much local activity in the form of tailoring, repair of uniforms and running of small canteens. Voentorg, the military shops and trading organization, is practically a subject in itself: it has many of the functions of the British NAAFI (or US PX) though with none of the Western lavishness, while it is also in the wholesale business and runs a whole network of "services" (cobblers, tailors, hairdressers ...).

Though it hardly comes under the heading of services, there is an appreciable involvement of manpower in the garrisoning commands which supply patrols, sentries and convoy guards, especially the latter. The Soviet military system is organized on cantonment lines--voennyi gorodok--where conditions in the outlying areas are far from ideal[13]. Garnizonnaya sluzhba is concerned with good order and military discipline, while the same can be said for the naval "base commanders"; the local komendanty (local commanders) handle MP duties, discipline in the garrisons and the regulation of leave passes or duty orders--a kind of military provost-marshal, while the garnizonnaya sluzhba is on a stand-by basis for military aid to the civil community in the event of natural disaster or urban emergencies. The garrison commands have their own mobilization and alert plans and also operate the contingency arrangements for the movement of military units into the MD under the direction of the MD commander. This also brings up the connection between MD forces and those of the MVD (and the KGB): There are numerous MVD formations distributed about the Soviet Union, motor-rifle troops with some heavy weapons in support, though they cannot be counted against military strength. More directly, the MDs with coastlines are also responsible for coastal defense (beregovaya oborona) whereby MR elements with supporting artillery and missile units form part of a joint command involving naval forces also.

In many respects, the structure of the MD explains its functions--the maintenance of "field forces" in a given deployment pattern, the establishment of a military-administrative system, the operation of an induction and training cycle (the MD-vokenkomat connection) and a mobilization apparatus. It is also an entity which is best suited to maintaining a series of complex liaisons with Party, government and civic bodies from oblast downwards. However, things are not always what they seem. While it is possible to look at the MD as a series of military-administrative structures--as indeed it is--the functions fall into a series of "cycles" of activities, some (such as the military-administrative work) regular and others less regular and cyclical in the real sense of that term. This cyclical mode does somewhat contra-

dict the notion of the "steady state" condition of Soviet military manpower management, for it is at times steadier than at others and thus appreciably affects operational efficiency and combat readiness. For example, autumn is a time of special stress, when there is not only the infusion of the second contingent of conscripts but also the arrival of junior officers freshly graduated from the officer schools. This problem has been recognized in Soviet military circles by adjusting the flow of conscripts into line units--those going to operational units receive what might have been called in Britain usage "corps training", that is, some six months of more intensive training which reduces "on-the-job training" and still leaves the soldier with more than 12 months of useful unit service. Of course, the advantage of that system or method is vitiated by the disadvantage of the lack of any appreciable cross-training and the "job allocation" system must work within the limits of this single skill profile (for example, a BMP driver) though a very small amount of latitude could be provided by adjusting the job specification. In brief, that disadvantage derived from the lack of cross-training makes itself felt less perhaps in the "teeth arms" than in the specialist troops (engineers, signals...), and leads to a situation where several men are distributed about one small complex of tasks.

At least an investigation of the MD system demonstrates the widespread nature of the Soviet practice of undermanning formations. The real test of the MD management/mobilization system rest on its ability to "flesh out" these formations to war strength--an elaborate process, by any standard. Present usage seems to indicate that the readiness of the "field forces" in MDs is augmented, when it is necessary, by the widespread use of 'subordination' (podchinenie), more nearly requisition rather than procedural mobilization. Thus we return continually to the problem of support, a probable made the more complicated by the intermingling of what we should identify as "service support" (supply, maintenance, transport, construction units...) with "overhead" (both men and resources). Units not infrequently "convert" themselves to what is referred to as Category I condition by drawing on both, literally bundling them off with the unit for its operational assignment. It would seem therefore, that it could be

useful to look more closely at these terms "Category I/II and III" which we use with such assurance. Both service support and overhead represent a staggering hotch-potch, using military, civilian, auxiliary and ancillary labour--how should one "count off" officers' wives used to develop both the limited social activity and educational programs in military cantonments? Though such activities and their associated structures (or organizations) have grandiose names, they are frequently denuded of personnel and resources.

Much depends on the more efficient operation of the voenkomat-MD system, which is at the heart of Soviet manpower management. The basic territorial unit for the oblast voenkomat (subordinate to the MD): at the local level, the voenkomat--with its 'draft commission' chaired by the gorod or rayon voenkom, attended by representatives of the local Soviet executive committee, the Party and Komsomol, the chief of the local militia, and a doctor--the required contingent of conscripts is selected and a job assignment made (type of service and specialization within it, depending on the conscript's education and success in pre-military service training, or DOSAAF). Needless to say, voenkomaty have come in for a welter of criticism for their inefficiency and misuse (or misdirection) of the labour force they handle. (This lack of "feedback" is not confined to the voenkomat-military unit connection, but affects the officer selection and educational programme in similar fashion.)

The overall effectiveness and efficiency of this management of manpower must and does affect the training load within MDs. It is true that the pre-military service training programme is beginning to bite rather more deeply and at its most nominal can reduce the unfamiliarity with military life and service, shortening the time needed for what the British Army used to call "basic training."[14] Obviously the aim is and will continue to be the manning of "the permanent staff" (which includes jobs in operational units) with extended-service personnel, rank-and-file as well as NCO and warrant officer level, which automatically reduces the training load both within specialist schools and also for "on-the-job training"--a conscript "job" has to be filled every two years, whereas "permanent staff" are fixed for a given and extended

period. Such a development must also affect training costs, which increase in relation to turnover rates. What we may see in the MDs--and in the Ground Forces in general--is small but visible upward movement in the direction of adjusting the "conscript/regular" ratio, but at a guess this would not appreciably alter the ratio as a whole--a 5:1 officer/man ratio and a 65:25 conscript/regular distribution.

What is required to "man" this manning system? As far as I can estimate (simply by subtracting the total manpower holding of the Baltic MD, for example, from what is available in divisional combat elements), the proportion seems to be in the order of almost 3:1 (and that becomes 5:1 if one adds in the military-educational system). This is also to assume that one has counted in an efficient mobilization apparatus, which can speedily expand formations to full war strengths. There is both surplus manpower (though of low military utility) and much waste. On the other hand, it is difficult to see how the MD could become "more efficient": at the moment, it seems to be the best possible optimization, given the Soviet system as a whole.

Paradoxically, the MD is both economical and wasteful. Its relative efficiency arises from the centralization, standardization and "spartanism" which it embodies, while wastefulness reflects more the characteristics of the Soviet system at large. There is, of course, the perennial problem of how to count the Political Administration and the political officers: here is a double overhead. On the other hand, the PA does assist in combat training and does discharge a number of welfare functions. It is also apparent that even under conditions of a reduced conscript flow the MD has appreciable slack which can accommodate this fluctuation in the manpower pool: it is unlikely that the tally or total of available divisional combat units will be affected and the only diminution will be in this varigated assembly of sluzhby. Adjustments could be made to the 'preventive maintenance' load, which must be relatively heavy in the major MDs.

This has been perforce a brief, not to say perfunctory glance at the military district as a manpower

management entity. Certain points, however, do appear to emerge:

- As a system - for deployment/mobilization and for the management of the conscript system--it has 100 years of experience behind it and, seemingly, the Soviet state can find no alternative better than that proposed by the Imperial government.

- Though there is a specific institutional arrangement all of which can be depicted and described, usage--"how to work the system"--seems to have its own logic and dynamism.

- The MD-voenkomat arrangement is an optimization which it would be hard to better under present and foreseeable circumstances.

- The MD arrangement is one which fuses "service support" and "overhead", but this may be an advantage.

- In spite of the expansive, not to say grandiose descriptions given to "services", these are more likely to be on a modest scale and, in any event, vary considerably.

- "Throughput" is reasonable and this can be improved, but only marginally, unless there are drastic changes in structure and management.

- Not unexpectedly, the system is massively bureaucratised and is subject to the constraint of "thriftiness" which frequently defeats its own ends--this is particularly relevant to training costs, which is a constant source of Soviet bemusements.

- "Readiness" is an artificially induced concept, which means in the first instance grabbing everything to hand--sluzhby included-- while the MD can induce a more orderly transition to greater readiness, given time.

In sum, with the MD we are looking at a form of Soviet optimization, which, given special circumstances, can produce segments of instant, high combat readiness. Its chief virtue, however, is the facility to implement an extended mobilization process even as it sustains a peacetime deployment pattern and a nominal order of battle. All this is to say that we need a nut-and-bolt (or rivet-by-rivet) analysis of the MD and the oblast voenkomat, even to show that there are substantial variations in this manpower pattern, both in quality and quantity.

We have much to learn about this system, particularly Soviet perceptions of its strengths and weaknesses. Meanwhile, if pressed, the system and the MDs could put out a formidable volume of manpower, though it would take time: "will the last man to leave the MD please switch off the lights" could well be their motto, but time may just not be so readily available.

Mention of operational contingencies obviously changes the nature of the discussion about the Soviet MD. It is clear that while this system sustains peacetime deployment pattern and furnishes a military-administrative structure (as well as a mobilization base), we have also seen a number of examples in recent years of MDs "going operational", not least during the Soviet incursion into Czechoslovakia in 1968 and latterly during the October (1973) war in the Middle East--and again during the fighting in the Horn of Africa when Soviet military men and military materials were shipped out of Soviet bases and speeded into Ethiopia. In a much larger context, the major MDs (in northwestern, western and southwestern Russia) form the substance of the Soviet "second echelon," as well as reserve forces. Soviet military writing has recently made much of the problem of these forces in the conventional mode of any conflict, with the crucial provision that force missions must be carefully planned in view of the fact that such a conflict may speedily go nuclear. These forces would be withheld during any conventional phase in order to be ready to move forward and exploit any nuclear strike: equally, it is emphasized that in this conventional mode or phase the second echelon will not assume the orthodox form of full field armies, rather being formations

specially "aggregated" and deployed with maximum deception to avoid their presenting visible targets for attack with nuclear weapons. In a sense, these forces become an "exploitation echelon" in their own right: for example, while Mairov's Baltic MD has a nominal order of battle of 6 MRDs and 3 tank divisions (plus two airborne), only one tank division can be counted as near "Category 1" and probably three MRDs, but this force could be "aggregated" and maneuvered as a "second echelon" with a specific mission related to the conventional/nuclear transition. It would thus not be necessary to rely upon a massive mobilization of the MD, though this does not dispose of the question of what support would be required and what civilian-military interface would be involved.

The second type of operational contingency is that related to "support" for action at some extended range. In these circumstances the MD--such as Odessa--is "activated" all without substantial alteration to its structure or its form, yet it is utilized to provide services and support, most probably under highly centralized control and coordination; this will also involve moving in special operational staffs or groups (and it is conceivable that the Odessa MD houses its own special operational staff related to possible operations in Yugoslavia). Thus, in line with the traditional Soviet distaste for institutional innovation, existing frameworks can be used and adapted for special operational requirements. All this is to say that under present conditions the MDs in relation to the "second echelon"--formulated in a traditional sense--may exhibit interesting and evolving features which require close and constant observation. For all its highly formalized structure, the MD appears to be a very flexible instrument and capable of being adapted to several operational contingencies, all without any great surface change. This proposition is worth examining in the light of developments in Soviet MDs over the past decade.[15]

REFERENCES

1. The first three MDs were set up on July 6, 1862 when First Army formed the Warsaw MD, the 1st Corps (First Army) the Vilno MD--orginally designated the Baltic MD--and 3rd Corps the Kiev MD: 2nd Corps (First Army) was disbanded and distributed throughout these three MDs. The Odessa MD was established in December, 1862. Intelligence reports on the Russian Army, distributed by the former War Office (British Army) contain excellent and illuminating material on the MD.

2. See Forrestt A. Miller, Dimitrii Miliutin and the Era in Russia. Vanderbilt U.P., 1968. See Chap. 3 and Chap. 6, on the MD and military service.

3. Local brigades (mestnye brigady) were distributed at rayon level throughout the area of the MD: the registration/attendance boards for military service at guberniya and uezd level--prisustvie po voinskoi povinnosti--operated under the writ of the Ministry of the Interior and were responsible for pension affairs as well as for compiling the rolls of conscripts and the granting of deferments.

4. I have examined this situation in some detail in "Some Military and Political Aspects of the 'Militia Army' Controversy, 1919-1920" in Essays in Honour of E. H. Carr, Macmillian 1974, pp. 204-228.

5. This is true only in the strictest sense, for with the introduction of the "mixed" (regular-territorial militia) system the voenkomat organization had to be changed: in January 1925 with the introduction of militia divisions recruited on a territorial basis, the MDs were divided into territorial segments with a guberniya (or oblast) corresponding to a corps (or a division). The administration of an "independent guberniya territorial district" came under the control of a corps commander and that of a "non-independent guberniya" under a divisional commander. With the return to a regular army in the latter half of the 1930s, the voenkomat reverted to an arganization on the lines of gorod, oblast, krai and autonomous republic. (See I. B.

Berkhin, Voennya reforma v SSSR (1924-1925 gg.), Moscow, Voenizdatm 1958, pp. 160-166 on the MD and the terokrug.)

6. N. P. Suntsove, et. al., Krasnozhamennyi Dal'nevostochnyi. Ist. Krasnoznam. Dal'nevost. voen. okr., Moscow, Voenizdat, 1971. Also variegated detail in N. K. Kiryukhin (Ed.), Forpost geroev, Khabarovskoe knizh. izd., 1973.

7. Without entering at this moment into the contentious issue of what constitutes "support" but adding what the Soviet Army calls sluzhby which I would amass at some 400,000 men (and women), then we get a round figure of some 1,900,000 men for the Soviet Army. The next problem is to arrive at a figure for what I would call "mobilizational support" or what others call 'additional support elements.'

8. This is not true in every case; there can be a Deputy Commander/Combat Training and a Deputy Commander/VUZy (as in the Moscow MD), or a Deputy Commander/Combat Training and VUZy, or a Deputy Commander/Combat Training and an Assistant to the Commander (pomoshchnik komandira) for VUZY. It obviously depends on the size and complexity of the MD.

9. Yet another "overlap" derives from the Frontier Districts, which come under KGB command and also include "water guards" (in short coastal patrols) where geography demands.

10. General A. N. Komarovskiis, Zapiski Stroitelya: Voenizdat, 1972, provides some excellent material on these undertakings.

11. With its origins in the RKKI (Rabkrin) Workers-Peasants Inspectorate and the State Control organs of the 1920s and 1930s: see V. K. Volovich and N. I. Kuznetsov, Narodnyi kontrol' v Vooruzhennykh Silakh SSSR, Moscow, Voenizdat, 1973.

12. Yet another centralized service is the avtotraktornaya sluzhba (with its own Central Administration in the Ministry of Defense), responsible for readiness, repair and maintenance of all vehicles in the MD

(fighting vehicles and soft-skinned): it is also responsible for base and mobile workshops

13. L. Gen. (Engr: Chief/Billeting and Maintenance/ MoD), 'Nastoyashchee : budnshchee voennykh gorodkov' Tyl i snabzhenie Sov. voor. sil., 1978, No. 1, pp. 23-25.

14. See P. M. Brysin, Urok nachal'noi voennoi podgotovki, Moscow, Voenizdat, 119 pp. (120,000 copies). (How and what to teach in pre-induction military training and how to assess students.)

15. I am indebted to Mr. Richard Woff of FCO for agreeing to this division of labor and his paper on the MDs--command and organization--is intended to do precisely this, namely, investigate the MD profile from 1965-1978.

SUPPORTING CHARTS

Chief (Glavnyi) and Central (Tsentral'nyi)

Directorates: MoD. (See also REAR SERVICES)

Chief

Cadres (Personnel)		
Military-Educational Establishments (VUZy)		
Navigation/Oceanography (also Chief/Hydrographic Service/Soviet Navy)		
Missile/Artillery Directorate		
Trade Directorate	Rear Services	
Military Construction	(See Construction and Billeting)	

Central

Finance .., ...	Rear Services	
Automotive (Motor-Transport)		
Military-Medical (Central	Rear Services	
Military Communications (Movement/ transportation: VOSO)	Rear Services	
Food Supply (Rations)	... ...	Rear Services
Clothing Supply		
Fuel Supply		
Administrative-Management		
Military Tourism		

REAR SERVICES (Tyl: Logistics)

Chief

First Deputy Chief

Deputy Chiefs (2)

Chief of Staff

Head/Political Department (politotdel)

Chief/Trade Directorate

Chief/Central Finance

Chief/Labour & Wages

Chief/Central Military-Medical

Chief/Military Communications/
Transportation (VOSO)

Chief/Food Supply

Chief/Admin-Management

Construction and Billeting : MoD

Chief

First Deputy Chief

Deputy Chiefs (2)

Head/Political Department

Chief/Military Construction

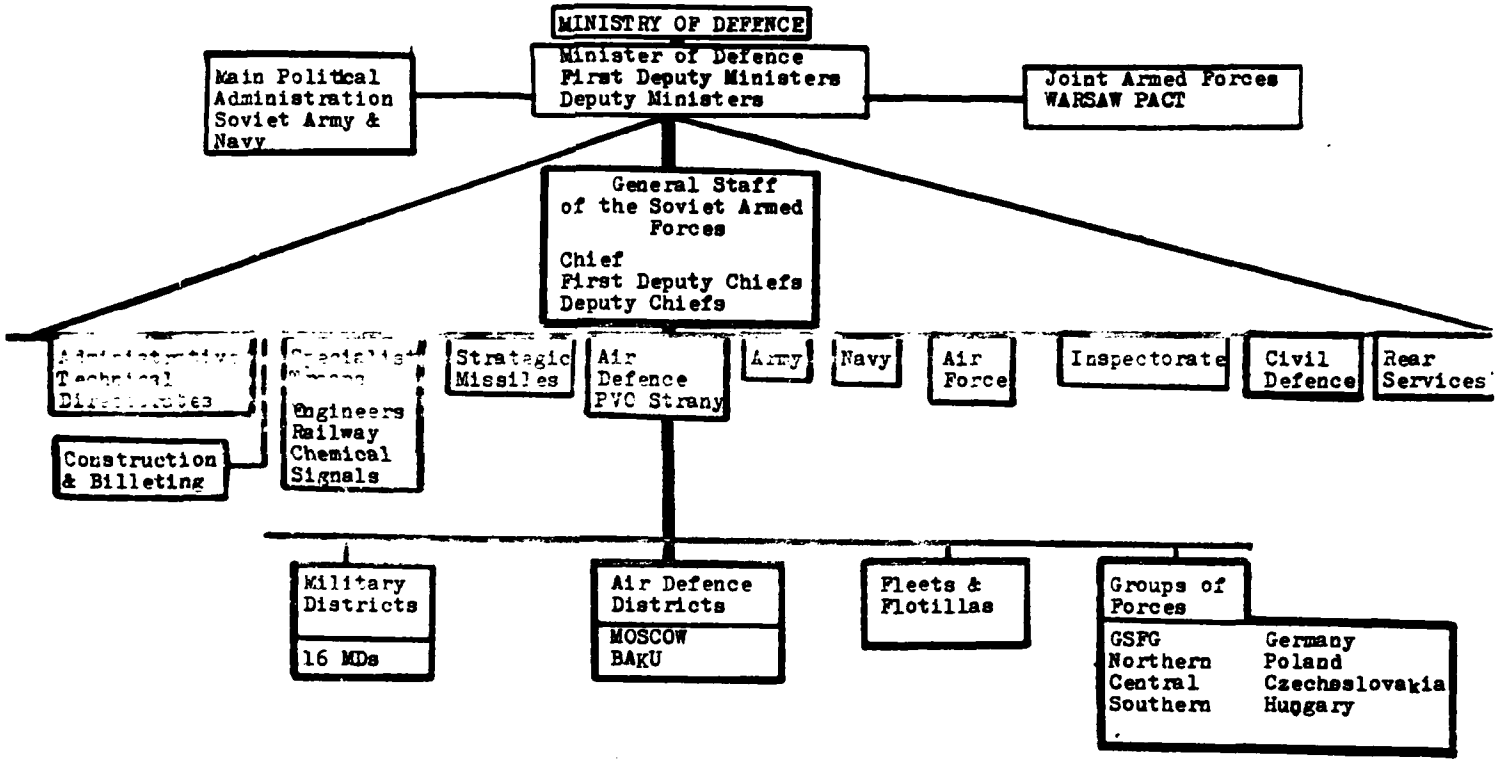
Chief/Billets/quartering and Maintenance

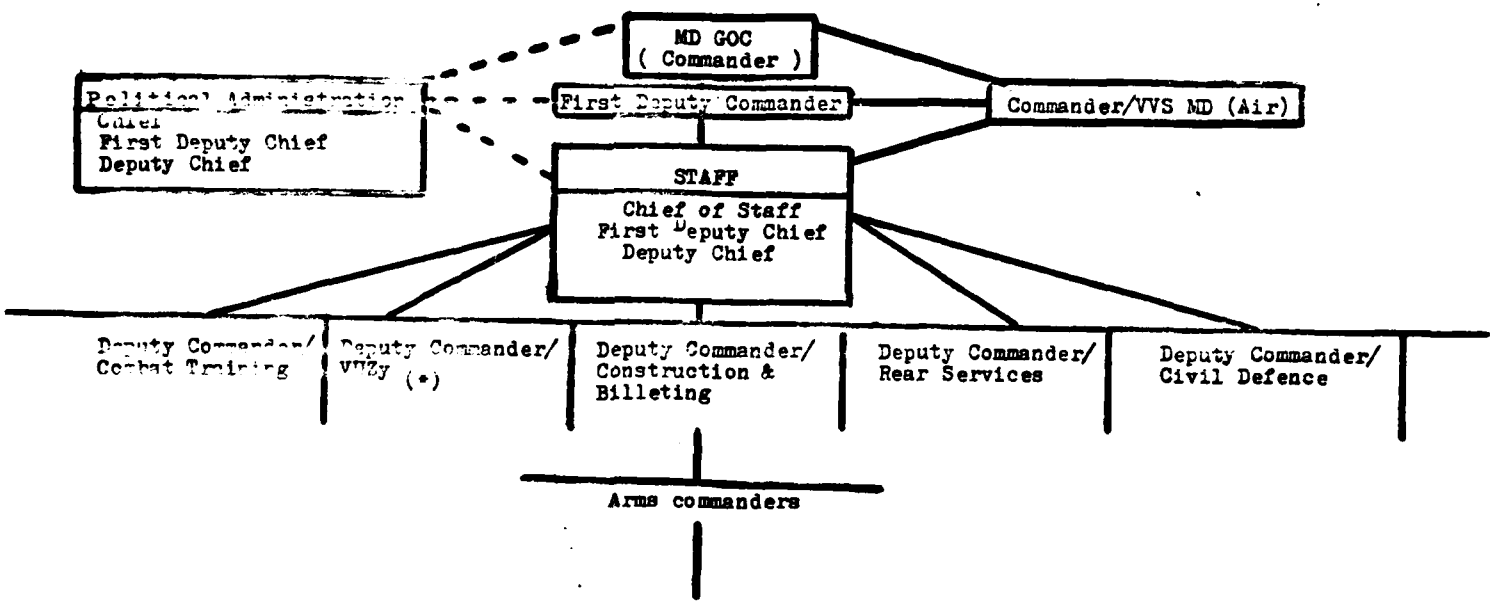
Chief/Materials/Resources

Chief/Central Military Projects

GENERAL DISTRIBUTION OF SOVIET GROUND FORCES BY MDs

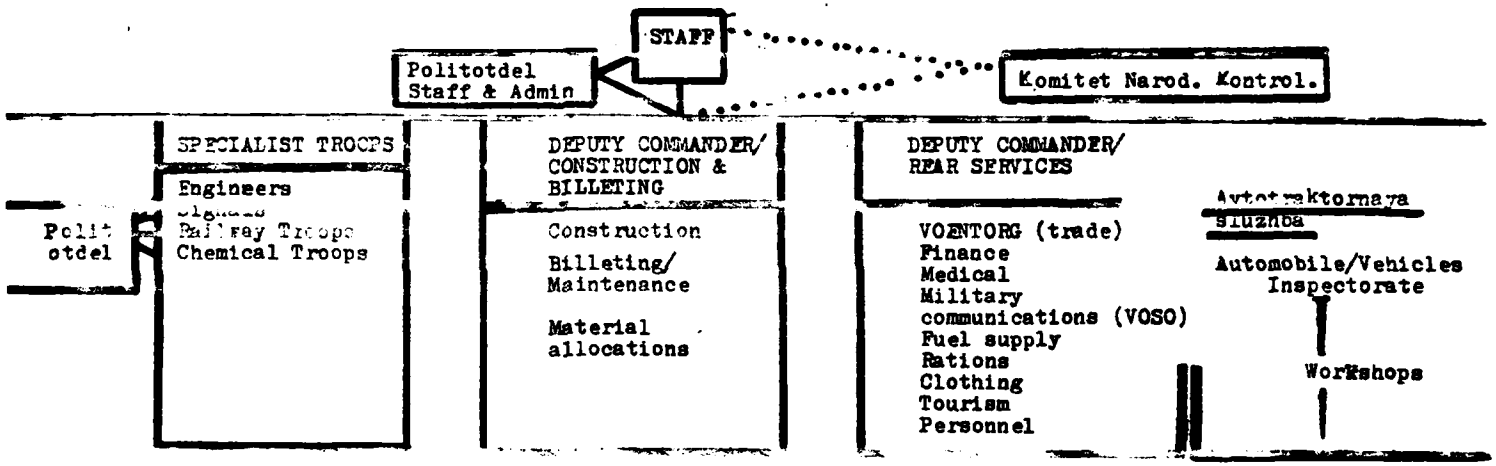
District (or Group of Forces)	Division type			
	MR	Tank	Airborne	Arty
GSFG	10	10	-	1
Northern	-	3	-	-
Central	3	2	-	-
Southern	3	2	-	-
LENINGRAD	8	1	1	1
BALTIC	6	3	2	2
CARPATHIAN	8	3	-	1
BELORUSSIA	4	5	1	-
MOSCOW	4	2	1	-
KIEV	5	7	-	1
ODESSA	7	1	1	2
N. CAUCASUS	6	-	-	1
TRANSCAUCASUS	9	1	1	1
TURKESTAN	7	1	1	1
CENTRAL ASIA	6	1	-	1
URAL	2	1	-	-
VOLGA	3	-	-	-
SIBERIA	6	1	-	1
TRANSBAIKAL	7	2	-	1
FAR EAST	19	2	1	2
OUTER MONGOLIA:	3	1	-	-

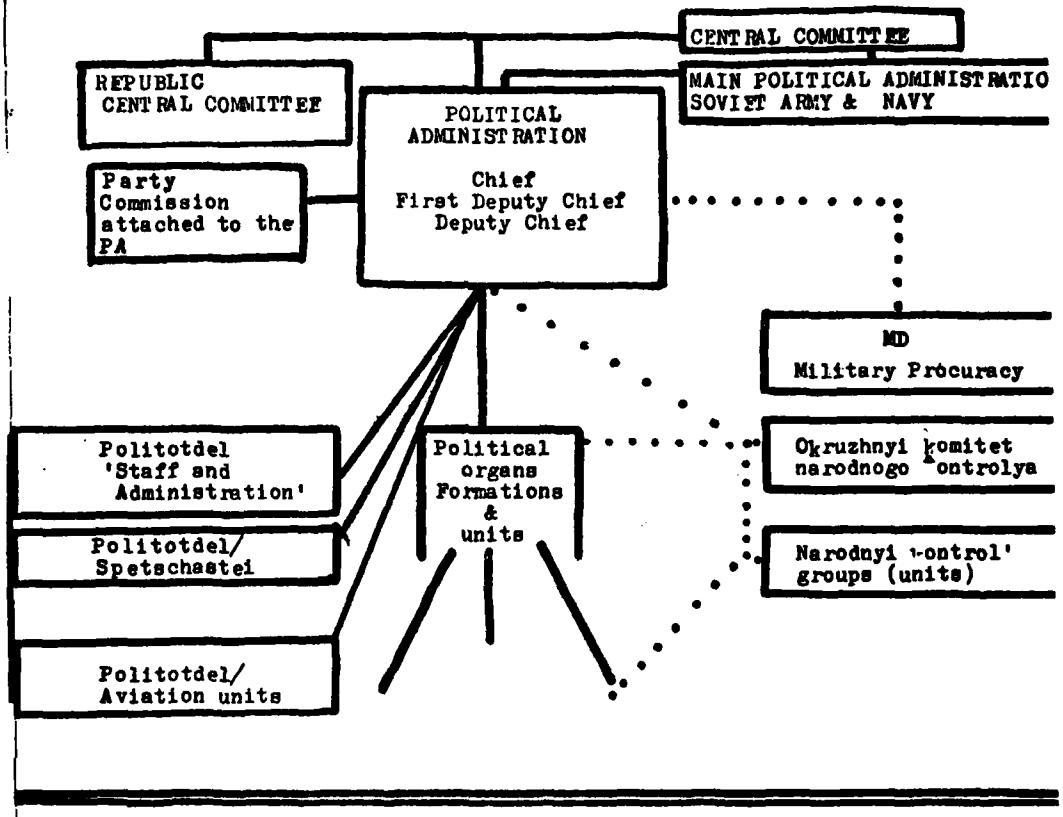

MINISTRY OF DEFENCE
Minister of Defence
First Deputy Ministers
Deputy Ministers
Main Political Administration Soviet Army & Navy
Joint Armed Forces WARSAW PACT
General Staff of the Soviet Armed Forces
Chief
First Deputy Chiefs
Deputy Chiefs
Technical
Construction & Billeting
Engineers
Railway
Chemical
Signals
Strategic Missiles
Air Defence PVO Strany
Army
Navy
Air Force
Inspectorate
Civil Defence
Rear Services
Military Districts
16 MDs
Air Defence Districts
MOSCOW
BAKU
Fleets & Flotillas
Groups of Forces
GSFG
Northern
Central
Southern
Germany
Poland
Czechoslovakia
Hungary

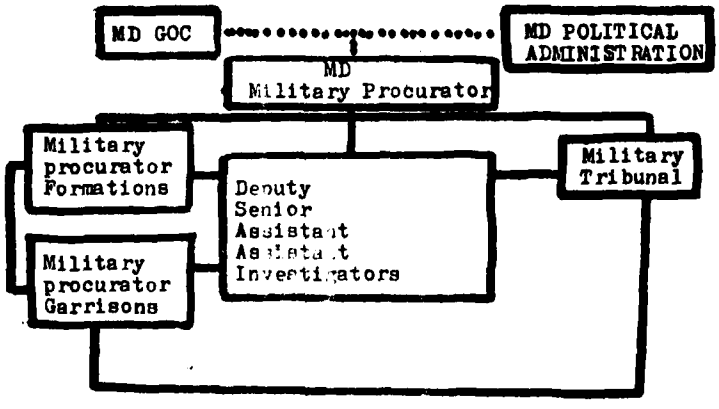


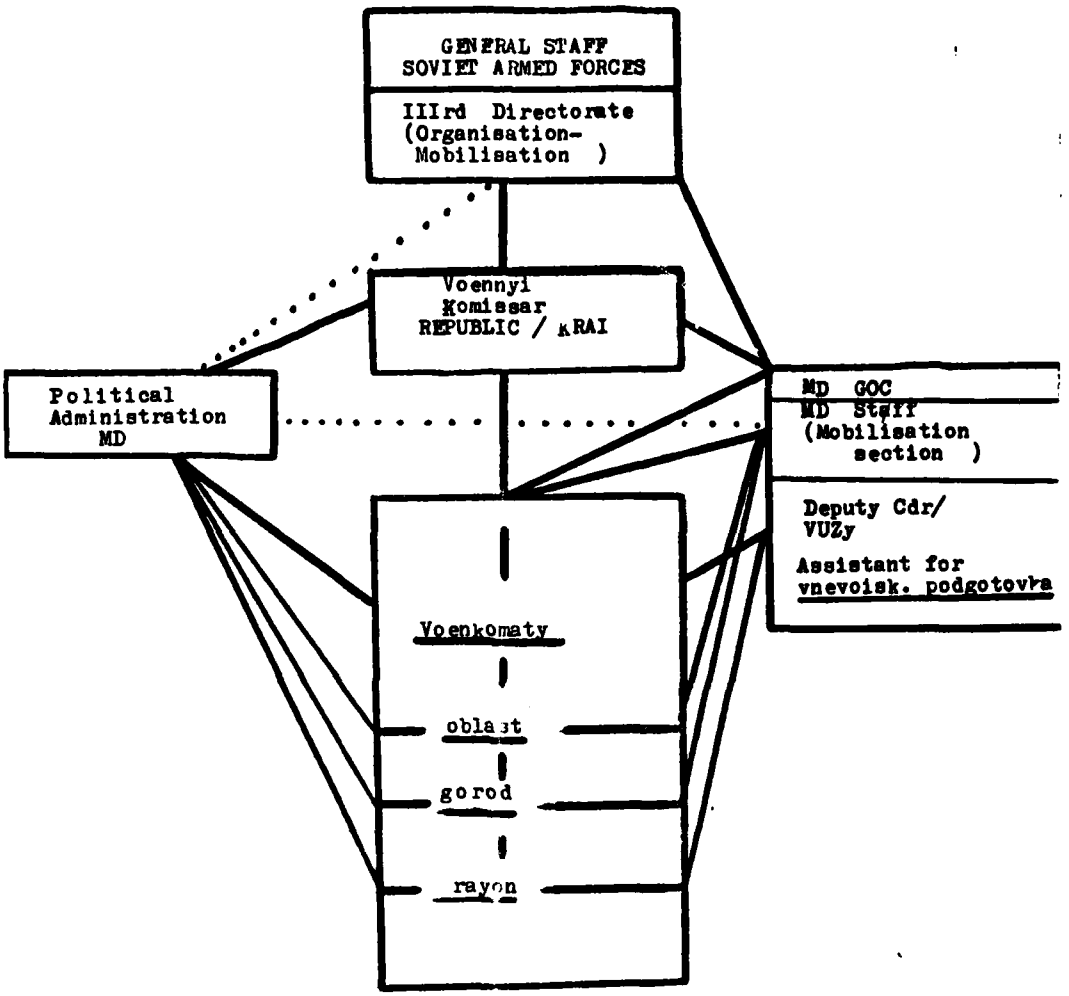
(*): in some instances, also connected with vnevoiskovaya podgotovka (pre-induction military training)

'SUPPLY AND SERVICES' (SLUZHBY)




CENTRAL COMMITTEE
REPUBLIC CENTRAL COMMITTEE
MAIN POLITICAL ADMINISTRATIO SOVIET ARMY & NAVY
POLITICAL ADMINISTRATION
Chief
First Deputy Chief
Deputy Chief
Party Commission attached to the PA
MD Military Procuracy
Politotdel 'Staff and Administration'
Political organs Formations & units
Okruzhnyi komitet narodnogo kontrolya
Politotdel/ Spetschastei
Narodnyi kontrol' groups (units)
Politotdel/ Aviation units


MD GOC
MD POLITICAL ADMINISTRATION
MD Military Procurator
Military procurator Formations
Deputy
Senior
Assistant
Assistant
Investigators
Military Tribunal
Military procurator Garrisons


GENERAL STAFF
SOVIET ARMED FORCES
IIIrd Directorate
(Organisation-
Mobilisation)
Voennyi
Komissar
REPUBLIC / KRAI
Political
Administration
MD
MD GOC
MD Staff
(Mobilisation
section)
Deputy Cdr/
VUZy
Assistant for
vnevoisk. podgotovka
Voenkomaty
oblast
gorod
rayon

APPENDIX G

THE MILITARY DISTRICT:

A PORTRAIT AND AN ASSESSMENT

By Richard Woff

THE MILITARY DISTRICT: A PORTRAIT AND AN ASSESSMENT

Introduction

The military district organization of the Soviet Union, despite a brief interment in the first days of the October Revolution, is a bequest from Czarist Russia to its Soviet successors. It remains, after 116 years of existence, the cornerstone of the internal military administration of the Soviet Union.

An examination of this "conservative" administrative system today shows that the basic structure and philosophy of the military district has changed little since the Frunze military reforms of 1924, which merely grafted Soviet concepts onto the former Czarist structure. Nevertheless, a number of important adaptations and a certain amount of reorganization has taken place to meet the increasing demands made on the system by Soviet defense policies and the "technological revolution" in military affairs throughout the last decade.

This paper seeks to give a portrait of the basic command structure of the military district today and seeks to identify some of the more important changes that have taken place over the last ten years.

The Military District: Its Organization and Role Today

The Military District is probably the most enduring example of the Soviet Army's debt to its Czarist past. While the old Czarist regiments and units had disintegrated in the turmoil of the Revolution, never to reform, the newly arrived Bolshevik leaders were forced by events to retain the basic remnants of the former Czarist military organization in order to arm, clothe, feed, and muster the Workers and Peasants Red Army in defense of the Revolution.

Naturally, Soviet military historians are at pains to record the demise and burial of the former Czarist military district organization. The Decree of

the People's Commissars of 23 January 1918 abolished the Czarist Military District Councils and turned their functions over to military departments of Workers, Soldiers, and Peasants Soviets. Shortly after this, in March 1918, the "first Soviet Military District -- the Petrograd" was established.[1] By 1922 the number of Soviet military districts had grown to 19. An Order of the Revolutionary Military Council of 15 April 1924 finally defined in more precise terms their structure and functions.[2] During the years of "peaceful Socialist reconstruction" (1922-1939) the military district "accomplished a great deal in training troops, in the familiarization of new arms and modern military equipment and in educating personnel."[3]

Following the German invasion of June 1941, the Western Military Districts of the Soviet Union were to form the nucleus of a number of Fronts. Other military districts were given the task of raising and training reserve formations. Marshal V.D. Sokolovsky in his book, Soviet Military Strategy, pays tribute to the role of "certain military districts in the immediate vicinity of the probable theater of operations" in the "concealed and special mobilization" of reserve formations at some critical moments of the War.[4] As the Red Army accomplished the final liberation of Soviet territory throughout late 1943 and in early 1944, the military district organization was to re-emerge intact. Consequently, by October 1945 there were 32 military districts, engaged primarily in the huge task of demobilization and resettlement of millions of Red Army servicemen and in the reconstruction of barracks and other essential military installations destroyed in the War.

This brief introduction serves to illustrate the two enduring basic characteristics of the military district: its ability to survive throughout war and revolution as a fundamental unit of military administration; and its adaptability.

Today the military district is defined in the Soviet military press as the "territorial all-arms association (ob'edinenie) of formations, units, military schools, and the various local military establishments."[5] The military district is, in fact,

the peacetime unit of command through which the Ministry of Defence administers and controls the Ground Forces. The strength and status of the sixteen military districts, which today make up the military administrative map of the Soviet Union, vary and their individual importance is not unnecessarily reflected in their respective size. The most important and prestigious military districts remain today those whose historic mission is the defense of the ancient Russian heartland. Others, such as the Transcaucasus Military District, or the Volga Military District, are no longer refuges for declining military reputations, but have assumed importance as the status of the Soviet Union as a "superpower" has increased, notably in the Near East and Africa. The smouldering Sino-Soviet territorial and ideological dispute has significantly increased the importance of those military districts which guard the Soviet Far East and the Central Asian Republics of the Soviet Union -- the Far East, the Transbaikal and Central Asian Military Districts.

The role of the military district is primarily to practice an assigned wartime operational mission. In the case of those military districts located in the Western USSR, this role will include rapid deployment into Western Europe in wartime. Other military districts will have the task, as set out by Sokolovsky,[6] of reinforcing the forward Fronts following mobilization.

In preparation for this role the military district carries out the following basic tasks on behalf of the Ministry of Defence:

- The conscription and initial training of two annual intakes of recruits on behalf of all branches of the Ground Forces
- Reserve training and practice mobilization exercises
- The advice and coordination of all aspects of pre-military and para-military training
- Military "cooperation" with the civilian population

- Assistance in the organization of civil defence training and exercises

- The administration of local Ministry of Defence controlled units, schools, and establishments

The peacetime command structure of the military district is headed by the commander, flanked on the one side by the military council (the "legislative") and on the other by the headquarters staff of the district (the "executive").

Soviet sources emphasize that the "leading role in the training and education of the personnel is played by the commander. He prepares and trains his subordinates for the armed defense of the Homeland...and it is not said in vain that the commander is capable of everything."[7] The "Internal Service Regulations of the Armed Forces of the USSR" describe the commander as "the sole political and military head (edinonachal'nik) who bears full personal responsibility...for the constant combat and mobile readiness of all units entrusted to his command. He is responsible for the combat and political training, education, military discipline, and morale of the men; for the maintenance of all arms, equipment, and transport; for the welfare and medical care of his subordinates." Consequently, the commander of the military district is primarily an administrator.

The professional background and career characteristics of all the present military district commanders are as follows: wartime combat experience as a company or regimental commander, service in a "specialist" arm or as a "staff officer;" like thousands of his comrades and as a "patriot," he will have joined the Party early in his wartime career; after the War, as an officer and commander of promise, he will have studied at a senior military academy (the Frunze Military Academy or the Armoured Troops Academy, etc.), and later have graduated from the General Staff Academy; he will have continued his career as a formation (army) commander or hief of staff of a military district; finally, as deputy commander of a military district or (of equal importance) head of an important Ministry of Defence

directorate, he will have completed his "grooming" for command of a military district. Some of the more important military districts -- the Far East, Moscow or Baltic Military Districts, for example -- also carry political status in the shape of a seat in the Central Committee of the Communist Party (CPSU). The military district commander is thus an experienced and influential figure in the military administration of the Armed Forces of the USSR in whom the Party must be able to repose the greatest faith with regard to both his political loyalty and his professional ability.

Like any large administrative structure, the military district is subjected to a complex system of "checks and balances." This function is vested primarily in the military council of the district. This body has been described as the "collective organ of military control, established for the purpose of discussing and, in some cases, deciding the basic problems concerning military organization, training, command and supply services."[8] Since 1958, when the role and status of the military council was demonstratively re-affirmed and expanded with the aim of re-establishing and strengthening political control at all levels throughout the Soviet Armed Forces, the composition fo this body has been as follows: The Commander of the military district (who functions as chairman), the Head of the Political Directorate, the First Deputy Commander, Chief of Staff, Heads of Arms of Service, the First Secretary of the loal Republican Party.[9] Other members may be co-opted if required for example, the First Secretary of a local oblast' (region) when discussing recruiting or the employm of military labor on civilian projects.

The Member of the Military Council - Head of the Political Directorate (to give him his full title) may be regarded as the "second man" in the military district hierarchy, the commander's "eminence grise." His role in the Civil War and during Stalin's rule have tended to keep alive the dubious and shady reputation of the "political officer." Generally, he is now regarded as a "combatant" and is expected to acquire the specialist skills of the arm in which he serves and to observe military codes of conduct. Although Brezhnev's old comrade, Colonel General K.S. Grushevoi, who has headed the Political Directorate

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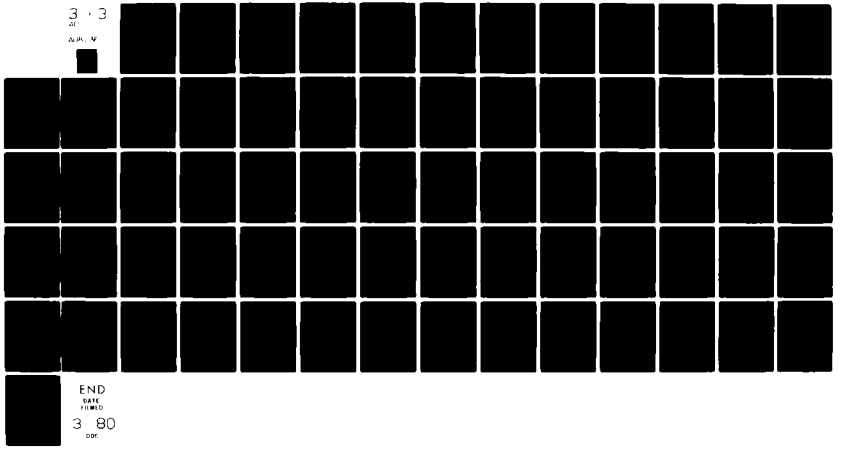

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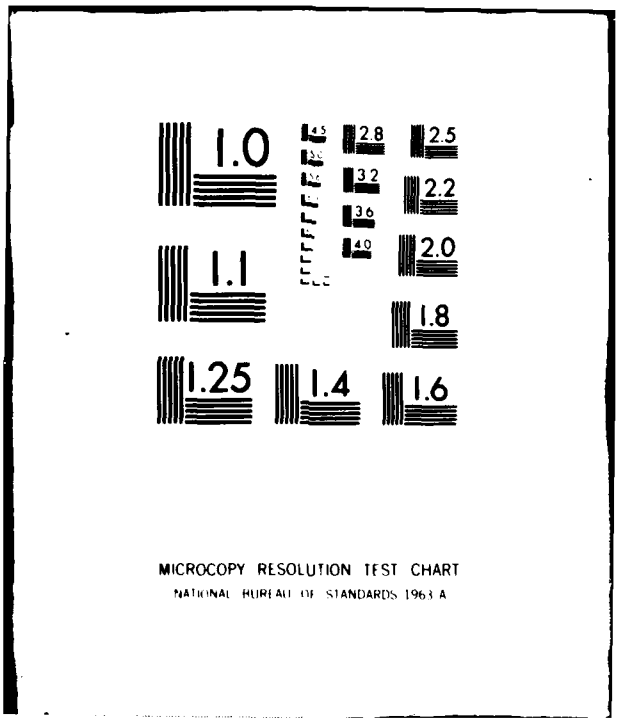
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963 A

of the important Moscow Military District for over 10 years, is primarily a Party "careerist," the bulk of present military "political" elite have had military training and combat experience. Nevertheless, the Head of the Political Directorate will always be regarded as the ideological "watchdog" and symbol of the Party's ultimate control of all activity in the military district.

The First Deputy Commander remains a rather "grey" figure in terms of "job allocation" within the military district command structure. Ex officio, he will, as a rule, command the district headquarters garrison. Subsequently, he makes all arrangements for and commands the large annual ceremonial parades -- the anniversary of the October Revolution, May Day, and Armed Forces Day. In fact, he appears to have a variety of responsibilities which vary from district to district. In one case, the First Deputy Commander of the Carpathian Military District, Colonel General N.B. Abashin, is believed to have responsibility for combat training.[10] Recently promoted Colonel General, he is now senior to all other First Deputy Commanders of the military districts. Overall study of the First Deputy Commander's activities suggests that he has supervisory responsibility of the military district administration, including combat training, education, and manpower.

In solving the problem of the optimum use of manpower within the Military District, the First Deputy Commander will work closely with the Chief of Staff. Echoing Shaposhnikov, the "staff" has frequently been called the "brain" of the Commander. Perhaps, echoing Grechko and the Soviet military press in general, "power-house" of the District would be more appropriate. Grechko has this to say that the "Staff" in general:

> In speaking of the command and control of forces, one cannot help but direct attention at the ever increasing role of staffs. The experience of past wars showed vividly that just by relying on the staff the...commander is in a position to accomplish successfully a broad range of difficult missions. The harmonious, creative collective work of

> the...commander and staff is a guarantee of flexibility and efficiency, precision and swiftness in accomplishing all measures of command and control of forces. The functions of a staff have now, as never before, become responsible and multifaceted. The staff is the true brain of the forces, a unique oscillator for the entire large complex of command and control work. It is fully understandable that all this requires that it be smooth running, with high efficiency and a high degree of staff effectiveness.[11]

Among the "multifaceted" tasks which are the responsibility of the Chief of Staff of a Military District are the following: Coordination of all arms, drawing up operational plans, mobilization, annual assessments of training standards, organization of Socialist competition. While the Chief of Staff assesses annual training standards, the Deputy Commander for Combat Training is primarily concerned with implementing training norms, as laid down by the Chief Combat Training Directorate of the Ground Forces, to meet the training demands of two annual intakes. The Combat Training Department of the District also seeks to lay down physical training standards and organize sports.

So far we have been looking at the basic traditional military district command structure which has existed since the Frunze reforms of 1924. Beneath the traditional structure, however, a number of significant changes and innovations have been introduced. These changes have been forced onto the traditional structure by a number of factors:

- The re-establishment of the Ground Forces as an independent command in late 1967
- The Military Law of September 1967
- The expansion and improvement of the military educational system
- The introduction of a vast program of expansion of the Civil Defence of the USSR

- An increase in the capital investment and construction programs in military districts

The above factors have placed a number of additional responsibilities on the military district administration and have added to local manpower problems, notably of those military districts involved in the military "build-up" due to the Sino-Soviet dispute.

Perhaps the most important feature has been the integration of a Deputy Commander for Civil Defence into the district command structure following the re-organization of the Civil Defence command of the USSR. Here the leading role has been played by (Army General) A.T. Altunin (Altunin replaced Marshal V.I. Chuikov as Head of Civil Defence USSR 4 October 1972 and was appointed a Deputy Minister of Defence of the USSR). Altunin, who was probably selected by Grechko himself for the task of re-organizing the Civil Defence structure, commanded the Transcaucasus Military District (1968-70), where he was able to study at first hand the problem of integrating Civil Defence into the local military district organization as well as the problem of the role of the military district in civil defense training. In the case of the Central Asian Military District, to take an example, the Chief of Staff of the local Kazakhstan Republican Civil Defence organization, Major General S.K. Nurmagombetov, was appointed a Deputy Commander of the Central Asian Military District. Much of the manpower to run and operate the Civil Defence -- which is regarded in the Soviet Union as a significant factor in the "strategic" defense of the Homeland -- is supplied by "volunteers," reservists, and Civil Defence troops. Nevertheless, if as Grechko himself has described it, the Civil Defence "plays a great part in unifying the Armed Forces and the people," and if in case of war "Civil Defence units will operate hand in hand with the Armed Forces...and will give inestimable help to the Armed Forces in winning victory over the enemy by ensuring the defense of the rear and the normal functioning of the national economy," the Armed Forces (the military district) in peacetime must devote its own resources "to help the Civil Defence...to successfully accomplish the tasks assigned to it."[12]

An important role in supplying cadres to train Civil Defence personnel is the Deputy for Military Educational Establishments, formerly known as the Assistant to the Commander for Military Educational Establishments. Over the last ten years, particularly following the Military Law of 1967, the military educational system (as distinct from the Academies) has been engaged in a vast program aiming to improve the standard of education given to the vast majority of officers on joining the Armed Forces. As a result, most military schools have been upgraded (by addition of the title "Higher"), and their curricula improved and adjusted to meet the demands for a more technically-minded officer, able to handle modern sophisticated equipment and operate the latest command and control procedures. Here it is perhaps of some interest to take note of the role of "national character" on the administration of military education and its effect on the relative status in the various military districts of the Deputy Commander for Military Educational Establishments. In the Baltic Military District, for example, his task is basically to harness the intelligence of non-Russian ethnic groups and to exploit and tap the resources of a level of education rated far higher than that attained to date in the non-Russian speaking Central Asian Republics. But it remains a fact, much commented upon in the Soviet military press, that the Armed Forces, due to a much publicized recruiting campaign and to the attractions of the prestige conferred on status today of the serviceman and officer, are attracting large numbers of young men who are unable to "make the grade."

Alongside the vast effort put into improving training and educational standards there is an equally vast effort -- and amount of publicity -- put into improving the standard of living for servicemen. Some indication of the scale of the problem and of future ideas and plans could be gleaned from articles and speeches published during the Conference on Improving Living Conditions in the Armed Forces, held in Moscow 18-20 December 1977. However, this is just one facet of the job in the military district of the Deputy Commander for Construction and Quartering, who is also expected to find the material and labor, not only for constructing living quarters and modern barrack

accommodation, but also for complexes housing modern weapons systems, military educational establishments, and other "base" facilities. He also has responsibility of ensuring that all DOSAAF and Civil Defence training establishments meet with military requirements and standards. If, like the Deputy Commander for Construction of the Moscow Military District, he will be given the task of providing labor for building the vast sports facilities for the 1980 Olympic Games -- "ahead of time" -- he will have the additional problem of syphoning off valuable labor for civil prestige projects. There is no doubt that today the Commander for Construction and Quartering in any military district is a demanding and responsible post, the achievements of which -- along with the "shortcomings" -- are accorded much publicity in the Soviet press.

Civil "prestige" projects, however, are not the only drain on the manpower of the military district. The construction of the Baikal-Amur Railway (BAM) has attracted wide attention. The manpower for this project, in the main, has been provided by the Railway Troops, Komosomol "activists" and ex-service "volunteers." The "battle for the harvest" of the summer of 1976 has received less publicity, certainly in the West. The problem confronting the local Party and government organizations was to harvest and transport a moderately good harvest (and thus avoid repetition of the disasters of 1975). The main problem areas were in the Central Asian Republics and the steppe areas north of the Black Sea. The scale of miltiary participation can only be guessed, but must, nevertheless, have been on a large scale. In Kazakhstan alone, according to Colonel General A. Smirnov (Head of the Motor-Tractor Directorate of the Minister of Defence), "some 55,000 military vehicles were employed in harvesting."[13] There were similar reports, but not quite so spectacular, for the North Caucasus and Volga Military Districts. Most military district commanders referred to the role of the military in "winning the battle for the 1976 harvest," seeking to remind the Party, no doubt, that despite the added burden on manpower combat (and political), training had attained the required standards. The year 1976 was no doubt an exceptional year. Nevertheless, as Grechko pointed out, "harvesting" is

just one way in which the Armed Forces maintain Lenin's principle of the unity of the front with the rear.[14] Indeed, in some military districts, the Far East, Transbaikal and Siberian Military Districts, geography and nature impel the local military authorities to devote much manpower for provision of essential food supplies. Although the total of manpower is not known, Le Monde (of 27 April 1976) estimated that some 170,000 servicemen were employed on military farms throughout the Soviet Union.

Summary

The role in the last ten years of the military district in strengthening the defense capability of the Soviet Union has been marked in a number of important cases, at an official level, by the award of high Party honors. Hence, the Moscow, Leningrad (both in 1968), and Transbaikal Military Districts (1974) were awarded the Order of Lenin for "successes in combat and political training." The Order of the Red Banner was awarded to the Belorussian, Kiev, Odessa, North Caucasus and Turkestan Military Districts in 1968; to the Baltic, Carpathian, Volga, Urals, Siberian Military Districts in 1964; to the Central Asian Military District (which was established as recently as 1969), in 1975. It was, at the same time, an expression of confidence in the ability of the military district to adapt itself to a varied number of tasks in peacetime. It is, furthermore, a system which brings an element of flexibility in the overall system of recruitment in peacetime and (in the initial stages of war), during mobilization. It is also a system, which in the view of Sokolovsky is "most suitable...(for) the territorial recruitment of armies during mobilization, which under conditions of nuclear rocket war considerably accelerates the process of converting the armies to a wartime organization."[15]

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APPENDIX H

SOVIET MILITARY TRAINING:

The Red People Eater

By William P. Schneider

SOVIET MILITARY TRAINING:

THE RED PEOPLE EATER

One of the principal consumers of military manpower in the Military District is military training. Short of actual combat this is, after all, what it is all about. Rare is the commander who can be heard to remark, "My men are overtrained." Let us examine what Soviet military training is from the individual solider to the Ministry of Defence.

THE SOLDIER

The Soviet soldier is a product of his society and because of its uniqueness there is a unique quality about the soldier. From his entry into the state-run nursery at the age of three months, the Soviet person is taught to suppress conflict and to get along with playmates and to share. In the kindergarten which follows, emphasis shifts to following directions and obeying orders. Some soldiers may have missed the nursery or the kindergarten but none miss the middle school, be it eight years to ten years.

In the middle school the pupil acquires basic military indoctrination -- soldiers are brought in to the early groups to provide a father figure frequently missing in the home. Having learned to respect military authority, the child begins to acquire military training in ever increasing doses during the school year. In his later years in the ten year school, not only does the level of complexity rise during the school year, the child also receives intensive basic training during the Zarnitsa games during the summer. In the same period the child is also subjected to the blandishments of DOSAAF and learns advanced skills such as parachuting, gliding, etc.,

By the time induction takes place, the young man has received sufficient training in military subjects to eliminate basic training entirely during "active duty". This training frequently includes basic automobile operation and maintenance, medical care of

wounded, and a whole series of subjects covering the effects of nuclear and other mass destruction weapons. Two periods of induction annually bring in new recruits with much greater fanfare than is done in Western societies. The service of one's country is an honorable affair in the USSR and welcoming committees from the unit go to the city of induction and receive the recruits from the local authorities -- the ones to whom the discharged hero will be returned. This, plus the internal passport/work-paper system, exerts tremendous pressure in a police state to do well and behave oneself.

The new recruit starts a two year period of near confinement in May or November -- his time is programmed from dawn to night and beyond. He commences advanced individual training and driver and operator training. He has a vast array of weapons with which he must become familiar and his indoctrination continues as well. His day begins with physical training in the barracks area and proceeds to the nearby local training area and ranges for weapons and equipment training, including the use of napalm and chemical agents.

Very quickly, thanks to his pre-induction training, by the end of June or December he is seen in specialized training areas becoming used to stream crossing equipment, BMPs and tanks in small unit training and including live firing exercises. In the next two or three months he will participate also in battalion or regimental maneuvers or possibly larger exercises.

By virtue of the twice a year induction and pre-induction training, the force is always at least 75 percent trained and even the "untrained" are capable of action with their units. In times of crisis when the induction period might otherwise interfere, the MOD simply does not release the soldiers due for release until they see fit, so that in a proper case, if a surprise attack were planned for June or January, there would simply be 100 percent trained plus a 25 percent nearly trained increment, with no undue disruption of industry or ruffled feathers which might be caused by mobilization -- this is, in fact, continuous mobilization.

THE SPECIALIST

Non-commissioned officers come from two sources; the first, but least, is the group of inductees who decide to remain in the service and become NCOs and career soldiers. The greater number come from the inductee stream -- the higher skilled personnel -- at least eight year school or equal, are sent to NCO schools where for nine months they learn special skills. They learn principally by endless repetition. A radio operator is taught only how to operate a particular radio set; how to transcribe, transmit, and receive messages; and how to maintain his equipment. He graduates as a junior sergeant or sergeant and is sent to a unit. He does not at this time -- during his initial schooling -- learn to repair his equipment or to operate other equipment. These are other specialties and he is urged to learn them later on.

If the sergeant decides to remain in the service, he is expected to become active in party work, possibly to join the party, and to increase his skills by acquiring other specialties. He receives higher pay, better quarters, and other perks as he acquires new skills. Although some of the conscripts do remain in the service, the actual attitude towards military service is not as strong as the official press might have us believe.

Officers come from several sources, including the five types of school:

(1) Normal/middle military schools

(2) Higher military schools

(3) Military career schools (Nakhimov and Suvorov)

(4) Military academies and institutes

(5) Military courses/higher military courses

Almost no officers come up from the ranks in peacetime. Upon graduation from the ten year schools at the age of 17 to 23 (only eight years are required for

servicemen), the largest number of officer candidates attend the ordinary Uchilische, of which there are over 74, and attend for 2-5 years. They are then commissioned in their branch of the armed forces and many go on to higher education (as officers) in the Higher Military School, the academies or institutes. An example is the Kiev Red Banner Tank School which is named in honor of Frunze.

Other sources are the Suvorors (20) and Nakhimov (2) Academies. Children of service personnel and others, principally party functionaires, are accepted from the fourth class/grade until graduation and commissioning as boarding students on full "scholarship."

Parallel with these but at a slightly higher level are the Higher Military Training Institutions. These are four year courses except that Suvororv and Nakhimov cadets may be accpeted in the second year. The graduate is commissioned as a junior lieutenant. An example of this kind would be the Tashkent Red Banner, Order of the Red Star Higher Combined Arms Command School named in honor or Lenin; more than 20 such schools exist.

The military academies and institutes are principally for officers already commissioned with good fitness reports. The courses vary from one to four years and the graduate frequently acquires an academic degree as a result. An example is the Military Command Academy of Air Defense and there are over thirty such schools.

The special courses are also, for the most part, for commissioned officers and include the Higher KGB School, the General Staff schools and similar schools. An unusual example is the well-known "Vystrel" course at Solnechnogorsk (the Central Order of Lenin Red Banner Officers Course).

In addition, civilian universities prepare graduates in some 200 military specialties and the graduates are frequently commissioned as needed.

All formal schooling is considered to be only the necessary minimum. All officers are expected to

continue their education and political awareness training advancing constantly in knowledge and the grace of Lenin.

THE PROOF OF THE PUDDING

The annual order of the Minister of Defence (MOD) outlining the state of the armed forces is based on the military inspectorate's analysis of performance at annual inspections and maneuvers. In particular, the message addresses the state of training of the previous year's officers their performance in exercises as well as an assessment of force status. The MOD inspectorates prepare programs of instruction, training, and exercises (based on the same data) for all military districts and branches of service. This program or plan is for a year or longer.

The Military Districts then issue an annual plan modified for the geography and climate of their MD -- state of training, presence of allies, etc. The MD may also prepare a mid-year, updated plan where conditions warrant it. Division commanders do the same quarterly, and regiments produce a monthly plan. Battalions or their equivalent prepare training schedules on a weekly or daily basis.

The principal thrust of these plans and programs at regiment and above is the officer command cadre. They emphasize tactical problems, command walks, sand table problems, staff exercises, and command post exercises (CPXs). In addition, there are frequent officers' conferences at division, military district, and even MOD level. For staff officers, there is separate staff training and they participate, of course, in the CPXs, maneuvers, and exercises.

The exercises and maneuvers are of several types, the simplest being the "demonstration" of new eqipment or tactics, such as "The Battalion in the Defence". While these are thoroughly practiced and umpired, their purpose is to demonstrate to the participants and observers new equipment and methods.

The next level is the combined arms exercise which is usually two-sided and involves air participation. These usually last two or three days and finish with a

live fire demonstration or examination phase. The purpose of these exercises is to inculcate proper habits in officers at levels up to division.

Test exercises at either of these levels are frequently supervised by the General Staff. These are designed to determine the effectiveness of new equipment or doctrine.

The final category is the maneuver at the MD level. These are designed to give higher level staffs and commanders the necessary experience to command troops in combat as well as fulfilling all the previously outlined aims. These are followed always by rigorous critiques.

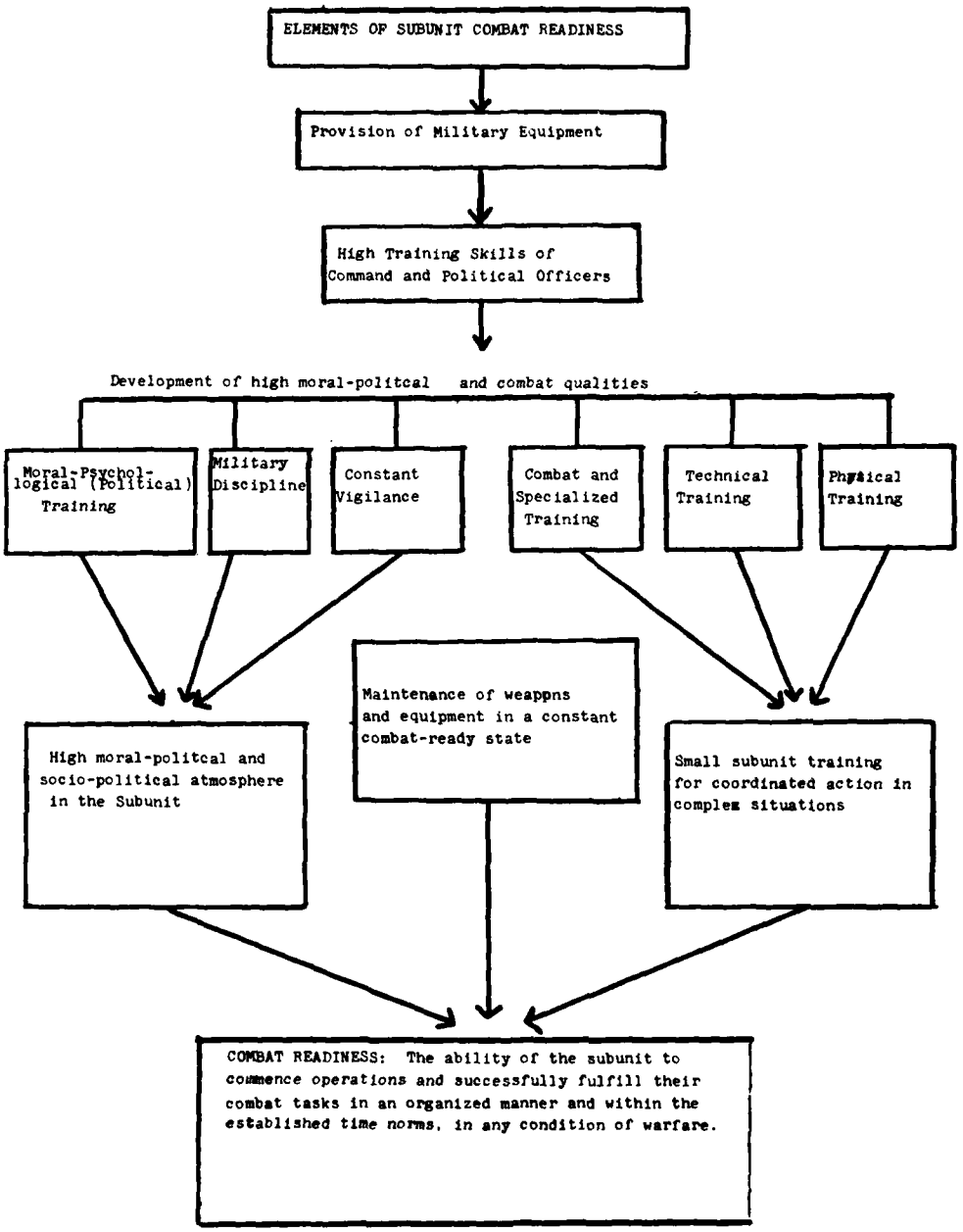
IMPACT ON MILITARY DISTRICT

We usually think of impact in a negative sense. The Soviet military training program, however, is largely positive in its impact on the MD. It is, after all, "what it is all about". This is what the MD exists for. In terms of numbers of "overhead" required to produce the training program, the impact is relatively small. Few additional troops are required to maintain training facilities; most of them are simply abandoned when not in use. Damage to roads and farms and homes as a result of training is left to the "owner" to repair.

The number of men involved in school programs for the ten year school or the summer games is small and frequently reserves are pressed into service through DOSAAF for this purpose. The DOSAAF program is large but is not a drain on the MD and the gains received contribute to the readiness posture of the MD.

The impact on Soviet society, however, is overwhelming. The Soviet Military Training Program is creating a Sparta in the midst of an Athenian world. The fabric of Soviet society is being tailored into a Mundir.

A SOVIET DIAGRAM OF COMBAT TRAINING ELEMENTS



C.S. Alferov, Voyenno-istoricheskyi Zhurnal, No. 12, 1977, p. 48.

APPENDIX I

SOVIET MILITARY MANPOWER:

ASPECTS OF THE MAN-MACHINE MIX

By Christopher Donnelly

SOVIET MILITARY MANPOWER:
ASPECTS OF THE MAN-MACHINE MIX

By Christopher Donnelly

"It should always be borne in mind," said Colonel-General Merimskii in an article in Voennyi Vestnik of March 1976, summing up in the debate on the use of the BMP, "that in the formula 'Man-Machine,' man always was, is, and always will be the more important element. Marxism-Leninism tells us that the more the means of armed combat are perfected, the more important the role of man becomes."

Every authoritative Soviet publication which touches on this topic -- even those whose main drift is to call for better technological backup (computers for artillery, etc.) -- is at pains to stress the same point, that the effect of even the best doctrine and technology, will be negated if the human element controlling and operating as part of the military organism is at fault.

If we are to ascertain the requirements set by the General Staff -- the yardstick by which we must judge the Soviet approach to the problem of matching man to machine, our best guide is to study the principles which govern the Soviet conduct of a battle. The best summary of these principles which is known to the author is contained in The Basic Principles of Operational Art and Tactics. In this work (see Figure 1), Colonel Savkin defined these principles in order of importance.

It is with a view to determining the extent to which the man and his machine can fulfill these principles of battle that we must study the Soviet Army. It is tempting to consider the ability of the Soviet soldier by reference to what a NATO army would require of its soldiers, to compare the relative competence of individual soldiers (i.e., Soviet and American) when faced with the same task. This temptation must be firmly resisted. It is the objective of this paper to present the man-machine mix from the Soviet point of view, stressing those

(1) SPEED: The achievement of mobility and the maintenance of a high tempo of combat operations.

(2) The CONCENTRATION of the main effort and the creation of SUPERIORITY in men and equipment over the enemy at the decisive place and time.

(3) SURPRISE.

(4) AGGRESSIVENESS in battle -- no let up in the attack, breakthrough and pursuit.

(5) The PRESERVATION OF COMBAT EFFECTIVENESS among one's own troops by: (a) being properly prepared and efficiently organized; (b) maintaining at all times efficient command and control over one's forces; and (c) maintaining morale and the will to fight amongst the troops.

(6) Ensuring that the aim and plan of any operation conforms to the realities of the situation, attempting neither too much nor too little.

(7) Ensuring COOPERATION of all arms of service and ensuring the coordination of effect towards achieving the main objectives.

(8) DEPTH: Attempting simultaneous action upon the enemy to the entire depth of his deployment and upon objectives deep in his rear, and including action to weaken enemy morale.

NB: SOVIET PRINCIPLES OF WARFARE at all levels stress the primacy of the OFFENSIVE as a means of waging war.

(Source: V.E. Savkin, Osnovnye Printsipy Operativnogo Iskusstva: Taktika, Moscow, Voyenizdat, 1972. Translated and published under the auspices of the US Air Force as Basic Principles of Operational Art and Tactics, Washington, Government Printing Office, n.d.)

Figure 1 - Principles of Battle

features of the problem upon which Soviet published sources concentrate, and reproducing Soviet assessments of tactics affecting the soldier's competence to wage war in an age of rapidly developing technology.

The material which we have used in this study has been drawn from all branches of the Soviet Army. There are clearly problems which are more acute in some branches than in others, or which affect some formations of military districts and not others, and we will attempt to define these variations as we go along. Such variations, however, are usually only of degree and what is most striking is the overall similarity of the problems through Soviet eyes. The problems of training men to master simple driving skills or to understand complex computers and the problems of fatigue which reduce the competence to control a cargo lorrie or strategic bomber are both seen as manifestations of the same phenomenon and to be tackled in each case in much the same way.

The need, in brief, is to improve the efficiency and thereby the performance of the Soviet Army within the limitations of the permissible expenditure of resources and the existing framework of the military organization. To accomplish this, it is necessary to make the best match of man to job/machine and to find the best ways of instructing the man to do his duties effectively.

This subject naturally divides into three areas for attention -- the psychology of selection, the mechanics of selection and posting, and the methods of instruction. The author has found only limited material on the mechanics of selection but a great deal of material which concentrates on helping the instructor "make the best of a bad job" when unsuitable human material is forces upon him. Two facets stand out from this latter point; first, that overall there is not enough really good human material available (a problem common in many armies), and second, that the selection system is inefficient in its allocation of manpower resources and further hampered by such constraints as security requirements which state the need to mingle races in military units down to a low level or the policy requirements which

state the need to mingle races in military units down to a low level or the policy requirements which send no Jews or ethnic Germans to serve in Group Soviet Forces in Germany (GSFG).

It is my intention to review firstly the Soviet analysis of psychological factors affecting the man-machine mix, as laid out with painstaking thoroughness in the book Voyennaya Psikhologiya.

PSYCHOLOGY AND THE MAN-MACHINE MIX

Emotional state has a great effect on a man's value as a soldier. Consequently, it is essential to maintain the soldier in an emotional state which will contribute to his effectiveness, not detract from it. The most stable and powerful emotions are moral-political feelings: love of the socialist motherland, hatred for the enemies of communism, military duty, internationalism, and collectivism, in that order. The most volatile emotions are moods. A positive, happy mood contributes to a rapid and sound assimilation of knowledge and acquiring skills. Neutral moods of uncertainty, indifference or worry impede the assimilation of material and the development of combat efficiency and affect morale. Negative moods can lead to infractions of discipline, accidents, and loss of skills acquired.

> "Victory in modern war...can be won only by an ideologically indoctrinated soldier who totally loves his motherland and is ready for the sake of this love to carry out heroic deeds. For this reason, indoctrination of Soviet military personnel in a feeling of love for the motherland and loyalty to the cause of the Communist Party has been, and is now, one of the most important tasks of moral-political and psychological training for modern war."[1]

Confidence in victory is essential. The value of a military doctrine or of a Marxist all-embracing world outlook is of positive advantage in this respect.

THE EFFECT OF TEMPERAMENT ON MILITARY EFFICIENCY

Pavlovian theory classified people as sanguine, choleric, phlegmatic or melancholic. People of all temperaments have their positive use in society and in the military. For example, the gunners and pilots must have quick reactions. It is easy to develop these qualities in a choleric or sanguine person, but it is very difficult for a phlegmatic or melancholic person to make rapid calculations in a combat plane or on a torpedo boat. Nor is there time in two years service to develop the ability to control temperament effectively, therefore, a soldier's temperament should be matched to fit his job, particularly in respect to avoiding a really bad combination of temperament and job.

This psychological selection of personnel in making up crews, in training, and in leadership is very important indeed. Not only is it important to select individuals well -- phlegmatic or sanguine soldiers for jobs needing great patience and constant pressure such as a spotter, sniper, radar or radio operator, etc.; sanguine soldiers for gunners, drivers of armored fighting vehicles (AFVs), and pilots; choleric types for jobs involving stress of high but short duration -- but it is also essential to have a mix of temperaments in a crew or team. Otherwise, friction develops. Tact is particularly necessary in handling people, in helping to work out their excesses of temperament and in constructing a psychologically sound team. Bullying people will be counter-productive. It is the job of a commander and a political officer to make personnel assessments and to deal with any problems which arise. So this is potentially one of the political officer's great contributions to the efficiency of training.

It is noted that some selection based on assessment of temperament should be accomplished at the time of conscription, but this does not seem to happen in an efficient manner. The ideal temperament for an airborne soldier and a rear service soldier are not the same. Failure to take this into consideration when posting men is often a cause for complaint by both commanders and political officers.

THE ESSENCE OF CAPABILITIES AND THEIR EFFECT ON TROOP EFFICIENCY

Capabilities exist in a soldier only relative to certain activities. Military equipment has changed and so have military activities, and the capabilities needed by today's Soviet soldier are far more complex than those needed by his counterpart in the last war. Capabilities are defined as the personality in its productiveness. Capabilities are not, the Soviets stress, simply innate qualities of character and cannot be used to judge or choose people for a certain profession. They are not features of the "psychological profile." Nor are capabilities just the knowledge and skill and experience of a person.

Marx linked the concepts of "manpower" and "capability for labor" when he wrote, "By manpower or capability for labor, we understand the aggregate of physical and spiritual capabilities which an organism or man possesses, and which are activated by him each time he produces anything of consumer value."[2] Therefore capabilities, according to Marx, are a mix of both natural and acquired skills. Experience in the capitalist armies, the Soviets note, shows that psychological selection for capabilities is very good for selecting men for training, but it is unsuitable for the forecasting reaction to combat activity. To get the best out of a soldier, the assessment and formation of his capabilities should go hand in hand. During the first six months of training, the most important means of doing this well is by an analysis of mistakes the soldier makes in his training. This analysis must bear in mind the following points:

- The preparational level relative to expected norms of pre-service training
- The progress resulting from the educational effort of students and instructors and the objective productivity of the finished man

Every soldier (sailor, officer cadet) makes mistakes. A careful study must be made to assess the mistakes on the following points:

- Deviation allowed from the standard (i.e., scale of error)
- Seriousness in relation to stage of training at which it was made
- Repetitiveness
- Relations to other errors
- Cause

An evaluation of reasons for error is most important; main and contributory causes are usually one or more of the following: insufficient training, poor capabilities, and lack of discipline or negligence caused by insufficient indoctrination. The commander and political officer should isolate the cause accurately and thus produce a study of errors to check the course of combat training and further studies and to make a psychological forecast of the man's military activity.

Thus a constant watch should be maintained at company level on soldiers to structure their training program to their psychological needs so as to improve their capabilities and effectiveness. Socialist competition is an important means of generating every enthusiasm, but it is also important for determining a man's capabilities and for instilling in him a love for his military specialty which is psychologically very important in helping him to improve his capabilities.

In socialist competition, each soldier indicates what he is capable of doing and pledges to improve it. The tendency to understate must be countered by the political officer by actively organizing, observing, publicizing, and comparing results of the competition. By allowing the soldiers to name the areas in which they will strive for improvement identifies their interest and hence is an important indicator of capability potential.

There is no "spontaneous" development of the capability of a soldier during training. As a result of the officer's analysis and assessment of training performance in the first six months of service,

training programs should be carefully structured to create a balanced development of skills and capabilities and attitude.

Hence the conclusion drawn (albeit by the authors who are officers in the MPA) is that the increase of political training time is not just to increase crude indoctrination but to improve military training and capabilities by giving more time for assessment, more time to engender enthusiasm, and more time to use social means of coercion (for example, publicity to get people to work better).

We might leave the book for a few moments here to take a quick look at what is meant by political training. This is not just indoctrination lectures but "social work," i.e., participation in company activities, especially competitive sports, Lenin room organizing, library, amateur dramatics, active Komsomol work, etc. Complaints are levied that this aspect is often given insufficient attention by military officers when completing studies on ways to improve military training.[3] In other words, there is undoubtedly a large gap between the ideal official attention to psychological evaluation and selection outlined in the book and what the average officer actually does in this respect.

At the NCO level, men often have great difficulty in leading soldiers and striking the right relations with them because these NCOs are about the same age as most soldiers and have very little more experience. Therefore, the NCOs have difficulty in getting the best out of trainees.[4] The interference of warrant officers and commissioned officers is often needed in training and it is very difficult in peacetime to strike just the right level of discipline between soldiers and conscript NCOs.

The authors then address the importance of military discipline in determining training attitudes, and stress that this requires a social awareness and must not just be passive obedience. Also very important is battlefield drill, for which discipline is essential and which itself strengthens discipline. Discipline and drill are particularly important because of the effect of modern combat on the psychology of

personnel. There is a great danger to psychological stability -- hence the ability to use equipment -- due to the rapid change in situations that can occur in modern war.

In other words, any mental inflexibility and lack of broad-mindedness make today's Soviet soldiers very vulnerable to dynamic war, probably more so than his western counterpart. In this respect a special threat is posed by nuclear weapons. The authors also note, rather disturbingly, that in the 1941-45 War a lack of combat experience was the chief cause of a debilitating and irrational fear of the potential of enemy weapons. If anything, the Soviet conscript of today has no combat experience at all and stands in awe of western technology. The value of troops getting combat experience in Angola, Ethiopia, etc., can be clearly seen as significant in helping to counteract this fear.

"Combat mastery" is defined in the book as "that professional skill of personnel which makes it possible to use to the best the capabilities and equipment available to personnel for achieving victory in combat."[5] Combat mastery is essential to combat readiness; vigilance is the other essential requirement of that necessary quality. Combat mastery includes total mastery of equipment.

In developing combat mastery, the authors assert that providing professional superiority over the enemy is the main means of solving psychological problems related to it; that is, combat mastery requires professional soldiering ability, both in handling equipment, men, and tactical forms, and it demands superiority over the enemy in professional ability in all forms of combat and in all adverse conditions. As a basic element of this ability, skills are required of every soldier; a skill is an action performed, as a result of numerous repetitions, correctly, rapidly, easily, productively, with no need to concentrate attention on methods of performing it, i.e., it is an automated action performed unconsciously."[6]

Most skills need constant repetition -- a submarine horizontal helmsman needs training every 7-10 days; a Morse radio operator every 2-5 days; a pilot needs a flight every 7-12 days.[7] The lower the skills

and experience of the specialist and the more complex the knowledge, abilities, skills and qualities required, the more often exercises are needed to maintain mastery at a high level. Therefore the best combat training provides a maintenance of the combat form for the professional training of a soldier on the highest possible level.

The more equipment becomes complex, the greater the skills needed and therefore the greater the degree of repetitiveness of training and constant acquaintanceship, so the authors conclude. At one level this means the need to practice constantly all year round in a training cycle without regard to weather conditions, availability of labor, exercise area, etc. (Hence the increasing popularity of specialized training machines/simulating.) At another level, this explains the desirability of conscripting young men with higher educational/intelligence level to cope with more complex equipment. But to offset this in some measure, the Soviets often say that enterprise and creativity are today even more necessary for combat mastery due to the possible fragmentation of battle.

It can be argued that the more independent and intelligent the conscript is, the more difficult it is for him to adapt quickly to military discipline and to the repetitive training we have just been told he needs. A drop in morale ensues and there is a need to increase moral-psychological training among the men. The job of a political officer is to observe the training routine to see that the training is done properly, with due regard to all these factors. Also, he has to ensure the right attitude among soldiers so that they actually learn what they are taught. Teaching methods are, therefore, most important especially with modern and complicated electronic and advanced technical equipment. Visual aids are necessary and not used enough.

The design of combat equipment includes serious consideration of these problems, but the effect is often blunted by the inadequate technological capacity of the Soviet arms industry.

While the above conclusions by the authors of Military Psychology can certainly be interpreted purely

as an attempt by the MPA to justify its slice of training time in terms of the effect it has on the soldier's professional ability, and might thus be dismissed as clap-trap, this would be to "flush out the baby with the bath water." The ideas of psychological assessment and training are inextricably bound, in the Soviet Army, with the concept of political indoctrination.

The book continues with a discussion of Psychological Training of Soviet Military Personnel which is today of great importance for several reasons:

- o Demands caused by technology -- e.g., an aircraft has ten times more instrumentation now than in World War II, but the time available in flight for combat tasks is now only one-sixth or one-seventh of what it was in 1945

- o Combat interference in the functional reliability of personnel which is becoming more critical. The speed and dynamism of war and the possible use of nuclear weapons increase stress, and in addition reduce time for decision, resulting in the deterioration of mental processes and the jeopardizing of professional reliability of the soldier/operator. Modern military equipment is most complex and has enormous destructive power, and has therefore increased enormously the importance of each soldier in battle and has immeasurably increased the cost of his mistakes.[8] It is essential, therefore, to prevent negative psychological states in respect of the man/machine mix for combat, so as to increase the functional reliability of the soldier in combat

- o Combat interference in emotional-volitional stability as a result of ever greater fear, especially of the unknown enemy weapons and of nuclear weapons, made worse by the effects of enemy psychological warfare. Imagination and imaginary dangers are often more important than real ones.[9]

Emotional stability requires strong political/ideological convictions; confidence in their weapons, their own ability to handle them, and in the effectiveness of NBC protection; and faith in effectiveness of their own comrades and officers. In good measure, emotional stability above all provides the ability for men to carry out the most complex missions even when insufficient manpower is available.[10]

For an army which has often sought -- successfully -- to solve its problems in battle by pouring in masses of men, this last statement may appear a strange conclusion to a book on military psychology. But in fact, the problem lies in the Soviets' own perception of the demands of future war.

The ball, therefore, passes to the court of military pedagogy: how to effect the training of the soldier who, it has been admitted, may not have been well chosen for posting in terms of his innate capabilities or his temperament.

The book Military Pedagogy outlines the problem of organizing effective training. The complexity of new combat equipment has led to a sharp increase in the role and significance of the theoretical knowledge of specialists. It is no longer enough just to know the design of a new weapon and to acquire practical skills in using it to accomplish "mastery" of it. Nowadays, "mastery" includes understanding the scientific and theoretical principles of its design and operation. In the past, theoretical training was ancilliary and subordinate to practical training. Today, knowledge of principles of design and operation is essential in order to maintain equipment correctly and competently. Theoretical training is now the main foundation for complete mastery of skills needed to operate new equipment. Theoretical knowledge is now an integral component activity of soldiers.

The volume of information which must be fed to a tank driver, aviation mechanic, or any junior specialist of a rocket complex during combat preparations is now many times greater than it was 30 years ago.

Special study of air defense units training to master new equipment showed that half the errors of operation or equipment breakdown were caused not by poor knowledge of the design of equipment, but by insufficient depth of understanding of the basic physical elements of the processes occurring during its operation, or because of incomplete understanding of the effects caused by these or other factors.[11]

In other words, the authors are suggesting that it is no longer sufficient to train a man to pull certain levers and operate a weapon, however skillfully he pulls them. He must now know what the levers do, how they affect the mechanism of the weapons, and why it is necessary to pull them in a certain way. If one of the levers fails to function, he must know how this effects the overall system and how to compensate for the loss or repair the fault.

Drill repetition to acquire a skill, highly important though this still is, is no longer the only requirement to train a soldier effectively. Moreover, the time allocated to training is becoming ever shorter. To cope with this, it is essential to get soldiers actively learning their job; training must be a developing instruction. You can no longer increase training productiveness by just increasing the speed with which drills are learned. The processes must be thoroughly understood and themselves learned.

Moreover, the book states that there is a strict physiological/psychological limit to human capacity beyond which training cannot expect to progress, except in narrow areas and to a limited depth: For example, the maximum attention span of a man is expressed in the ability to grasp simultaneously between 5-9 isolated objects; an individual arm can perform approximately 5.2 motions in a second, the forearm 8, the wrist 11.4: the minimum reaction time is a quarter-second, the maximum interval between signals at which correct reaction is possible is a half-second, etc.[12]

Expanding on the above, one feels that this clearly recognizes that human ability limits the technological capacity of weapons and equipment.

Technological improvement needs, therefore, to increase logarithmically. For instance, if aviation technology increases an aircraft's speed to a point at which a pilot cannot react swiftly enough to control and maximize the aircraft's performance, additional technology must be developed to reduce the burden on the pilot to a point at which he can cope. If such avionics cannot be produced and fitted, it seriously limits the value of the extra performance of the plane. Another example: it is pointless having a most effective hand-held SAM (surface-to-air missiles) if no sighting device for it exists which will enable the average operator/soldier to engage an aircraft, identify it, and fire the missile in the time likely to be available, and under the conditions of stress of the modern battlefield.

There is a point, in other words, in the man-machine mix when the increasing complexity of the machine becomes self-defeating due to the inability of the operator, for whatever reason, to utilize his machine's performance. This is a psychological/physiological barrier quite distinct from (though not entirely unconnected with) the problems of the diminishing reliability of equipments with the increasing quantities of fragile, vulnerable, or critically essential components.

From the gist of many articles and publications, particularly those debating certain aspects of tactics or control, it appears to this author that in many areas of Soviet military development this point has been reached by a combination of the increase in the requirements of modern Soviet doctrine of the high speed offensive, and the increase in the performance of the latest weapons systems, combat vehicles, and other military equipment. Further development, if it is to be effective, must concentrate on developing secondary and supporting technology to ease the load on the individual handling military equipment, raising both the breadth and depth of training skills in the soldier, and improving the speed and accuracy of command and control systems, both in terms of technology and commanders' ability, to enable the advantages to be fully exploited. If any one of these factors above is not improved, unbalanced improvement in the other two will be effectively neutralized.

The attainment of these goals, as suggested in Military Pedagogy might be accomplished by:

- o Increasing the capabilities and skills of officers
- o Improvements in the functioning of systems
- o Improving training methods and teaching methods/programmed instruction and teaching aids
- o Increasing enthusiasm and professional morale
- o Improving the quality of conscripts
- o Setting scientific training and battlefield norms
- o The developing of new ideas to short-cut lengthy problems
- o More economical use of training time[13]

The authors of the book note that research has shown that 24 percent of training time is wasted, namely by repeating old material in new presentations; trying out new visual aids, etc. without rehearsal; using training time for administration; unproductive movement to and from training areas.[14]

The soldiers' mentality and its effect on training is approached quite realistically in the work. The 18-20 year old conscript is emotionally immature, energetic, volatile, idealistic, and optimistic; these qualities have both positive and negative features. But there is, of course, in the Soviet Army a very rigid "Victorian" standard of behavior enforced and deviations are not tolerated. While this is clearly considered by the old as good from the point of view of preventing the ideological subversion of youth, it can hardly serve to increase young people's genuine creativity or sense of inquiry, qualities the authors would, they say, like to see increase. The most common problems affecting young soldiers' attitudes to training are the shock of military discipline; the harshness and coarseness of

military life; and problems with girl friends, fiancees, or wives. Lack of discipline, contempt of work, a disrespectful attitude towards comrades, and drunkenness are the harmful attitudes most frequently encounterd among young servicemen. Both problems and attitudes have a deleterious effect on the conscripts' training.

It is assessed that the training of a conscript falls naturally into three periods as far as psychological attitudes to training are concerned, and that this has a great effect on his capability and combat effectiveness.[15] The first period (up to six months) is psychologically very difficult, chiefly due to the abrupt change in living conditions and the harshness of military discipline. In the second period (12-14 months of service) the soldiers, having come to terms with life in the Armed Forces, and having adjusted to new friends, begin to enjoy their life in the Army. This is the most productive period of military service. In the third period (the last 4-6 months of service), the majority of soldiers and sergeants now understand their individual specialties and related specialist tasks and are employed in passing on their knowledge to younger conscripts. However, it often happens that the "old" soldiers become bored or complacent, particularly if they are not given increased responsibilities and "stretching" tasks.

The problem that this presents for the training staff, in view of the demands of Soviet military doctrine, can be clearly seen. The period when the young soldier is expected to absorb the basics of his military skills, and the rudiments of his technical specialties is that period when he is psychologically disorientated, unsettled, and most vulnerable to the corrupting cynicism of older soldiers. It is not until the middle of his term of service that he can be expected to attain proficiency in his primary specialty. But permanent combat readiness demands rather better than this if the army is to be "ready to go" at the drop of a hat. While the training program undoubtedly runs sufficiently smoothly today to avoid a violent drop in effectiveness immediately following every conscript rotation period, it is quite clear that units are vulnerable to losses in their

trained cadre at any time, and particularly just after the conscript rotation periods. If it takes up to 12 months to acquire effective technical skills and competence to operate the latest technology, ergo, half the conscript cadre, or about 40 percent of the army as a whole do not have the skills necessary to carry out their designated function in battle.

One might also add a few complicating factors drawn from our general acquaintanceship with Soviet citizens and soldiers. Matching man to machine is made more difficult in any technical field, even such a one as driving and vehicle maintenance, both by the individual conscript's general lack of acquaintanceship with things technical, and by the slipshod attitude of the average Soviet citizen to machinery, particularly state-owned. This khalatnoye otnoshenie makes a driver ignore faults on a vehicle until they accumulate to a critical point; it makes individual soldiers ignore small cuts and bruises so that they fester and render him unfit for duty; it makes the field pipeline assembler ignore the pebbles and gravel that get into the system on assembly, even though he knows they will bring the pumping station to a standstill and involve a lot of people, including perhaps himself, in a great deal of extra work, to say nothing of potential battlefield dangers.

In this regard, the "board of honor" system and the entire grading system, socialist competition, etc., are designed to be effective not only as straight-forward incentive-by-honor schemes, but also as a means of making a very serious attempt to inculcate in the conscript a pride in the detail of his job. It is not enough, in other words, to be simply a noble and committed warrior for the motherland or communism. Pride in a job well done is also essential in this age of modern technology; yet, this is a most un-Russian trait. Russians are not thorough and are mentally untidy. Yet so "stretched" is the military system that this mental untidiness, once the hallmark of a good Russian soldier, is now an embarrassment because of the inefficiency it causes.

The conscript rotation system creates another problem in the man-machine mix, in that every 6 or 12 months 25 or 50 percent of every platoon changes. The

trained specialists leave, the untrained "rookie" arrives, yet combat efficiency must be maintained. Just as in the old Red Army, departing conscripts passed on their rifles to newcomers in an elaborate ceremony; nowadays, it is a question of passing on skills of all types and this is not so easy to accomplish quickly.

Hence the need for constant sustained pressure on sub-units to maintain the level of their combat readiness and to keep technical skills at a high level. As the burden of exerting pressure falls on the sub-unit officer, it is natural that the sub-unit soldiers' success in achieving training norms should contribute to promotion prospects for their commander -- thus providing an incentive in terms both of reward (by promotion) and punishment (by lack of promotion).

There are, of course, those special skills which cannot be learned economically within a two-year conscription period. The creation of the warrant officer rank in 1972 has done much to attract and retain regular NCOs who possess, or who can master, these desirable skills. The system now offers the retired soldier or NCO the chance to re-enlist if he possesses a skill which the Armed Forces need. It is at the warrant officer level that the man-machine mix is probably most successful. The warrant officer, too, is coping very well indeed with low level (platoon) command appointments in almost all arms of service, and the latest debate currently running (1978) in the pages of Voyennyy Vestnik on initiative and devolution of command has even included discussion of allowing warrant officers some independence of action on the battlefield.

Thus, by relieving the officer of low level command, by taking over many of the more tedious duties of sub-unit officers, and by increasingly becoming specialist equipment operators, the warrant officer has made it much easier for the Soviet officer corps to develop into a more cohesive and homogeneous "caste." If the system develops, the Soviet officer will no longer have to demean himself to quite the same extent by performing the trivial tasks that have heretofore been his lot, tasks, which, incidentally, have always been done by NCOs in the British Army.

The officer will be able to concentrate on his command and control duties. There is a decided move in the Soviet military, and must certainly have Party backing, towards a more "elitist" professional officer corps, indeed "caste" is not too strong a word, as the officer corps becomes a closer knit, more privileged and even hereditary sector of Soviet society day by day.

So far, this increase in "caste-consciousness" has probably worked to the benefit of military efficiency. Although there is still a great deal of room for improvement especially among younger officers who are still over-burdened in professional terms; there is no doubt that the professional officer-specialist will in the future be able to make better and more economical use of the manpower resources available to him, not only because he will have more time to devote to the solving of this problem, but also because he will have been taught what methods to apply. He can expect an ever increasing percentage of his NCOs to be the technically qualified warrant officers.

Further "institutional" measures to improve performance by making the best use of existing manpower resources through improved selection (matching man to job) and training are identified in an intersting article in Soviet Military Review.[16] It is clear that in several spheres, intense work is going on to develop psycho-physiological tests to improve selection for jobs. Other examples are given in articles in Voyennyy Vestnik.[17] Much space is devoted to commanders who cannot, or make no effort to, discover individual qualities in their men which make them suitable for special tasks.[18]

Research and development in this field is done under the auspices of the Sociological Research Department of the MPA.[19] The best description known to this author is one which describes a psychological training studio for radio and telegraph operators at the Ryazan Higher Military Command College in some detail.[20] The studio realistically reproduces battlefield noise and visual effects, and offers the opportunity to assess both the temperament and

capabilities as well as the actual ability and level of training of the students subjected to it, combining therefore an aptitude and progress check.

Having spent so long in looking at the theoretical aspects of the man and machine mix and the problems the Soviet military system has in meeting the demands of its own doctrine, I would like to conclude by narrowing down the scope to look at the problems as they have affected one arm of service -- the engineers, with particular reference to their ability to support a high speed offensive.

It can be seen from the length of time and the manpower needed to construct engineering works that, in terms of the high speed offensive which is considered an essential for victory in war, most of the construction works which cannot be accomplished almost entirely by machine will be virtually irrelevant in modern war because of the length of time taken to effect them.[21] Not only, therefore, do the engineers face increasing problems of accomplishing their training tasks, and of maintaining their viability in the face of casualties due to lack of manpower interchangeability. Even if these two problems can be resolved satisfactorily, there is the fact that they may not be able to fulfill all their combat tasks because of an inability to adapt to the changing style of war, especially to its increased tempo. It is interaction of these three facets that the sociological research of the MPA must address. The MPA's operation is seen to be an attempt to solve all three problems simultaneously; the solution of the practical military problems being the most important.

In summary, I would like to outline what I see as the conclusions the Soviet General Staff might draw from a study of the manpower problems they must face in relation to the man-machine mix.

These perceptions and problems can be defined as:

- The demands for increasing the speed of the offensive and combat readiness and mastering the most modern technology are leaving far less time (a) to train for war and (b) to carry out tasks in war

- The latest modern technology, be it aircraft or engineering bridging or AA guns, etc., needs more time to master

- Soviet military doctrine requires that the main aims of a war be achieved in its initial period without reliance on additional mobilization. There is, therefore, an increasing volume of equipment on the battlefield as equipment norms are raised and attained to effect the required correlation of forces of main axes of advance. This means that there can be no "manpower slack" to absorb casualties in the event of war, as a standing army (with GSFG as its first echelon) will have to fight with, more or less only the men and eqipment it has in peacetime

- Consequently, there can be no immediate replacement for the technical specialist who is a casualty. The other members of his team must "cover" for him. But with present, highly technical equipment this is extremely difficult because it means that men must acquire more than one complex specialty

- Due both to the power of modern weapons and the dynamism of modern war, the consequences of an individual's failure can be very great -- a radar operator's lack of vigilance can lead to the enemy achieving a disastrous surprise attack

- The lack of time to train and the need to train in more than one specialty means less "automatic" skills can be acquired. This means increased vulnerability to functional disruption due to the stress of modern war, and particularly to the effect of nuclear weapons

- A short war involves a lack of time to gain combat experience and a consequent increase in the danger of imagination and fear of enemy weapons. The Russian character shows a marked inability to make level and objective analysis, while very little hard fact will be available

Therefore, the hard lesson that is contained within the pages of Military Psychology is that

increases in the qualitative aspects of equipment and tactics without a corresponding increase in the quality of the man who operates and controls them will not only prove to be non-productive, but even counter-productive.

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APPENDIX J

NAVAL MANPOWER AND THE BALTIC MILITARY DISTRICT

By Commander Hans Garde

NAVAL MANPOWER AND THE BALTIC MILITARY DISTRICT

By Commander Hans Garde

> Every ruler who has only a land army has only one hand, while he who has a fleet has both hands.
>
> Czar Peter I.

In his last book "The Sea Power of the State" Admiral of the fleet of the Soviet Union Sergei G. Gorshkov[1] is using this quotation[2] when he through a historical approach justifies the need of the Soviet Union for a navy. In the historical perspective, St. Petersburg has been the center for the development of the navy. Leningrad still is, in respect to shipbuilding and naval education, but the Admiralty is today in Moscow and the operational tasks in this part of the world are executed by the Northern Fleet and the Baltic Fleet. The latter being almost entirely based within the Baltic Military District, which is the framework of this paper. Within this framework a few characteristics related to Soviet naval manpower will be looked at. For this purpose six headings will be used, corresponding to the six requirements to be met by Soviet officers, as they are established by the late Soviet Minister of Defence, Marshal of the Soviet Union A.A. Grechko.[3]

THE BALTIC FLEET

Before turning to these points, a rough outline of the Baltic Fleet will make up the introduction to the subject.

Writing in Red Star for 28 July 1946, Admiral G. Levchenko provided, in the words of Commander Robert W. Herrick, "the first of the pro-Army statements of the Navy's postwar leaders...'The Navy - faithful Helper of the Red Army'."[4] This help was given by flank protection and amphibious assaults. However, most of the sailors fought the war on land, directly under the army's command and the Soviets failed to use their sea power.

Today, Admiral Sergei G. Gorshkov's navy has clearly moved into the oceans to pose a threat to the shipping on which the West depends and to contribute to the Soviet Union's strategic delivery capability. However, the Soviet Navy's traditional tasks remain: to gain command of the four fleet areas, particularly the Baltic, Black, and Barents Seas, and to provide flank support for land operations along the coastal axes.

These are historical tasks whose underlying nature has altered little, although their geographical scope has been somewhat extended, and it has been assumed that they can be carried out in a nuclear environment. The older Soviet warships gravitate to these traditional tasks which also employ the bulk of new constructions of escort size and smaller as well as a substantial share of the submarines. From a geographical standpoint, the impetus given to Russian sea power by the victory in the Second World War was immense, especially in the Baltic. To a greater degree than ever before the Baltic Sea has become a Russian lake, with the Soviet-dominated coastline now lengthened from 75 miles in 1939 to nearly 1,000 miles today. The expanded coastline includes numerous commercial ports and naval bases, some of which (those in the south and west) are normally ice-free. Even so, the Soviet geographical situation is still basically less favorable than was Germany's hardly admirable situation in the Second World War, for Germany at least had a coastline directly on the North Sea. The peninsula of Jutland, covering the Danish archipelago, breaks the otherwise long and unhindered European coastline from Leningrad at the fartherest end of the Baltic to the Atlantic ports on the Bay of Biscay. But Jutland is not only an obstacle to coastal traffic along the Northern shores of Europe; it is also a gangway to Central Europe. It is a wedge of land driven in between the North and the Baltic Seas.

Because of this well-known geographical situation, the Northern fleet is gaining increasing Soviet attention, while the Baltic fleet is no longer in an operational context "primus inter pares."

However, behind Jutland the Germans used the Baltic for supplying the armies on the Eastern Front

during World War II. Today the Baltic serves as a supply route from the Soviet Union to her forces in Central Europe.

If the Red Army were to start marching westwards, an extention of this route would be of great importance in a continental as well as a maritime context.

Furthermore, the Baltic gives direct access to the major industrial centers in the Soviet Union as well as in the two other littoral Warsaw Pact countries. On the coasts controlled by the Pact, the capacity for shipbuilding and repair has been developed to such an extent that it surpasses the entire Soviet capacity of the other fleet areas. The Baltic is therefore, extensively used for trials with new ships, tests of new weapon systems and training of new crews.

As observed by George F. Kennan more than 20 years ago, "It seems preposterous to the Russians that foreign planes and naval vessels should be able to approach with impunity within a few miles of their coastal installations. For these reasons they have shown and will continue to show an extreme and almost pathological degree of sensitivity about their maritime frontier."[5]

The present maritime activities in the Baltic and along the coasts are clear evidence of the truth in this statement. Examples of these activities are:

- o Increased maritime surveillance from ships and aircraft
- o A farther and farther westward push of patrols in the Baltic and the Approaches
- o The reactivation of the Soviet Marines in 1963 and the ever increasing scope of their operations in cooperation with Polish and East-German "Soldiers of the Sea"

The Soviet Union's maritime frontier in the Baltic coincides almost entirely with that of the Baltic Military District. So in this military

district are situated the majority of the operational bases of the Baltic Fleet, the ships, the fleet aviation, the naval infantry, the coastal defense and all the associated logistics. The responsibility for these forces is placed in a naval officer, the Commander-in-Chief, Baltic Fleet, Vice Admiral A.M. Kosov, as shown in Figure 1. Within the Soviet naval organization his position is reflected in Figures 2 and 3; these illustrate that although the shore establishments are situated within the military district, the chain of command goes up to Admiral Gorshkov. This chain of command within the navy itself is particularly important in promoting the new image of an oceangoing Soviet Navy with missions beyond the shores of the Soviet Union. Because the Soviet military establishment has generally conceived the Navy to be an extension of the land forces, intended to function in liaison with land fronts, particularly in the Baltic Sea area.

NAVAL MANPOWER

On this general background the rest of this paper will attempt to take the pulse on Soviet naval manpower. In a period of transition from a purely coastal navy to a blue-water navy also, the Soviet Navy is increasingly confronted with problems, the solution of which tends to emphasize the values, norms, and goals common to most navies. The Russians are more and more accommodating themselves to the international maritime community. They are, on the other hand, also products of Russian heritage and the communist system, both of which are basically continental.

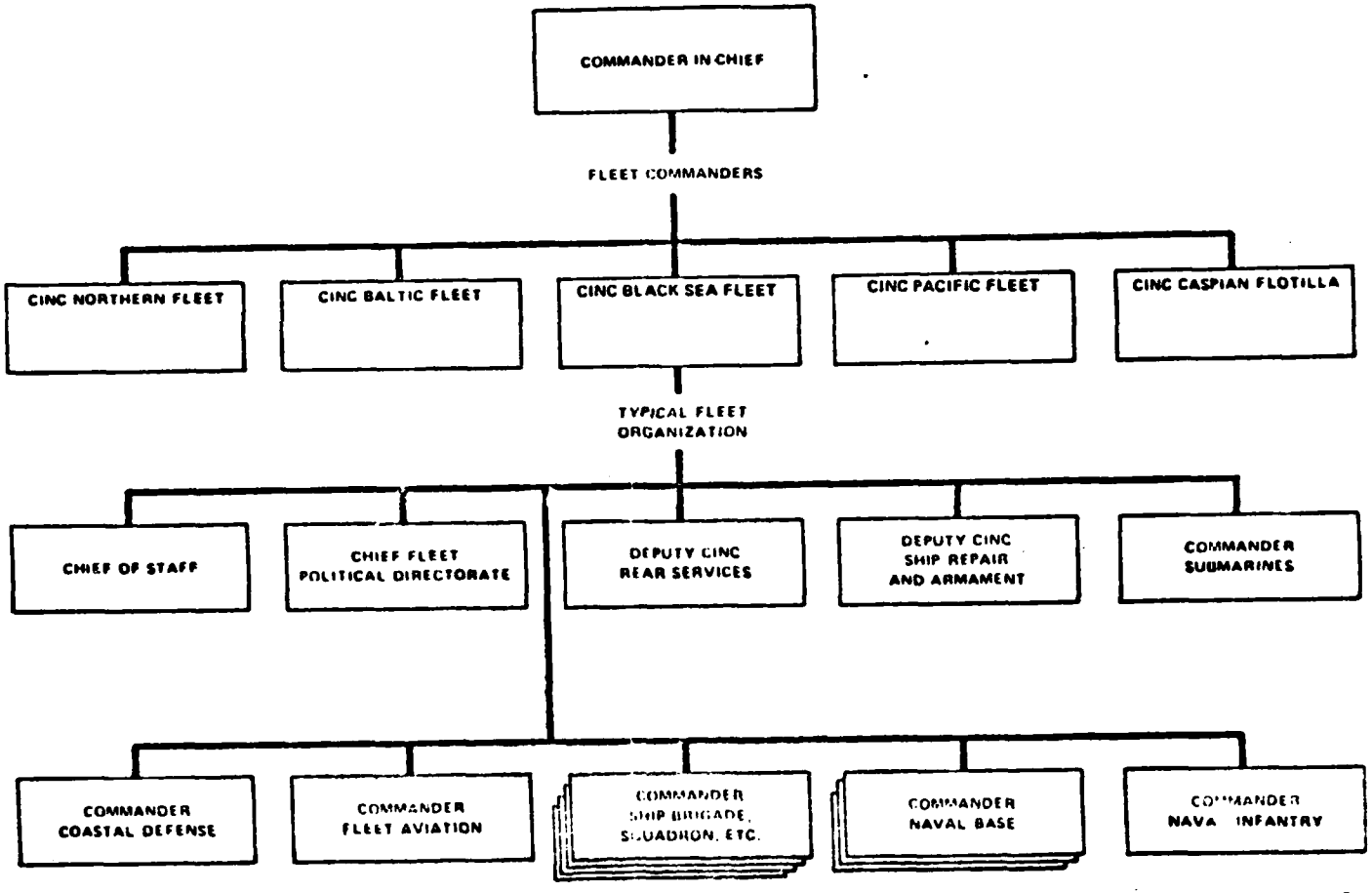
In search of a balance between these viewpoints Marshal Grechko's six requirements to officers will be used as points of departure in the order of priority, as established by the Marshal:

- o The Party and the People
- o Discipline
- o Initiative
- o Leadership and [illegible]

Commander in Chief of the Soviet Navy *Admiral of the Fleet of the Soviet Union*	—S. G. Gorshkov
First Deputy Commander in Chief *Admiral of the Fleet*	—N. I. Smirnov
Deputy Commander in Chief, Chief of the Political Directorate of the Navy *Admiral*	—V. M. Grishanov
Deputy Commander in Chief *Admiral*	—N. N. Amelko
Deputy Commander in Chief *Admiral*	—G. A. Bondarenko
Deputy Commander in Chief *Admiral*	—V. V. Mikhaylin
Deputy Commander in Chief *Admiral (Engineer)*	—P. Kotov
Deputy Commander in Chief *Admiral (Engineer)*	—V. Novikov
Deputy Commander in Chief, Chief of the Main Navy Staff *Admiral*	—N. D. Sergeyev
First Deputy Chief of the Main Navy Staff *Vice Admiral*	—P. N. Navoitsev
Deputy Chief of the Main Navy Staff *Vice Admiral*	—I. A. Sornev
Commander in Chief Soviet Naval Aviation *Colonel General (Aviation)*	—A. A. Mironenko
Commander in Chief, Northern Fleet *Admiral of the Fleet*	—G. M. Yegorov
Commander in Chief, Baltic Fleet *Vice Admiral*	—A. M. Kosov
Commander in Chief, Black Sea Fleet *Admiral*	—N. I. Khovrin
Commander in Chief, Pacific Fleet *Admiral*	—V. P. Maslov
Commander, Leningrad Naval Base, Educational and Training Establishments *Admiral*	—V. M. Leonenkov
Commander, Mediterranean Eskhadra *Rear Admiral*	—V. I. Akimov

(Source: Captain William H.J. Manthorpe, Jr., US Navy: The Soviet Navy in 1976. Proceedings, May 1977, p. 213.)

Figure 1 - Soviet Command List, 1976



(Source: Office of the Chief of Naval Operations: Understanding Soviet Naval Developments, Washington, DC, 1975.)

Figure 2 - Soviet Naval Organization

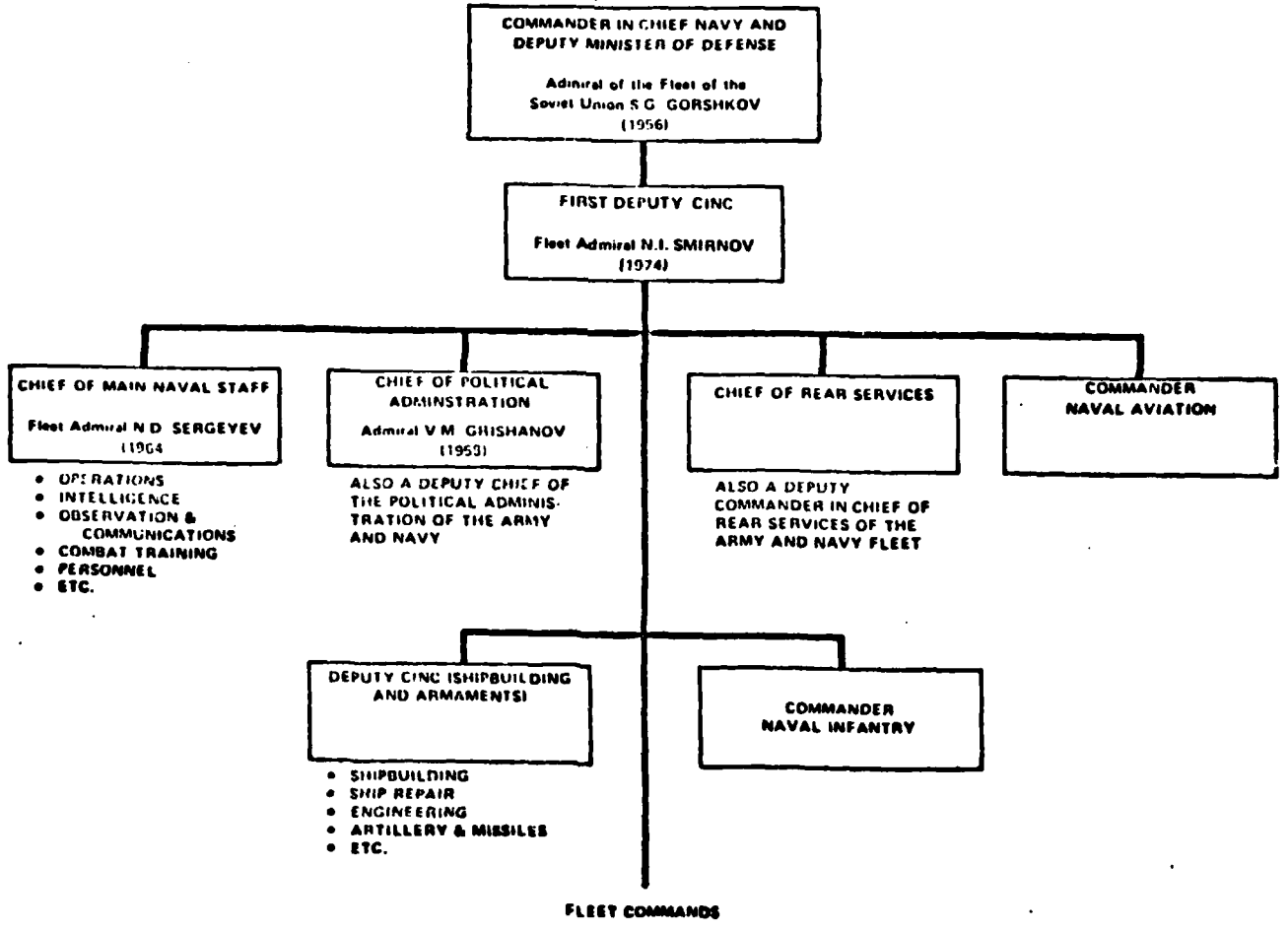


Figure 3 - Soviet Naval Organization

o Training and Knowledge

o Educational Techniques

In order to limit the scope somewhat, the officers' corps will attract the main attention. This is because of Marshal Grechko's statement: "The officers form the basis, the backbone, of the Army and Navy. A lot of the combat preparedness and fighting efficiency of units and warships depends upon the standard of the officers' training, their moral and political qualities and their efficiency. The Communist Party is aware of this and has been concentrating on training and educating its officers."[6]

THE PARTY AND THE PEOPLE

"Above all, Soviet officers must be totally committed to communist ideals and be utterly devoted to the Communist Party and the Soviet people."[7]

Certainly a key factor in the Soviet Navy is the omnipresent political infrastructure, as shown in Figure 4. The naval-political organization gives the political officer all the needed opportunities to report on his military contemporaries and seniors. This is a constant source of irritation to the regular officers. On the other hand, today's political officer, the zampolit, is much more accepted in the wardroom and by the crew than his predecessor, the political commissar, who ranked with the commanding officer and occasionally overrode the latter's decisions in purely military matters. That dual command system is now replaced by the principle of one-man command. Thus, on larger warships the political officer generally ranks third, after the commanding officer and the executive officer. On smaller ships the duties of the executive officer and the political officer are often combined.

The naval and political leadership within a unit are therefore formally exercised by one person -- the commanding officer. This does not, however, mean that there has been any relaxation of Party control. On the contrary, it must be assumed that the principle of

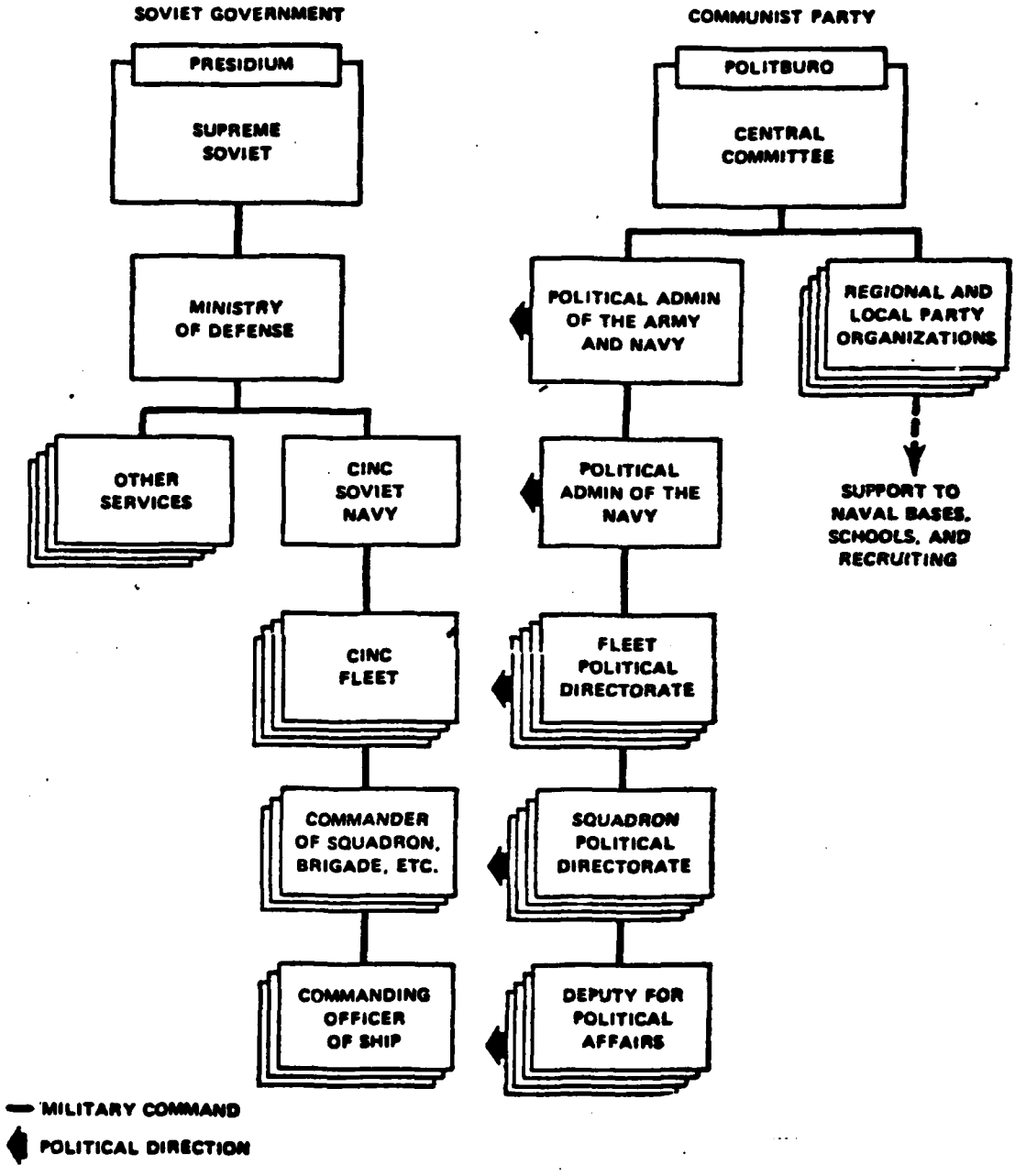


Figure 4 - Soviet Naval-Political Organization

one-man command relies on the Party for its continued existence. It is evident that the armed forces have a far greater potential for the exercise of physical force than any other element in the Soviet state. No one should doubt that the Party will ensure that a proper mutual relationship between the Party and the armed forces is maintained at all levels. The military authorities have to guarantee that the present level of Party control in the Navy will not be jeopardized because of officers not being sufficiently devoted to the Communist Party.

An indication of the naval officers' loyalty to the Party may be found in the fact that reportedly about 90 percent of them have membership in the Communist Party or the Komsomol.[8] For comparison, members of the Party constitute in total only some 5 percent of the Soviet population.[9] These figures may on the other hand indicate that, although party membership is theoretically voluntary, a great deal of pressure is exerted on officers to affiliate.

The expanded scope of fleet operations with many calls on foreign ports all over the world is often prized by Soviet admirals. But the authorities in the Party are not quite so content with the possibilities of decreasing political reliability. Apparently, they fear what they call ideological subversion. To counteract this, several different measures are taken aboard through political lectures and required readings, while naval personnel on their few hours shore leave go in groups often under the supervision of an officer.

While the political reliability may be discussed, there are no reasons to doubt the devotion to Mother Russia. The well-know Russian patriotism is backed by an intensive propaganda campaign, glorifying Russian maritime traditions, and, not least, the Navy's role in the Great Patriotic War. Admiral Gorshkov's books are often quoted examples.

Although, only the oldest and highest ranking officers have combat experience and a memory of the war, it is well worth to remember that the naval officer corps is made up largely of Slavic peoples -- Great Russians, Belorussians, and Ukrainians.

Members of this ethnic group occupy virtually all positions of responsibility and authority in the Soviet Navy, and they come from that part of the Soviet Union which suffered most in World War II. It has been suggested that the Great Patriotic War is so valuable as a propaganda device, because it lends itself to blurring the distinction between the devotion of ethnic Russians to Mother Russia and the attachment of minority nationalities to their own regions.[10] These peoples are melded together in common loyalty to the broader entity of the Soviet Union. The patriotic pride in the national military victory over the Nazis and political commitment to the Soviet system are thus fused. This is, however, not necessary for the naval officers in the Baltic Fleet.

DISCIPLINE

"Secondly, the Soviet officer is expected to show a high sense of discipline and be efficient in carrying out orders of his superiors."[11]

Discipline is a key word in Soviet terminology. It is often used by the leaders and it is of paramount consequence to members of the Party. The importance attached to military discipline is therefore natural when seen from a national as well as a military point of view.

At schools, aboard ships, and ashore, officers and men are trained to adhere strictly to rules and regulations. Automatic obedience is required. Even on small ships no deviations from the regulations are tolerated. Such is the official attitude toward discipline. This harsh and often extremely formal discipline is pursued with reference mostly to its value in World War II.

There are, however, signs that certain changes may be under way. Admiral Gorshkov, in his Navy Day interview in 1976, did point out "that the time has come in the Soviet Navy when a commander must understand and relate to his men, commanding by respect rather than by more traditional and harsher means."[12]

Navies are today manning complicated weapon systems with specialists. In order to attract qualified personnel in competition with civilian firms, western navies have adjusted the regulations to be more in consonant with norms outside the military. The need for a similar development in the Soviet Navy may have been the reason for Admiral Gorshkov's statement. And the mutiny in the Baltic may have caused it.

Almost on the date of the famous shot from the Russian cruiser Aurora, with which the Baltic Fleet triggered the Russian Revolution in 1917, a remarkable mutiny took place in Riga on 9 November 1975 onboard the large ASW ship Storozhevoy.

Before the mutiny, the Storozhevoy had been mentioned in a rather lengthy article in Red Star.[13] The ship had not done very well in the socialist competition between ships. During 1974 "The Minister of Defence, Marshal Grechko, went to sea on board this ship and evaluated highly the mastery of the anti-submarines...In a word, the Storozhevoy had all the requirements necessary to win first place in the ranks of outstanding ships...Yet, at the end of the training year it became clear that the ship could not do better than fourth place." The article attributed the problems of Storozhevoy to a laxity of political awareness and morale and discipline aboard the ship. One article during 1975 related a successful ASW exercise by the Storozhevoy but gave no other indications of her standard.

According to official information from the Swedish Ministry of Defence, it has been reported,[14] that the trouble began when the Storozhevoy's crew was denied shore leave. The reason should have been that the entire Soviet fleet had been placed on alert at the height of the fighting in Angola. Led by the ship's political officer, the crew should have locked the commanding officer and most of the officers in their cabins and set the destroyer on course for Sweden.

As the Storozhevoy passed through the Irbe Strait into international waters, Russian planes and naval pursuit vessels appeared and opened fire. The

mutineers surrendered, and the ship returned to Latvia, where it was reported hidden in a protected harbor and quickly repaired.

In April 1976, the Storozhevoy passed the Danish Straits, enroute via the Suez Canal to join the Pacific Fleet. On 10 August 1976, Vice Admiral V.V. Sidorov, First Deputy Command-in-Chief Baltic Fleet, gave a press conference during a naval visit to Copenhagen. Confronted with questions about the mutiny, he flatly denied any knowledge of disciplinary problems within the Baltic Fleet. "Mutiny on a Soviet warship in the Baltic is unthinkable."[15]

INITIATIVE

"Thirdly, the Soviet officer is expected to display initiative and be able to act on his own."[16]

Late in 1975, Vice Admiral Sidorov wrote an article entitled "Competition: Experience, Initiative, One More Reserve." He pointed out that in the competition between two units under equally experienced commanders, the success of one unit and the shortcomings of another are often traceable to the difference in initiative between commanders.[17]

The balance between strict discipline and the promotion of initiative seems to have tipped too much in favor of the discipline. Although, these factors are not exactly two sides of the same coin, the Soviet society and particularly the bureaucracy do not generally favor initiative. Within the armed forces the strict adherence to rules and regulations tend to develop an attitude of fear for responsibility and reluctance to take initiatives. When Marshal Grechko ranks the requirement for initiative after the requirement for discipline it seems to be in harmony with the actual situation. But it surely is a problem for the Soviet Navy with expanding operations and changing missions, which require that Soviet naval officers and sailors are able to handle unusual situations without awaiting orders.

Consequently, Admiral Sidorov and many other high-ranking officers point to the importance of initiative. The traditional maritime belief in "the

man on the spot" is increasingly gaining support in the Soviet Navy. But there is a long way to go for a navy in which the commanding officer of the destroyer Dostoyny received a medal for having carried out the mission during a severe three-day storm while on a training cruise.[18] In a blue-water navy, ship handling in adverse weather is regarded as a prerequisite and not as an exception.

LEADERSHIP AND MANAGEMENT

"Fourthly, the Soviet officer must exercise his will as commander and be a good manager of his men."[19]

From these words, used by Marshal Grechko, there seems to be quite a distance to the words with which Captain Roskill, R.N., opens a chapter on the management of men.[20] He is of the same opinion as John Buchan who, in analyzing the qualities of the great leaders, placed human sympathy very high. "We see it," he wrote, "in Julius Caesar's strange magnanimity, in Lee's tenderness and chivalry, and in that something in Napoleon at his best which bound the souls of his veterans to him, and perhaps above all in the many-sided genius of Nelson." In conclusion, Captain Roskill points to the fact that human sympathy always works in both directions -- the possessor of it attracting it also to himself.

Rear Admiral Sumner Shapiro, USN, Deputy Director of Naval Intelligence, Office of the Chief of Naval Operations, states that "leadership is the Soviet naval officer's most serious shortcoming."[21] Amongst the many factors contributing to this generally accepted low standard, lack of human sympathy is probably decisive. It is however a result of the very system. The regular Soviet naval officer is a planner and organizer. He is also very much manually involved in operating, maintaining, and repairing equipment. The political officer on the other hand, is in charge of political education and, in general, personnel matters, welfare, and recreation. To a certain extent, it could be said that while the regular officer turns to the equipment, the men turn to the political officer. The principle of one-man command is not synonymous with one-man leadership.

TRAINING AND KNOWLEDGE

"The fifth requirement is that the Soviet officer should have the benefit of highly qualified professional training, have a good general education and an intimate knowledge of military technology."[22]

The odd relationship that exists between the Soviet naval officer and his subordinates is probably also a reflection of the general education of the privileged naval officer corps. Since its founding in World War II, the Nakhimov School System has provided the navy with most officer candidates. Boys -- most sons of Party leaders or naval officers -- enter at the age of 7. They complete their entire primary and secondary school education in these schools before entering one of the 11 naval academies, the so-called higher naval schools. Naturally, cadets are recruited from other schools also, but officers from the Nakhimov School system are reported to set the pace and the norms. Without any doubt, these officers are very dedicated to the navy and their fellow officers. They are well educated, particularly in technical skills, but the possibilities for their understanding how life is outside the navy are limited. A large number of conscripts come from this other way of life.

EDUCATIONAL TECHNIQUES

"Finally, the Soviet officer must be fully versed in educational techniques."[23]

Indeed, references to the lack of understanding between officers and sailors are often heard. Phrases like "loyalty to the collective," "a collective atmosphere"[24] and the crew is "a single combat family" are used. Sea training is believed to help in solving this problem. In Admiral Gorshkov's words, "long ocean voyages are the best school for enhancing naval training and the special and tactical training of personnel."[25] First Deputy Commander-in-Chief of the Soviet Navy, Fleet Admiral V.A. Kasatonov, in 1972 said: "Ocean cruises have become the main means of training our Red Banner fleets. In cruises of vigilance the naval men get a general review of their learning, acquire sound knowledge and naval tempering, and practice solving operational training tasks

under complex conditions of the seas and oceans."[26] It is justified by reference to how naval cadets were divided into two groups, one of which did much of its training at sea on long voyages and the other at the naval school. The former received higher grades on an examination that was given to both groups.

Certainly, a change in the ratio of practical to theoretical training has taken place in the last few years. So, recent graduates from the naval academies have spent about 10 months in active naval units.[27] Again, however, much of this time the cadets spend in special training ships. And the time at sea does of course for the Baltic Fleet depend very much on the rather rough weather and the ice conditions during the winter months.

Finally, a particular responsibility of the Baltic Fleet should briefly be mentioned: that of cooperations with the two other Warsaw Pact navies in the Baltic. The almost annually executed amphibious exercises are much published. They demonstrate a high degree of interoperability and coordination in such complicated operations. In Admiral Gorshkov's words: "Combat training of Soviet sailors takes place in close cooperation with navies of...the Warsaw Pact. Joint maneuvers...have become a great school for sea training."[28]

CONCLUSIONS

On the background of those six qualities, listed by Marshal Grechko, this paper has looked at Soviet naval manpower. Four conclusions are to my mind noteworthy. First, the content, and especially the order of priority, of Soviet naval qualities seems to be different from the standards required of western naval officers.

Secondly, examples of the situation within the Baltic Fleet have been used to illustrate how well these qualities are performed. It has certainly not been the intention to show that the Baltic Fleet and the Soviet Navy have a serious lack of professionalism or great operational weaknesses. We should not believe so. But on the other hand, they have problems, constraints, and weaknesses. Their most

published shortcomings are in the third and fourth requirements: initiative and leadership. But their problems might well be of a more serious character in the second requirement: discipline. The reported mutiny in a peacetime fleet and the flat denial hereof might well be the indications.

Thirdly, the Soviet military leaders advocate the fifth and sixth requirements: training and educational standards as ways to improved performance. Ocean voyages is in this context of special importance. But the basic problem, which is not raised in public in the Soviet Union, is probably much more concerned with the first requirement and the relationship between the Party and the Navy.

Fourthly, the Russians are more and more accommodating themselves to the international maritime community. The Soviet Navy has expanding operations and new missions with a need to trust "the man on the spot." Although developed from the dual command system to the principle of one-man command, the relationship between the Party and the Navy continues to create problems because the formal and real leaderships do not completely coincide.

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APPENDIX K

PATTERNS OF SOVIET INVOLVEMENT IN A LOCAL WAR

By Amnon Sella

PATTERNS OF SOVIET INVOLVEMENT IN A LOCAL WAR

SOVIET RESOURCES AND FLEXIBILITY FOR "LOCAL WAR" OPERATIONS: EXTENDING THE MD?

General Background

The USSR has been deeply involved in the affairs of several Middle Eastern countries. The political and military conduct of the Soviet Union has been closely examined and analyzed by many interested groups during a period of more than two decades. In this paper we are concerned to highlight only those aspects of Soviet conduct in the Middle East that are pertinent to a possible Soviet military involvement in the area.

Over the years the Soviet Union has made it quite clear that it could not remain idle if a client state or a friendly regime was in mortal danger. At times, as in 1956, declarations to this effect were phrased in blood-chilling form, at other times the threat, if no less ominous, was somewhat more specific, like the warning that any attack on the Aswan Dam might well trigger off Soviet retaliation. In 1973, the USSR wanted to have the USA and through it Israel believe that it was seriously considering the possibility of direct involvement.

Until 1973, doubts as to Soviet capabilities may have had foundation, but after what happened in 1973 and since then, I do not think we can still permit ourselves any illusions. If the Soviet Government decides to involve the Soviet Armed Forces in a local war in the Middle East, the Soviet military will be perfectly capable of carrying out the assignment.

Given the formidable potential acquired by the Soviet military in the last decade, Soviet politicians must be very cautious indeed when they assess the gains or losses involved in having recourse to military means in place of diplomacy. It is more likely than not that if the politicians do turn to the

military for backing, the answer will be that the capacity to go ahead is there. Today the Soviet military is capable of coping with many assignments in the Middle East -- provided US forces can be neutralized.

Fundamentally, then, a Soviet decision to send forces to fight in a war in the Middle East would be a political decision. It must be remembered, however, that what would seem the optimal decision from a military point of view seldom corresponds to the way a crisis usually develops. From a purely military viewpoint, the best way to keep the USA out would be to act fast and secretly before the Americans had time to organize, but things generally develop differently and the decision whether or not to get involved in direct fighting would have to be taken under crisis conditions. It is to these circumstances that we shall now turn our attention.

Pattern of Involvement

The first type of Soviet involvement in the affairs of a given country is military assistance by advisers and technicians, already on the spot. Our information is that these people are highly qualified and very far from the inefficiency and bungling in organization and maintenance so often criticized in Soviet military publications. In Egypt (in the past) and in Syria (at present), apart from their role in the general training of the army, these advisers were concentrated in several specialized and critical sectors of the military machine. The position of the Soviet advisers in Egypt prior to July 1972 was a rather peculiar and not typical story. The USSR had been required by President Nasser to take over the air defense of Egypt in the circumstances that developed during the "War of Attrition" (1969-1970). Bringing their forces in Egypt up from about 3,000 in 1969 to about 20,000 in late 1970, the Soviet "garrison" in Egypt operated as an air defense district, complete with pilots, missile-belts, radar installations, AA guns, ground services and maintenance crews, and all this quite apart from the Navy. It has repeatedly been stated that Soviet advisers in Egypt could be found down to battalion level. This is not surprising if we consider the figures involved. About 75,000 men

serve in the Egyptian air defense: at a safe guess, about half the Soviet contingent in Egypt was assigned to air defense, this means in a simplified way that there was one Soviet adviser or technician to about every ten Egyptians. Even without working it out in such simplified terms, we can still see quite easily how the Russians could be in charge at battalion level.

It is worth mentioning in passing that criticism is often voiced in the Soviet press regarding the attitude of commanders to their subordinates and superiors to their juniors. This holds for the ground, air, and naval forces. When we come to assess the work of Soviet advisers in Egypt, we must conclude that they did a very impressive job especially in air defense, but that their human relations were a critical failure. The Russian advisers were abusive, rude, and impatient -- just an extension of their much-censored behavior towards their own soldiers at home.

The Syrian story is not altogether different. Of course there are fewer advisers in Syria, but there, too, about 1,500 out of 3,000 are engaged in air defense, and more specifically the defense of Damascus. (I shall come back later to the functional side of the Soviet deployment in both Egypt at the time and Syria.) In the cases of both Egypt and Syria, many components were present of an all-round military machine. There were naval facilities -- piers and docks and the rudiments of submarine installations. For the air force, there were airfields, which in turn were incorporated in the air defense system of Egypt and Syria respectively, with some crude beginnings of an overall advance warning system. An elaborate command and control system was in operation for anti-aircraft defense, both passive and active. For intelligence, the USSR has its independent network, a system based on intelligence ships in the Mediterranean, a squadron of MIG-25s and a regular series of satellites, usually launched from Plesetsk and Turatam, and closely monitored by the station in Evpatoria.

The whole machine was partially activated on several occasions, and can be fully mobilized again should the need arise. Furthermore, if a political

decision were taken to intervene, a well-entrenched contingent of advisers could render great service to the incoming forces.

The second type of Soviet involvement is in military aid by sea or by aircraft. There is an obvious difference between shipment and airlift. The volume of the cargo that can be delivered by sea is much larger than that delivered by airlift. There is, however, an eight-day's time lag between the first alert that something is afoot and the arrival of the first reinforcements in the Mediterranean. There is no reason to assume that the period would be any shorter for a freight ship. In order to deliver military aid in time, before a war in the Middle East is over, the Soviet military must have at least a fortnight's warning if not more. The shortcomings of sea shipments are that they can hardly be secret: sudden loading of numerous ships and the sailing of combat ships and submarines from other fleets to reinforce the Mediterranean squadron are bound to draw attention. With all the experience the Russians have had over the last five years, they still encounter some difficulties even in technical matters, such as securing the cargo on trucks and organizing the truck's approach for loading or unloading. Then again the harbors the shipments are destined for are likely to be at least closely watched if the war has not yet broken out, and most likely bombarded or subject to air raids even at the very time of arrival. The approaches to the harbors and the way from the coast to the front lines are likewise subject to air raids. In Syria, moreover, the harbors are small and very crowded. Still, it should be pointed out that during October 1973, the USSR delivered far more cargo by sea than by air.

Airlifts are far more complicated, but then they are also more effective. During the October 1973 crisis, the Russians flew 934 missions of AN-12 and AN-22, carrying about 15,000 tons in all. On at least one such occasion, such deliveries are known to have changed the volume of fire on a given sector of the front within hours of delivery. The airlift to the Middle East in 1973 and the recent airlift to Ethiopia have thrown light on the capability of Soviet overseas large-scale logistics -- and on several of their difficulties as well.

The Soviet air fleet is able to support one ally or more in a long drawn out local war with a high rate of attrition, using about 15 percent of all its available military cargo aircraft. Both in 1973 and in 1978, about 225 aircraft took part out of about 1,500 taking off from several airfields in the Soviet Union and the Eastern Bloc at intervals of about 20 to 25 minutes. If we divide 15,000 tons by 225 planes, we arrive at an average of about 60 tons per aircraft, but, of course, this is misleading since the loading capacity of the different aircraft is not the same. The AN-12 can carry its maximum cargo of 36 tons a distance of 3,600 km, while the AN-22 can carry 88 tons a distance of 5,000 km, and the Il-76 can carry 40 tons the same distance. There are fewer AN-22s than AN-12s in the Soviet air fleet, and we have no information that the Il-76 took part in the 1973 airlift. In both 1973 and 1978, assembling the war material that had to be taken to several airfields caused some interruption and dislocation of the railway system. In 1973, some airfields in Bulgaria and Yugoslavia were used. For the huge operation in Ethiopia in 1978, the USSR was obliged for the first time, to draw on military stockpiles from beyond the Urals. Army stores in Tashkent and Alma Ata were also used. Although the flight routes are well-defined and well-known to the pilots and some notice, even if a short one, was given to the countries concerned that there would be over-flight and passage through the Bosphorus, the incoming planes still had to face difficulties in communicating with airfield controls. All this was done in 1973 in the teeth of air raid hazards, and such risks would certainly be taken into account by Soviet pilots in any future war in the Middle East.

The third type of involvement is a direct one by Soviet troops. If the Soviet Government were to decide to take such a course, we should be likely to witness an orchestration of all the above mentioned components in order to facilitate the landing of troops.

The first in order of probability that presents itself is the use of the airborne divisions. Rumors of their possible use were rife in 1973 and the subject deserves further elucidation. There are seven

airborne divisions currently operational in the Soviet armed forces, and one more is in process of creation. (At the end of World War II there were nine divisions, organized in three "corps".) An airborne division is a highly specialized force, coming directly under the Ministry of Defense and not the Chief of Staff. This status emphasizes their uniqueness and the delicate political considerations involved in their use. These divisions have often taken part in regular and irregular exercises of the Soviet armed forces, but for all that, they differ from regular ground forces divisions in many respects. An airborne division consists of 7,500 men in three regiments. Recruits are handpicked upon enlistment. They undergo rigorous training in specialized schools for airborne troops. The ideal graduate is a tough, political-minded soldier, who can function as an accomplished commando fighter. For that purpose an effort is made to have each recruit parachute at least five or six times during his first year in school. Parachute training includes free-fall.

All the regular weapon systems of an airborne division are air mobile, including artillery, transport and armor. (In the Dvina exercise in 1971, an airborne division with 160 vehicles was landed in 22 minutes.) Since the airborne division's [illegible] enemy upon landing is the tank, the division is literally packed with anti-tank weaponry: the Sagger and the Swatter, RPG, ASU-51 and ASU-85 assault guns, and BMP with the 76 mm smoothbore gun. The artillery section is also impressive: 122mm Howitzer, 120 mm mortars, the 16-tube, 140 mm multiple-rocket launcher, and last but not least the Frog tactical nuclear missile. The anti-aircraft arsenal includes the 23 mm ZSU and the SA-4 with its excellent mobile radar system.

The airborne division is thus well equipped for war in the Middle East, having been through many complicated exercises both in desert conditions and on the tops of snow-covered mountains. The training, assignment, deployment, and past experience of these troops indicate that the airborne divisions are not meant to operate as single formation of seven divisions. Their special training and highly-specialized assignments make each division into a typical commando unit or at the most, the backbone

of a larger, "softer" force. This would appear to have been the assignment of the airborne division which took part in the invasion of Czechoslovakia in 1968. The deployment of the force also suggests that in case of an emergency in the Middle East, one of two divisions may be mobilized -- either the 104th Guards of Korovabad (North-Caucusus) or the 103rd Guards of Vitebsk (Bielo-russia). If it is the 103rd, it will have to fly some 3,000 km, the distance between its location and northern Syria, or more than 3,500 km if it is going to land in Egypt. The first distance is within the maximum range of the AN-12, but the second is just beyond it. The AN-12 (of which there are about 800) can fly to its maximum range carrying about one platoon of men with 250 kg per capita. A rough calculation gives about 30 airplanes for the division, without its heavy equipment. If, as an example, we take only three items of the standard equipment of an airborne division, we find that the weight of the ASU-57 is 5.4 tons, of the PT-76 14 tons and of the BRDM-APC likewise 14 tons. If we take into account only the 160 vehicles mentioned above in connection with the Dvina exercise, we end up with 2,000 tons per division -- and the vehicles are only part of the division's equipment. It must also be taken into consideration that one or even two airborne divisions may not prove decisive and that a lot more troops may be needed in order to prevent "Vietnamization" of the war. In order to have a decisive effect, the USSR would then have to send in MRB, a far more complicated operation.

(It will be noted that so far I have dealt mainly with the logistics and not with the operational side.)

None of these soldiers and probably few, if any, of their high-ranking officers have seen actual combat. Young, energetic and on the whole well-trained, they are nonetheless inexperienced. If they are sent to the Middle East, they are going to land in a hostile environment, far from home, to take part in a war they may not fully understand. Upon arrival they will either have to take command or else be subordinate to a local command. There will be impossible language barriers, probelms of communication, command and control. For both the

Soviet armed forces and for the Arab forces, command and control still present a major obstacle. Soviet pilots are severely censured by their superiors for poor management of flying controls, poor targeting, lack of flight discipline, and poor communication with ground controls. The combination with Arab airfield systems, flying controls, and radar surveillance will probably pile on the agony!

Conclusions

Direct involvement of Soviet forces in a local war in the Middle East would thus be a very dubious undertaking. The primary Soviet considerations would have to be political: whether or not to risk a confrontation with the USA. If they decided to go in, they might do so by degrees, testing the reaction of all the parties concerned -- particularly the USA -- at each level of escalation. In order to be fairly ready for combat, the Soviet military needs notice of at least two weeks and probably more, depending on the deployment of their naval units and the preparedness of their satellite launching sites.

Last, but not least, if war breaks out in five or ten years' time (it might well happen before that), the Russians will have to consider tactical nuclear fire exchange.