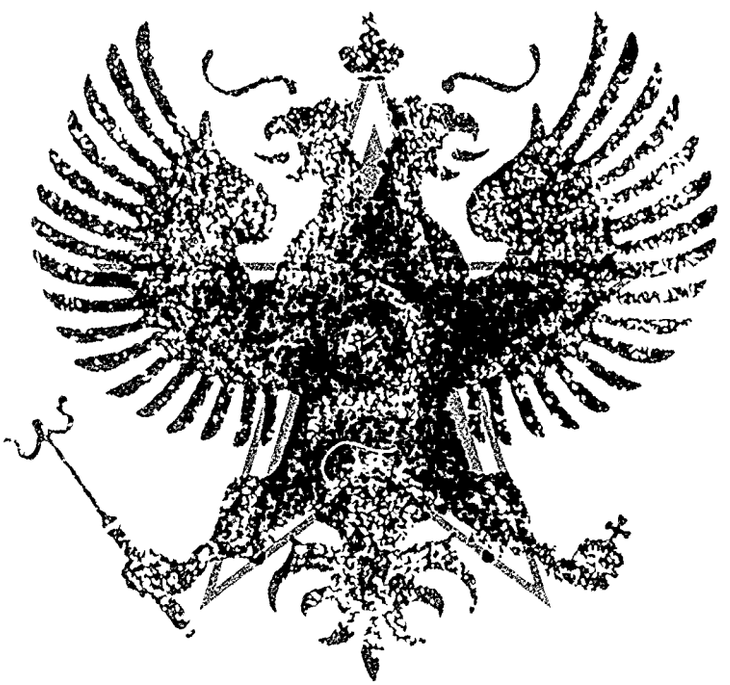
TRANSFORMATION IN RUSSIAN AND SOVIET MILITARY HISTORY



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The Twelfth Military History Symposium

1–3 October 1986
United States Air Force Academy

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and
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Preface

Russian history and culture has long fascinated Westerners, but only in the twentieth century has Russia had an impact on people everywhere. Why is this true? Why is the Soviet period of Russian history extraordinary in Russia's millennium-long existence? Several reasons come to mind. In the twentieth century Russia has served as a dramatic example of the challenges encountered by all late modernizing societies. For a time, the Soviet Union seemed to incorporate the dreams of both Marxism and nationalism. It offered an unprecedented developmental path to modernization while maintaining both political and economic independence. Many Soviet citizens and some foreign observers correspondingly escalated their view and understanding of Russia's historical experience to universal levels, seeing the Soviet Union as embodying the sufferings and humanitarian aspirations of people everywhere, in all cultures and in all places.

Within this broad context, other factors have also made the Soviet period of Russian history extraordinary. Among them is the special concern of this book—Russian experience with modern war. War is arguably the central fact of modern Russian history. Encounters with modern warfare have certainly transformed Russia in the twentieth century. In particular the Soviet period of Russian history has been uniquely shaped, possibly distorted, by the devastating results of global war. One outcome has been that Russia's influence has been extended globally, even into space itself.

To date, however, the centrality of war in the Russian historical experience has not been well integrated into the general understanding of Russian history in the West. Several factors have contributed to this, not the least of which has been the emotionalism engendered by the extravagant mutual hostility of Communists and anti-Communists. Unrealistic optimism concerning the impending demise of capitalism on the one hand, or of socialism on the other, colored interpretations and obscured evidence. Only occasionally were partisans on both sides forced to accommodate themselves to the stubbornness of historical data.

In addition to the problems generated by this emotionalism, the subject of modern warfare itself is exceptionally complex and generally underestimated intellectually by both civilians and military professionals. The subfield of military history has not always kept pace with modern warfare as it has evolved from the eighteenth to the twentieth century. The rapidity of the changes in the craft of war combined with the intricate and interrelated nature of the political, social, and economic factors affecting modern war to

challenge, if not defy, the conventionally trained historian. Military professionals, politicians, and the general public find themselves in the same situation. As a result the Russian military experience, particularly over the past century and a half, has not been well understood, especially by the nonspecialist. Even specialists who study and interpret Russian and Soviet military history have been notably unsuccessful in effectively informing military professionals, politicians, and the general public.

The Twelfth Military History Symposium was designed to address this enormous problem, modestly by arriving at a definition of the subject in the organization of its program and associated topics, less modestly in attracting some of the Western world's leading specialists to address specific subjects (information on the contributors is at the end of this volume), and ambitiously, in view of the work remaining, to suggest tools and approaches for future study. The symposium's planners began with a major assumption, that the rise of the Soviet Union as a military superpower ranked among the leading events of recent global history. Further, they concluded that some roots of Soviet military capabilities existed before the twentieth century in continental resources, in the experience of a centuries-old imperial state, and in well-established military traditions and institutions. This conclusion brought the planners to another assumption, that a better understanding of the developments which led to the transformation of the Russian Empire into a military superpower would lead to a more comprehensive and accurate view of the Soviet Union and to a fuller appreciation of Soviet military power today. The readers of this volume are in a position to judge for themselves the validity of these assumptions and conclusions.

Given the limits of sessions and presentations spread over forty-eight hours, the program had to be simple, broad, and inclusive, with all the hazards that suggests. The guiding historical view that came to influence the symposium's structure can be summed up in the following fashion: the military heritage of Imperial Russia was shaped by many of the same problems of physical environment, domestic reform, and great power status in a hostile world which later beset Soviet military professionals. Dealing with these problems shaped a military tradition which eventually served as a basis for the Soviet Army. The development of an adequate intellectual basis for the Soviet military profession became increasingly critical for the evolution of these new military forces. As the Soviet state modernized Russia's war-making capability, Communist leaders envisioned using that capability in defense of the Revolution and in extending both Communist and state power.

Hitler's invasion of Russia in 1941 proved an epochal event, providing the opportunity for an extraordinary assertion of power, far beyond that of Napoleon's invasion in 1812, known to Russians as the Patriotic War. World War II also attested to major successes by the Communist Party: industrializing for war, contributing to the theory and doctrine necessary for success in modern warfare, and providing the professional military forces with the weapons and the leadership required to achieve the goals of the Soviet state. The Great Patriotic War, as World War II is known in the Soviet Union, mobilized and focused the nation's resources, its people, and

its military might at new and higher levels of capability than Russia had ever known before. This achievement and its ensuing results led to the emergence of the Soviet Union as a military superpower. In this capacity, the Soviet Union was able to project its power to a degree unparalleled in Russian history—a transformation with immense potential. This broad view focused the examination of the symposium's various topics and themes, orally in presentations and discussions, and then more fully in the essays of this volume, composed prior to the symposium and refined in its wake.

All historical records are incomplete and these proceedings are an imperfect record. The introductions and commentaries exhibit some discontinuities because their authors did not see the revised versions of the papers contained in this volume. The members of the international panel which closed the symposium commented only briefly because of time limitations, but subsequently submitted the written observations in this volume. Discussions with the audience at the symposium's sessions and the banquet presentation by Brig. Gen. Roland Lajoie, USA, on "The Soviet Fighting Man" are not included here because of space limitations. They must remain the special pleasure, benefit, and memory of the symposium's participants.

What distinguishes this book from others in Soviet studies and Russian military history? In Soviet studies a plethora of books and articles on military issues exists in a contemporary framework from the vantage points of national security and international relations. Very few are written in the historical perspective. In Western writing on Russian military history, the number of historians and uniformed specialists recognized as truly outstanding is surprisingly limited—a fact which became forcefully evident to the symposium's organizers as they combed Germany, France, Great Britain, and the United States for qualified contributors. This volume views the subject historically and may be unique in its combination of overall program, individual contributions, and suggestions for future research. In the structure of its program it is a survey of modern Russian military history. In its individual contributions it provides a good bit of specialized "post-holing." It possesses a pragmatic, professional military view in having sought out contributions by qualified military contributors and in providing a bibliographical aid. This aid is a significant indicator of the current professional level of Soviet military studies in the West, offering military specialists, scholars, and graduate students a readily accessible tool for further research and study.

The Great Patriotic War demonstrated both capabilities and deficiencies in Soviet society, many still unexplored by Western specialists. The ability of the Soviet Union to sustain itself in the face of extraordinary losses and destruction is indisputable. Why this was true is less clear. It may be that this was the major contribution of the Communist Party, but the issue remains unestablished, at least in Western minds. This question is related to one of the symposium's major gaps, the question of the role of the "rear" or the "homefront" in Russian wars and in particular in World War II. The poverty of Western scholarship on the Russian and Soviet "rear" caused planners for the Academy's 1982 military history symposium to leave out Russia and the Soviet Union altogether at that symposium, which was devoted to the subject

of the homefront and war.* Four years later the subject of the Soviet homefront remained largely unaddressed by Westerners, a gap of enormous significance. Therefore, it purposely was not included in this symposium's program.

The Soviet "rear" as a subject for further research is tied to an even larger topic, that of Russian mobilization in the broadest sense. Although mobilization is at the crux of the many factors influencing modern warfare during the last half of the nineteenth century and the first half of the twentieth, it has generally remained in the shadow of operational matters for both military historians and officers. In the context of combat, the teeth must understandably come before the tail, but periods of actual combat in the course of a war, decisive as they may be, are relatively short compared to the time expended in preparation for battle. And the subject of mobilization may also prove a revealing touchstone for a number of unexplored factors in the larger context of Russian history.

The relationship between military matters and the political, social, and economic dimensions of Russian and Soviet society has received increased attention since World War II, but remains shrouded in considerable ambiguity. Although no issue has aroused more interest than Soviet political-military relations, much remains an open question for Westerners. However, the fundamental and long-term dimensions of the relationship might be better understood if viewed in the context of the historical evolution of the expanding Russian capability for mobilization. Russian and Soviet political leaders and military professionals, whatever their differences over the past one hundred years, have both been forced to recognize the complications posed for mobilization not only by geography but also by the poverty of Russia, reflecting its late modernization. Relative to other great powers from 1850 to 1950, Russia had less developed national wealth from which to draw resources for national security. The historic primacy of military matters in Russia, however, has generally resulted in an exceptional share of those resources being devoted to the military or to military-related sectors of the economy. It is not only a Marxist-Leninist tenet, but also a condition of modern political independence, that economic and military concerns cannot be separated indefinitely.

As a result of limited national resources in both the Imperial and the Soviet periods of Russian history, the human element has remained in the foreground. Mobilization is more than a technical, bureaucratic, and organizational matter. It is also intensely human and social. Historically, human beings have been Russia's great marginal resource. The ability of Russian leaders to marshal and control that resource has proven correspondingly crucial. The attention Western research devotes to the military as an agent of socialization in both the Imperial and Soviet periods highlights this fact, and is also tied to the basic, underlying, and ongoing modernization of Russia. Further research in this area will expand our understanding of phenomena so basic as the role of the political officer in military units. The

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*The proceedings were published as *The Homefront and War in the Twentieth Century: The American Experience in Comparative Perspective*, ed Lt. Col. James Titus (Washington, 1984).

problem of social mobilization is basic in modern warfare and directly related to the will and motivation to fight and to die, a matter as crucial, complex, and significant as the most advanced weapons system.

Other questions and ideas concerning future research grew out of the planning for the symposium, the symposium itself, and reflection upon its results. This volume constitutes an argument for the historical approach, but no single disciplinary approach is superior to all others, especially in studying and understanding a subject such as the Soviet Union. Soviet studies, including Soviet military studies, in the best sense are multidisciplinary. What is clear is that Soviet military studies have been dominated by other than historical approaches, notably by those with expertise based on the analysis of quantitative data. The historical approach has been neglected for a number of reasons. Few competent specialists exist, and this in turn reflects the difficulty of acquiring and using the kinds of records necessary for the retrospective and contextual analysis distinctive to the historical discipline. For all its handicaps, the historical approach, especially the broad recounting and interpretive effort, does force the addressing of elements of analysis which have been major weaknesses in Soviet military studies. The historical approach ideally makes it necessary to analyze events and personalities in the context of organizational and institutional processes. Answering the causational questions "How did it work?" or "Why did it work?" in the past should suggest reasonable hypotheses about "How does it work, or not work, now?" But if an accurate and thorough historical record, and a contextual analysis of processes, do not exist, how can the quantitatively based analyst ask appropriate questions of contemporary data?

From this vantage point of historical analysis, processes became more significant than historical events themselves. For example, much of the data on the Soviet Union before and during World War II suggest that it should not have won the war, that it could have been defeated. It was not. A host of Western rationalizations exist for its victory. Too often they are based on the deficiencies and errors of Russia's enemies, the exceptional contributions of its allies, and any number of other avenues but that of answering the historian's question, "What did the Soviet Union do right and well?"

Were Soviet military achievements derivative in terms of military thought and practice? If they were, and yet were also applied effectively, perhaps conventional wisdom about the lack of flexibility and adaptability in the Soviet military profession and political leadership should be modified. If Soviet achievements were original, what does this say about the Soviet capacity for innovation? What does it suggest about the Soviet state's management and synthesis of the political, economic, and social dimensions of modern war? In summary, it may be that the synthesis was forced by the extraordinary challenges and dimensions of the Russian physical environment; made possible by the broad parameters of Soviet military thought in providing for the scope of the war; achieved through the adaptability, professionalism, and patriotism of the Soviet soldier; and led with extraordinary political effectiveness by the Communist Party. But we do not know this with assurance, given the current state of Western historical research in Soviet military studies.

A number of other issues and questions deserving further research may emerge for the reader. They include the following:

Elaborating on the development of the military district and the evolution of associated organizational forms and practices in Imperial Russia as prologues to Soviet forms of mobilization and operations.

Assessing the impact of military geography, especially the problems growing out of territorial expansion and defense of the frontier and their historical influence on Russian and Soviet military organization and the military profession.

Specifying the distinctive Soviet contributions to Russian military thought in light of its historical origins and antecedents with consideration of the particular impact of Marxism-Leninism.

Assaying the adequacy and inadequacy of Soviet military thought as an anticipation of modern war as experienced in World War II.

Surveying the experience of late modernization as advantage or disadvantage in preparing for and waging modern war effectively.

Describing the integrative processes which led to the coincident undertakings of national mobilization (on a scale beyond that of any other World War II combatant); military organizational modifications; the implementation of new tactics; and the manufacture, modification, and use of new weapons.

Specifying the evolution of the educational and training parameters of the Soviet military profession to understand better both Soviet military science and the role of military history in it.

Analyzing the Soviet approach to sustainability of forces as evidence of the professional viability of Soviet military science.

How should these and other questions which may emerge from the following pages be approached? The preceding paragraphs implicitly constitute a discussion in support of professional Soviet military studies. If one accepts the validity of Soviet military studies as a professional subfield, then a number of points follow concerning the appropriate credentials of its practitioners. Some are logical outgrowths of the subject; others become apparent in reviewing the biographies of specialists, such as the contributors to this volume.

Successful study of the Soviet military involves accepting the fact that the attempt to understand the institutions, practices, and thought of another culture risks misunderstanding because of applying one's own culturally based values and attitudes to another society. The intellectual rigor required to

avoid this pitfall can be derived both from a professional recognition of the obstacles to telling the story of any society "the way it really was" and from firsthand experience with the subject itself.

In the simplest sense this justifies a combination of academic training and direct involvement with the subject. The profile of the ideal specialist in Soviet military studies would include professional military experience and firsthand familiarity with the Soviet military; language competence, exercised and developed in the country itself; an awareness of the millennium-long history of the subject of study and therefore of its continuity; and an acceptance of the multidimensional, multidisciplinary nature of the subject, growing largely out of the complex nature of the development of modern warfare. All too rarely do we have these qualifications in appropriate balance and representation. And when we do find them, as in the biographies of some of the distinguished contributors, we discover they are often the result of accidental circumstance, such as unforeseen involvement in World War II, rather than the product of a carefully planned and guided program of professional development.

From the military viewpoint, the value and usefulness of such specialists in Soviet military studies is not dictated by academic concerns and needs, rather it is rooted in the historically unprecedented military power possessed by the Soviet Union and the United States. As the executors of violence for the political leaders in both countries, Soviet and American military professionals are by definition among the most knowledgeable advisors about the use and exercise of the enormous destructive power of both conventional and nuclear weapons. For this reason alone, they are vitally concerned with sustaining peace. Their ability to contribute successfully may be directly based on the accuracy and depth of their understanding of their counterparts. Mutually achieved professional respect and understanding can be its own powerful contribution to peace and the deterrence of violence, a prospect enhanced by the specialists in Soviet military studies who contributed to the symposium and who wrote for this volume.

Introduction

Colonel Carl W. Reddel, USAF

The Russian physical environment is unique in scale and degree. Its size and location have placed special demands on Russia's people and leaders throughout the country's long history and given distinctive meaning to the word "frontier." Understanding the impact of the frontier on the Russian military profession may contribute to understanding how national security has posed planning problems unique to the Soviet military profession. The ever-expanding Russian frontier has also posed exceptional difficulties in conducting modern warfare—particularly with regard to mobilizing comprehensively and effectively the nation's resources, one of the major indices for potential military success. Russian military professionals, challenged by defeats in the Crimea and the Russo-Japanese War, wrestled with this problem long before the October Revolution. One of their proposed solutions was the military district system, and its durability to the present day testifies to their understanding of military geography and the merits of a solution peculiar to Russian environmental challenges, independent of the predilections of the governing authoritites.

Within this environmental context, the experience of political and military transition growing out of World War I and the October Revolution provides other challenges to the historian's capacity to specify and to interpret elements of change and continuity. With defeat in World War I, the role of the military professional was temporarily eclipsed. However, the influence of the Russian military profession grew and was magnified in the Soviet Union because of the hostile international environment, the struggle for survival during a vicious civil war, the poverty of Communist ideology concerning military questions, and the ad hoc approaches of Communist leaders to ruling Russia following their seizure of power. Military considerations came to the forefront for Communist leaders at that time and have never retreated. The soundness of Russian military intellectual achievements before World War I, and the numbers of former Tsarist officers and NCOs who fought with the Communists during the Civil War, further enhanced the influence of the military profession. The contribution of Communist ideology to the enrichment of Russian military thought was to follow, and Russian military history came to play a special role in this context.

Military history has been for some time a "secret weapon" for Soviet military professionals—"secret" in the sense that Westerners, apart from notable and significant exceptions, have seriously underestimated its role and impact in the Soviet military professionals' understanding and approach to war. The Western devaluation of military history has many sources, not the least of which is underestimating the intellectual dimension of modern war. Westerners have also been properly offended by the Marxist-Leninists' willingness to restructure history according to political imperatives. The extreme differences between the Marxist-Leninist and the Western views of the role and purpose of military history are striking. In practice military history remains in the ivory tower for many Western military professionals and civilian national security and defense analysts, though few, if any, will publicly state this. For the Soviet military professional, on the other hand, history is a multifaceted tool to be widely used and applied, if necessary at the expense of Western standards of scholarly objectivity.

World War II provided the crucible in which much was tested—the traditional qualities of the Russian soldier, Russian military thought in its Soviet application, the political effectiveness of the Communist Party, and the results of forced draft modernization with the accompanying development of a totalitarian state. Not least, the Great Patriotic War tested the Soviet military profession itself. It is not surprising that Soviet military professionals have found their experience in World War II, especially since Stalin's death, such a useful laboratory for assessing their views and hypotheses on modern warfare.

In World War II the Soviet soldier was found to be the Russian soldier, especially in his patriotism and willingness to serve the state. These Russian qualities proved special assets to those Soviet military leaders who knew how to exploit them with skill and imagination in conditions of modern warfare. The Russian soldier has long been recognized as courageous and capable of withstanding immense hardship. To Western eyes, however, the capacity to endure sometimes appears as undue submissiveness. This in turn causes the Westerner to wonder if the Soviet military man possesses the Westerner's capacity to adapt, to innovate and to take initiatives. It may be that endurance is a quality which has grown particularly out of the extraordinary demands of the Russian environment, and in many respects the Russian environment has not changed.

Some may also find unprecedented and unparalleled military professionalism in the retreat of the German Army, but final victory remains the ultimate standard for the successful conduct of modern warfare. Soviet participation in World War II generated specific data for the military professional and the military historian to demonstrate strengths and weaknesses, effective and ineffective performance, and a host of other contradictory and paradoxical findings concerning Soviet military forces.

World War II also demonstrated a number of specific professional achievements by the Soviet military. The Soviet Air Force exhibited the capacity to overcome large initial losses and then to adapt organizationally as it developed new aircraft and tactics to prosecute the war in support of Soviet land forces. The Soviet Army proved to have organizational flexibility, a second tier of young, exceptional leaders to replace those lost during

the purges, and the military theory to support its growing capabilities during the war. These achievements are especially striking in that they occurred after losses and destruction which could have spelled defeat, and were prosecuted in the midst of a continuing and intense struggle for survival. In an exceptional way, the Soviet military profession following the war has continued to assess the history and results of World War II in the interest of developing and refining contemporary military thought and practice. In this sense there is truly a Soviet "military science" which grows out of and is dependent upon military history.

For the purist, military history and military studies are not the same, and Soviet military history is sometimes too much in the applied mode for Western scholarly criteria and tastes. Fecund rationalizations are as unlimited as human imagination itself, and the fertility for their growth increases rather than diminishes in the battles of memoirs and postwar accounts. This complicates immensely the problem of analysis for the military professional. Ideally, it is at this juncture that the role of the military historian, in or out of uniform, should be vital and critical. However, as noted earlier, within Western professional military circles the military historian is frequently regarded as residing in the ivory tower. In this, as in so many other matters, the Soviet approach is different and without Western equivalent. In particular, the Institute of Military History, *The Military History Journal*, and the professional development of serving officers, including flag rank officers, with doctoral degrees in military history or military science have very few Western counterparts.

Since World War II, and especially following Stalin's death, Soviet military capabilities have expanded dramatically. The Soviet military profession's theory and practice have accommodated the Western challenges of nuclear weaponry and improved conventional weapons. More striking in the minds of some Western military professionals have been not only the vastly increased numbers but also the diversity and range of improvements in Soviet weaponry over a relatively short period of time, the Soviet Air Force serving as a striking example in this regard. The debate over whether these improvements are for offensive or defensive purposes remains insoluble in the sense of satisfying all questioners, but no one denies that credible offensive capability constitutes a strong Soviet defense.

In the final analysis, the essential transformation which occurred in Russian and Soviet military history was the mastery of modernization in the interest of Russian national security, a fact which is indirectly demonstrated by the essays in this book. This relationship between the military and the process of modernization is inseparable because of the multifaceted nature of modern war, which is total war in that no dimension of human experience or activity escapes it. The bureaucratic and organizational infrastructure necessary for waging modern war is also the underlying base characteristic of the modernized state and society. It is also expensive, which has meant political decisions overriding purely economic and social needs in the interest of national security. Russia's military transformation was a primary factor placing the Soviet state irrevocably on the global stage of history and making it the historical planetary leader in the exploration of the universe.

The proper investigation and understanding of Russian and Soviet military history may contribute to other changes, possibly in the broad appreciation of Russian history and in the general field of Soviet studies, a matter which others will appropriately judge for themselves.

Acknowledgements

The Military History Symposium is a biennial event jointly sponsored by the Department of History and the Association of Graduates. Developing and organizing the symposium occupied many individuals during a period of almost two years. The person most responsible for directing the many efforts leading to its successful execution was Maj. Phillip S. Meilinger, the symposium's Executive Director. Initial groundwork for Major Meilinger's activities, preceding his assignment to the Academy, was undertaken by Maj. Mark L. Dues, who left the Academy shortly before Major Meilinger arrived. Major Meilinger was supported in all facets of activity by the department's Deputy Head, Lt. Col. Harry R. Borowski, who directed the committee work which led to the proposal of topics to the department head. Both of these officers were, in turn, supported by virtually every member of the department, in one phase or another of the symposium's activities. They also had the support of its superb secretarial staff, most notably Christy M. Whale.

Conceptualization of the symposium program owed a great deal to the informal network of scholars and officers who examined and criticized the various topics, issues, and problems proposed for the final symposium program. Over the years this network has come to include former Harmon Memorial Lecturers, past symposium participants, and military historians too numerous to mention here. Without their interest and generous support, the success enjoyed by the symposium series over the years would have been greatly diminished.

A smaller group of Soviet specialists and Russian historians who were consulted and who gave generously of their time and counsel can be mentioned and publicly thanked in this limited space. They included Col. Robert E. Berls, Jr., USAF; Robert F. Byrnes; Lt. Col. Allen F. Chew, USAF, Ret.; Robert H. Dodge; John Erickson; Col. Felix M. Fabian, USAF; Lt. Col. David L. Giddens, USAF; David R. Jones; Jacob W. Kipp; Col. Richard L. Kuiper, USAF, Ret.; Michael MccGwire; Bruce W. Menning; Robert R. Moore; Samuel A. Oppenheim; Michael Parrish; Dale Pfafenberg; Alexander Rabinowitch; Ronald R. Rader; Col. William F. Scott, USAF, Ret.; Harriet Fast Scott; Lawrence F. Silverman; Maj. Scott M. Smith, USAF; Brig. Gen. William A. Stofft, USA; John M. Thompson; Peter H. Vigor; Peter von Wahlde; and John D. Walz. Special inspiration and support

for the symposium came from Mrs. Charles A. Wood, first donor to an endowed chair at the Academy. The contributions of these and other individuals were supported throughout by the Academy's Superintendent, Lt. Gen. Winfield W. Scott, Jr.; the Dean, Brig. Gen. Erwin J. Rokke; and the Acting Dean, Col. John T. May. In turn, the entire Academy community provided the support necessary to host properly the symposium's more than 350 participants.

The appearance of the proceedings is due first of all to the contributors themselves, who demonstrated their extraordinary expertise at the symposium and then patiently refined and revised their papers for this publication. In turn, the professional knowledge and skill of the staff of the Office of Air Force History, Washington, D.C., also aided publication. The initial typing of the manuscript was expertly accomplished by Miren Reinoso, with all subsequent revisions and typing completed with extraordinary dedication and professionalism by Rae L. Hellen.

As always, time and money are essential for such undertakings. The symposium received generous support from the Frank E. and Harriet E. Hedrick Endowment Fund and the Major Donald R. Backlund Memorial Fund, which are managed by the Association of Graduates. In 1981, Mr. and Mrs. Frank Hedrick and the Beech Aircraft Corporation generously established a fund to enrich cadet and faculty education at the Air Force Academy. Major Backlund, a highly decorated member of the Class of 1971, died in a 1979 aircraft accident. His memorial fund has been a special source of assistance to our last two symposiums. Additionally, the gracious contribution of the Falcon Foundation was significant in making this symposium possible.

In June 1987, the Academy generously provided sabbatical time to edit the manuscript. Several librarians were unstinting in their support of editorial research, including Betsy Coxe Kyseley and Steven E. Maffeo of the Academy Library and the late Sergey S. Gordeyev of the Library of the Soviet Affairs Literature Research Facility, Bolling AFB. At various stages of manuscript preparation, Maj. Richard J. Muehlier, USAF, John M. Thompson, and Dennis E. Showalter provided special advice and assistance in word processing, in Soviet studies, and in military history, respectively.

Although the official name of the Soviet Army until 1946 was the Workers' and Peasants' Red Army, Soviet Army is used with few exceptions. When the word *front* is italicized, it is used to indicate the Soviet meaning, roughly a group of armies. For Russian language sources, the Library of Congress system of transliteration was used with the deletion of diacritical markings. The Russian soft sign was retained and is indicated by an apostrophe. Deficiencies in these and other matters of manuscript preparation and final appearance are my responsibility.

C. W. R.
USAF Academy
January 1988

THE TWENTY-NINTH HARMON MEMORIAL LECTURE IN MILITARY HISTORY

Introduction

The Twenty-Ninth Harmon Memorial Lecture

Colonel Carl W. Reddel, USAF
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The scope, scale, and mystery of Russian history has, through the years, captured the imagination of poets, novelists and historians. Especially from the time of Peter the Great, the forceful presence of Russia on the European historical stage has been a continuing reminder of that great multinational empire's determination to participate in the world's affairs. However, our scholarly, historical understanding of the special contribution of Russian military figures and institutions to the growth of Russia's international influence has been modest at best. Without attempting to assay fully the reasons for this neglect, it might be noted that the geographical and cultural distance of the Russian historical experience from our own has too frequently left Western military historians comfortable with the accounts of the vanquished in describing and assessing Russian, and Soviet, military victories and achievements. This symposium is a small step in the direction of a more complete and accurate understanding. This is also a timely undertaking, for surely the emergence of the Soviet Union as a military superpower, having conquered its previously landbound status and indeed much of space itself, is a transformation in the military capability and status of Russia and must rank as one of the more significant achievements of the twentieth century.

The potential contribution of the scholarly discipline of history to improved understanding of our subject faces formidable obstacles, not only the usual challenges of removed time and place, but also the problem of overcoming distinctive cultural differences. The solution to this problem is aided by the mastery of unusual languages and sources, and familiarity with the military profession itself. In this regard, we are unusually fortunate in our lecturer, Professor John L. H. Keep of the University of Toronto, because he has demonstrated tremendous range and power in his command of historical sources and periods, having worked across more than three centuries of Russian history, exhibiting great skill in synthesis and conceptualization in an era when the historical profession is dominated by high specialization. Pertinent to our subject tonight, "Soldiering in Tsarist Russia," is the fact that Professor Keep has been a serving soldier, entering the British Army at

the age of seventeen during World War II and completing his service in 1947 with the rank of staff captain.

For more than thirty-five years, John Leslie Howard Keep has studied, spoken, and written about Russian history and the Soviet Union. From the University of London he received the B.A. degree (with honors) in 1950 and the Ph.D. in 1954. A research officer for the Foreign Office during 1953–54, Dr. Keep served as lecturer in Modern Russian History at the University of London from 1954–66, with a year as a visiting Associate Professor at the University of Washington during the academic year 1964–65. From 1966 to 1970, Dr. Keep was the Reader in Russian Studies at the University of London, leaving that post in 1970 to assume his present position as the Professor of Russian History at the University of Toronto.

From the 1960s, Professor Keep has written on an impressively wide range of subjects, including the origins of communism in the Russian Empire with *The Rise of Social Democracy* (Oxford, 1963), the Russian revolutions of 1917 in *The Russian Revolution: A Study in Mass Mobilization* (New York, 1976), and *Soldiers of the Tsar: Army and Society in Russia, 1462–1874* (Oxford, 1985). He has also edited books devoted to the methodological problems of understanding Soviet history and power, wherein he demonstrated mastery of another foreign language, that of Communist ideology. The scholarly distinction of his work was recognized with a Guggenheim Fellowship in 1978. His current research includes work on "The Russian Army in the Seven Years War" and on "Military Justice in Russia" during the eighteenth and nineteenth centuries.

This lecture series, "The Harmon Memorial Lectures in Military History," is dedicated to the memory of the late Lieutenant General Hubert R. Harmon, the first Superintendent of the Academy. The purpose of the lecture series and the memory of General Harmon are indeed well served by the work of our lecturer, because Professor Keep speaks to the most basic reality for most participants in Russian military history through the course of time, soldiering itself.

THE TWENTY-NINTH HARMON MEMORIAL LECTURE IN MILITARY HISTORY

SOLDIERING IN TSARIST RUSSIA

John L. H. Keep

For most of us the title of this lecture conjures up images of technological backwardness and administrative inefficiency, perhaps also of bovine submissiveness on the part of vast numbers of peasant conscripts to some faraway autocrat, indifferent to their fate, and to equally unfeeling officers and bureaucrats—an instinctive loyalty, punctuated from time to time by violent and brutal mutinies.

It is a picture that is exaggerated and oversimplified. It owes much to Western historians' tendency to concentrate on the final years of the Imperial regime, which were untypical in that Russia's armed forces confronted unusually severe, indeed ultimately insoluble, problems. In World War I, all but isolated from her allies, Russia faced Ludendorff's mighty military machine, far better trained and better equipped, as well as the Austrians and the Turks. Along the Eastern Front, her traditionally loyal and courageous fighting men suffered unparalleled casualties and privations in seemingly endless and unprofitable trench warfare until even they finally decided they had had enough. They rebelled; and this great upsurge of "the men in grey overcoats," coupled with disaffection in the rear, led to the collapse of tsarism in February 1917, the breakup of the Russian Empire, economic chaos, the dissolution of the armed forces, and, within a matter of months, to the formation of a new "Red Army" under Bolshevik direction, which differed in many important ways from its Imperial predecessor.[1]

Yet the social revolutionaries who so zealously advocated a people's militia imbued with political consciousness and totally unlike any traditional army, soon found that the legacy of the past loomed larger than they had expected. It was especially evident in the logic of a situation that forced the

new regime to take immediate, desperate measures to defend itself against its many internal and external foes. Only a trained, disciplined, centrally administered, and well-equipped force could do this. So it was that within a few months conscription came back and former Tsarist noncoms and officers were recruited. After a few more years Trotsky's name disappeared down the "memory hole," and the Red Army became a fully professional force in which certain selected values and traditions of the old army were resurrected and even made the object of a veritable cult.[2]

That is not to say that there is continuity between the Tsarist and Red Armies. Stalin's army, like its successor of today, was a heavily politicized body dedicated to supranational goals as defined by the ruling party. But in the pursuit of these goals it has proved expedient to invoke old-fashioned sentiments of patriotism, of selfless service to the central state power, such as had animated men in Russia for centuries, along with various familiar institutional habits.

To understand how this was possible we have to take a longer historical view than one focusing exclusively on the prerevolutionary years. Any army expresses the *mores* of the society from which it is drawn. It will reflect the goals of its leaders and suffer from the tensions that strain the nation's cohesiveness. Already in medieval and early modern times Russian society had been shaped by warfare: by internecine strife among the princes and by the need to defend the forest heartland against attack from the open steppe. The Mongol-Tatar conquest in the thirteenth century left psychological wounds that have not entirely healed today. We can see them in the fear and prejudice with which many Soviet Russians view their great neighbor to the east.

Even once the Russian lands had regained their sovereignty under the autocrats of Moscow in the fifteenth century, forces had to be mobilized each year along the country's exposed southern border to grapple with bands of aggressive Tatar raiders: skillful horsemen who came to take prisoners, whom they enslaved and sold in Near Eastern markets—that is, if they did not choose to kill them instead.

> *The elderly and sick* [wrote a Western traveler in the 1520s] *who don't fetch much and are unfit for work are given by the Tatars to their young men, much as one gives a hare to a hound to make it snappish: they are stoned to death or else thrown into the sea.*[3]

It must be acknowledged that the proud but impoverished rulers of Muscovy (as Russia was then known) were rather slow to develop an effective response to this threat. The earthen and wooden palisades they built to guard the border were expensive to maintain and soon rotted away. Even the warlike Cossack communities established beyond the line were a mixed blessing, for at times their chieftains rebelled and led masses of disaffected peasants against Moscow. It was not until the late eighteenth century that this volatile region became stabilized; and even so the Russians could not be certain that the Ottoman Turks, for long a formidable military

power, would not try, with backing from the West, to make good the losses of Islam—as happened at least four times between 1806 and 1914.[4]

To her west, Russia confronted European states that were more advanced politically and economically. Nationalist and Communist historians never tire of reminding us that in 1612 the Catholic Poles stabled their horses in Moscow's holy churches, or that a century later Charles XII of Sweden led an army of 40,000 men into Russia. He might well have reached Moscow had he not shortsightedly put all his eggs in one basket and lost his supplies, which placed his forces at a disadvantage to those of Peter the Great, who proved to be an effective military leader. One might have thought that Napoleon in 1812 would have studied the lessons of history, but he did not and paid an even heavier penalty. Then of course in our own time there was the Kaiser, who could have made it in 1918 if he had really wanted to, and the Nazi General Guderian, who certainly wanted to but was halted near Moscow's airport.

Before jumping to the conclusion that the historical record justifies the Russians' evident "defensive psychosis," let us add that they were not always the innocent victims. Many peoples of eastern Europe and northern Asia had reason to feel similarly about them. Some nations probably gained from absorption into the Russian Empire, as the Armenians did, and for a time also the Finns, Baltic Germans, and even Ukrainians. Others had more painful experiences: conquest by force of arms, violent repression of dissent, loss of cultural identity, and so on. One thinks here of the Muslim peoples of the Volga Valley, the Caucasian highlands, of Central Asia, but most obviously of the Poles, who had enjoyed statehood before partition of their country, and whose four revolts (from 1794 to 1905) were put down with great severity. Nor did the Hungarians, whose uprising of 1848–49 was suppressed by Nicholas I's troops, or the peoples of the Balkans, whom several nineteenth century Tsars tried to protect or "liberate," necessarily have reason to remember the Russians fondly, whatever may be said to the contrary in these countries.[5]

All this warfare fueled international conflict and also posed problems of imperial integration, a task in which the army was only partially effective—less so than in the Austro-Hungarian Empire, for example.[6] It also determined the lifestyle and outlook of much of the country's elite. When there were rumors in Moscow in 1853 of impending war with the Turks, young officers "awaited impatiently for hostilities to break out so that they could fight the foe, 'toss their caps in the air,' as the phrase went, and win a few medals."[7] They had plenty of opportunities, for right up to the 1870s Russian military planners preferred to have at their disposal a large semitrained army rather than a professional cadre force—partly from traditional inertia, partly because manpower was the most readily available resource in what was still a "developing country." One contributory cause to Russia's economic backwardness was the tremendous strain placed on her limited productive resources by the rapacious ambitions of the state. This vast body of men had somehow to be paid, fed, clothed, lodged, and equipped.[8]

Over and above this, for 400 years or so before the reform era of the mid-nineteenth century, Russia was a "service state"; that is to say, the various social groups were defined largely by their roles in supporting the throne as the embodiment of sovereignty. The Tsar's privileged servitors—those whom we call inaccurately "nobles" or "gentry," classes that had no close analogy in Russia—started out as cavalrymen. It was they who in Muscovite times manned the defensive screen against the Tatars already alluded to and who after Peter the Great's reforms officered the new standing army. Any commoner who worked his way up the ladder to subaltern rank automatically joined the privileged estate. This means that the autocrats could regulate social mobility, and that one's status was determined not by ancestry or wealth but by one's place in the official hierarchy.[9]

For over a century most young, well-born males preferred to render state service in the military, since this conferred greater honor and prestige than the civil bureaucracy. To be sure, the system was not watertight. Russia never developed an exclusive officer caste with its own ethos as the Prussians did, and in 1762 the obligation on nobles (*dvoriane*) to serve was actually abolished; but there were plenty of "volunteers"—indeed, almost too many for the army's health, since they could not all be properly trained or employed. Poverty and custom compelled all but the wealthiest aristocrats to spend at least some time in military uniform. Foreigners were often struck by the number of officers to be seen in the capital's streets: "cocked hats, plumes and uniforms encounter us at every step," wrote one English clergyman in 1839,[10] while the more celebrated French observer, the Marquis de Custine, noted the "haggard look" of the soldiers who passed by, not citizens but "prisoners for life, condemned to guard the other prisoners" in a "country that is entirely military."[11] Still, all this had its brighter side, too: social gatherings in St. Petersburg were brilliant affairs at which dashing dragoons and hussars, clad in all colors of the rainbow, paid court to the ladies.

Since almost everyone served, it comes as no surprise to learn that many of the great Russian writers had military experience. Lermontov served in the Caucasian wars, and Dostoevsky was an engineering officer before he resigned his commission and got into political trouble, which earned him a terrifying mock execution followed by forced labor in Siberia.[12] Tolstoy served at Sevastopol, and though a Christian pacifist, it was in the army that he learned his habit of command; he once joked that he was "a literary general."[13] So many officers or ex-officers worked in government bureaus that an ambitious civil servant complained:

> *It was almost impossible to make a career except by serving in the armed forces: all the senior offices in the state—ministers, senators, governors—were given over to military men, who were more prominent in the Sovereign's eye than civilian officials. . . . It was taken for granted that every senior person should have a taste of military discipline.*[14]

Using modern sociological terminology, we can say that Imperial Russia fell into the category of states with a military preponderance, if it was not actually militaristic; in this respect it stood midway between Prussia and

Austria. In any case the armed forces' prestige remained high until the 1860s, when the attractions of soldiering began to pall for members of the elite, who now had other career options that paid better, imposed fewer restrictions on their liberties, and offered more excitement than life in some dreary provincial garrison town.

Those officers who stayed on in the forces gradually developed a more professional outlook. They were better trained, although the old cadet schools, with their strict discipline, narrow curriculum and caste spirit, survived in all but name right into the twentieth century.[15] Most incoming officers were educated (if that's the word) in so-called "junker schools," on which the state spent only one-tenth as much money as it did on the elite institutions. Even so their quality had improved by World War I, and more and more entrants came from the underprivileged groups in society, including sons of former serfs. This was against the government's wishes, but it happened all the same.

Can one speak of the "democratization of the officer corps?"[16] Russian officers were too diverse to form a "corps" on the German model, and the humbly born might be no more democratic in outlook than their more privileged fellows, perhaps even less so. But they were more likely to take a professional, conscientious attitude to their duties. It bears restating that three of the best known White generals in the Civil War of 1918–20—Denikin, Kornilov, and Krasnov—were of this type. Unfortunately, they also betrayed a lamentable lack of political *savoir faire* which can be traced back to their education and the deliberate, indeed disastrous, isolation of the army from the country's political life and from the problems that concerned ordinary people.[17] In old Russia a vast gulf yawned between officers and men. An attempt to bridge it was made by Dmitrii Miliutin, the reformist War Minister of Alexander II,[18] but he had a hard struggle against archconservatives in the military bureaucracy. When the Tsar was assassinated by left-wing terrorists in 1881, Miliutin was forced out of office, and the pendulum swung back to social exclusiveness until after the disastrous war with Japan in 1904–5, which prompted further reforms. John Bushnell has argued eloquently, but perhaps a little one-sidedly, that the old vices, including corruption, persisted right up to 1914.[19]

As for the soldiers, they were of course drawn overwhelmingly from the peasantry. In early times they generally served for a single seasonal campaign, but after Peter the Great set up the standing army they remained in the ranks for life—or perhaps one should say until death. In the 1790s the service term was cut to twenty-five years, but this made little difference, given the low life expectancy at that time. It is thought that perhaps one-quarter of all those enlisted survived to tell the tale, the rest falling victim to disease more often than enemy bullets, while one man in ten may have deserted.[20]

Only some of the survivors returned to their native villages, which they would not have seen for a quarter century, since home furlough was unknown. If they did go back they might well find that their wives had remarried; no one would recognize them and they would be resented as "ghosts returned from the dead" and a potential burden on the community.

The plight of the Russian veteran was harsh indeed. A foreign observer wrote in 1812:

> *The Russian soldier generally serves in the army as long as he can and then joins a garrison, where he performs ordinary service until he becomes an invalid; then he is put in a monastery, where, thanks to the frugal diet, he vegetates a little while longer.*[21]

Others got low-grade government jobs as doorkeepers and the like, and only a few fortunate enough to have been totally incapacitated fighting "for Tsar and Fatherland" qualified for institutional care and a tiny pension.

Yet many contemporary Western military writers admired the Russian military system and thought it preferable to select recruits from the native population than to hire mercenaries of doubtful loyalty. The system might be "despotic," but the authorities at least seemed to look after their men in a paternalistic spirit. For instance, soldiers who had children might find them taken away to be educated at the state's expense[22]—they were literally state property! But then this was an age of serfdom when most peasants also belonged to someone and received next to no education. Soldiers were housed, fed, and even paid, so that materially they were better off than some peasants.

Still the system looked better from outside than from inside. The laws on selection of recruits, although designed to spread the load as fairly as possible, were actually full of loopholes that allowed the wealthier peasants to escape the net, so the army might be left with the social misfits, as in the Western mercenary forces. The painful task of deciding which member of a rural community should be separated forever from his loved one—a sort of blood tax—was beyond the capacity of the barely literate rural officials. There was a good deal of wheeling and dealing. Money changed hands to secure exemption from the draft or to pass off as fit young men who were actually sick, or undersized, or deaf—once a recruiting board was presented with two men so deaf that they could not even hear a cannon being fired[23]—or who squinted, or had no front teeth—a serious matter, since you needed them to bite off cartridges before ramming them down the barrel of your musket! It seems to be a legend that unwilling but resourceful recruits would put a gold coin in their mouth, which the examining doctor would pocket and let them go;[24] but there is a surviving decree ruling that the Tsar's Army should not contain any eunuchs[25]—a point readily established since recruits paraded naked *en masse* with their families still in attendance!

Service was unpopular. Men liable to the draft would flee to the woods, or mutilate themselves, "cutting their fingers, poking out or otherwise damaging their eyes, and deforming their ears and feet," to quote another official decree.[26] When finally taken, a recruit would have the front part of his scalp shaved like a convict—a useful means of spotting deserters and cutting down on lice—and was clothed in ugly prison-grey garb. All this produced a traumatic effect. One of the few soldiers who wrote his memoirs gives us a glimpse of this: "When I woke up the next morning, as it happened opposite a mirror, and saw my head shorn, I was greatly shaken."[27]

Officers tell us that the men soon settled down and adjusted to their unfamiliar environment, but the high rate of desertion tells its own story. Perhaps it was less of a problem than in the West, but that was partly because of the natural obstacles—settlements were rare, and if the peasants found you they would turn you in for the monetary reward—and partly because of the harsh corporal punishment that awaited those caught, which acted as a powerful deterrent.

It will come as no surprise to hear that discipline was maintained by physical coercion. In general, absolutist Russia lagged in developing a judicial system that encouraged respect for the law, let alone that protected men's natural rights. So far as soldiers were concerned, natural rights were not recognized even in theory until the 1860s, although a system of military tribunals, modeled on that of Prussia, had existed since Peter I's day. The spirit of prereform military justice may be judged from a case that occurred in the Polotsk regiment in 1820. Some soldiers engaged in an illicit moneymaking scheme killed a noncom to stop him from squealing on them. Two privates reported the murder, and their account was confirmed on investigation. But the brigade commander ordered the *informants*, not the culprits, to be severely punished, and his verdict was upheld by higher authority. The case happened to come to the Tsar's attention, but since he knew the brigade commander personally he simply ordered him posted and took no other action.[28] The army's rank structure had to be upheld at all costs.

As in other armies, commanders had ample scope to impose "disciplinary penalties" without any formal proceedings. These might involve all kinds of physical torture—for instance, standing to attention for hours at a stretch bearing up to six muskets, each of them weighing over twelve pounds, and above all, the dreadful "running the gauntlet." In Prussia, where this penalty originated, it was used only in exceptional circumstances, since it could well lead to the victim's death; but in Russia it was treated as a regular means of enforcing discipline. "Running the gauntlet" involved having a soldier beaten in public by all his comrades, who were lined up in two opposing ranks, through which the prisoner, stripped to the waist, staggered along while the men on either side struck him with thongs about one inch in diameter. To prevent him from moving too fast he was preceded by a noncom who held a musket with the bayonet fixed and pointing to the rear. An officer rode alongside to see that the blows were properly administered, and the victim's groans were drowned by the rolling of drums. Although his back would soon be reduced to a bloody mess, beating continued until he collapsed—and sometimes even after that, for his limp body would be placed on a board and carried along.[29]

In 1801 the enlightened Alexander I, a correspondent of Thomas Jefferson, formally abolished torture throughout his domains and prohibited "cruel" penalties.[30] Unfortunately, "running the gauntlet" was not considered cruel! The only change was that a doctor now had to be present, who could order the punishment stopped if he thought the victim might expire; but as soon as the prisoner revived, the beatings recommenced. This was a mixed blessing both for the soldier and for the doctor, who had to compromise his

Hippocratic oath, much as some do today in certain Latin American dictatorships. Tsar Nicholas I (1825–55) issued secret orders reducing the number of blows to 3,000, but this rule was not always enforced, precisely because it was secret.[31] Soldiers who deserted might now get 1,000 blows or double that number if they repeated the offense or stole while on the run.[32] Men sometimes survived an incredible number of blows. The record is held by a stout fellow named Gordeev, who absconded six times and received a total of 52,000 blows; on the last occasion he was spared and sent to forced labor instead.[33]

After the Crimean War corporal punishment was generally replaced by jail terms, although it was not abolished until the early twentieth century. Along with this reform came an improvement in the military judicial system. Court verdicts, for instance, might be publicized—this new openness was referred to by the same Russian term, *glasnost*, that Gorbachev has made so free with. Tribunals conducted proceedings orally, by adversarial contest, and allowed the defendant to have an advocate. An official, called the military procurator, carried out the pretrial investigation and saw to it that justice was done; and sometimes it certainly was, for during the Russo-Turkish War of 1877–78 we hear of a procurator standing up to a powerful functionary, saying "Your Excellency, you have no power to alter a statute!"[34]

A recent American historian states that by the turn of the twentieth century "the structure of Russian military justice, the legal education of military-judicial personnel, and [their] attitudes and practices . . . all buttressed due process of law." Students at the prestigious Alexander Academy acquired "a highly developed legal ethos."[35] That was one reason why army leaders resented having to repress and try civilian political offenders, such as demonstrators and strikers, as the army did on a massive scale during the 1905 revolution, especially in the national minority regions of the empire.

The new legal ethos, insofar as it existed, was one fruit of the Miliutin reforms, which involved giving the troops some sense of what they were fighting for and humanizing their conditions of service. "An army [he wrote] is not merely a physical force . . . but an association of individuals endowed with intelligence and sensitivity."[36] This meant a veritable cultural and psychological revolution, for previously officers and noncoms had treated their subordinates like impersonal cogs in a machine. Now fear was to give way to trust, to "conscious self-discipline," as the phrase went. Miliutin's ideal was cooperation among all ranks in the common task, while preserving the hierarchical rank structure. He took over from the French republicans the notion of the army becoming "the school of the nation." The idea was too radical for his contemporaries, who saw him as something of a "Red," and the Tsar stalled on it. Even so, a start was made. Schools were set up in many units, and in 1867 it was ruled that noncoms had to be able to read and write. Many mistakes were made, such as holding literacy classes in the evenings, when the men were exhausted after an eleven-hour day, and the instructional material was hardly inspiring: training manuals, for instance, instead of contemporary literary works.[37] The budget ran a miserly ten kopecks a year per man, and interest soon waned. One expert who toured

regimental schools in 1870 reported that "the soldier can scarcely cope with the technique of reading. . . . In a book he sees only the letters, not understanding what they mean, and he cannot relate what he has read."[38]

Even so, by the end of the century educational standards were higher in the army than they were in the population at large, which admittedly is not saying much. Once the short (generally six-year) service term was introduced in 1874, literate soldiers who returned to their villages helped to awaken a thirst for knowledge among peasants. It was foolish of Miliutin's successor, Vannovskii, to shift the program to a voluntary basis in the mid-1880s. It was not restored until 1902 and then only for the infantry. When one subaltern in the 65th Infantry Regiment taught the men in his company the ABCs on his own initiative, his CO was furious and ordered him to stop at once: "Get those booklets out of here!" he thundered, "You'll get me into trouble with the War Minister!"[39]

Among other things, the *fin-de-siècle* reaction meant that Russian soldiers were still poorly paid, housed, and fed—significantly worse than in the armies of the other major European powers. Many received less than three rubles a year before the pay scales were doubled after the Russo-Japanese War.[40] Since they needed to cover not only personal expenses but also repairs to items of clothing and equipment, they could survive only by off-duty labor independently or under an officer's supervision, which took place on a vast scale. The regiment was as much an economic organization as it was a fighting one; in 1907, 150,000 men, or 12 percent of total effectives, spent their duty hours tailoring.[41] This was an old tradition. Since the central supply services were notoriously inadequate, units were expected to be as self-sufficient as possible; but the pressure seems to have increased after the 1860s when the government was trying to save money on the army.

Tinned meat came into the quartermaster's stores around 1870, as did tea, much encouraged as an alternative to hard liquor. The food ration had until then consisted almost wholly of cereals, which the men would either mix with water to make a kind of gruel or dough, or else double bake as biscuit to carry with them in their packs on the march. In this way they could do without the elaborate field bakeries other armies required. This impressed foreign observers. They thought the Tsar was lucky to get his soldiers so cheaply. The first to make this point was an Englishman who went to Moscow as early as 1553:

> *Every man must . . . make provision for himself and his horse for one month or two, which is very wonderful. . . . I pray you, among all our boasting warriors how many should we find to endure the field with them but one month?*[42]

Another traveler of the time noted that gentry cavalrymen and their men shared the same frugal meal of millet and salt pork, "but it may occur that the master gets very hungry, in which case he eats everything himself and his servants fast splendidly for three days."[43] Yet somehow they fought well and looked robust, which had some Westerners worried. The Frenchman Charles de Nercly wrote in 1853 that they were sober, impervious to fatigue, and

> *in a word an admirable fighting machine, more intelligent than Europeans generally think, who would be a redoubtable instrument in the hands of a conqueror, a Russian Napoleon, should the winds blow in that direction one day in their icy regions.*[44]

This was an uncommonly good prophecy, some might say!

Patriotic Russian and Soviet historians have dutifully catalogued the many "exploits" (*podvigi*), or feats of bravery, which these warriors had to their credit.[45] There are countless inspiring tales of soldiers who volunteered for dangerous missions, who stood by the flag to the last man, who fired off all their ammunition but kept the last bullet for themselves, or even chopped off a gangrenous arm with their own sword while awaiting transport to the dressing station.[46] Foreigners sometimes thought these deeds more foolhardy than courageous. In the Seven Years War of the mid-eighteenth century, for instance, a Saxon engineer seconded to the Russian forces expressed amazement that troops would deliberately stand up on the battlements to draw enemy fire, commenting that "in this army rash bravery is much respected; if an officer wishes to win his troops' esteem he must expose himself with them in a manner that would be reckoned absurd in any other army."[47] Some critics maintained the Russians showed themselves to better effect in defense than in offense; "passive courage" this was called. Insofar as this existed, it may be linked to their cultural and social background as Orthodox Christian peasants, as well as to Russia's lack of a chivalrous feudal tradition such as one finds in the West, including Poland. But one should not be too dogmatic about this. In the Russian Army, as in others, soldiers' morale on the battlefield was greatly affected by local circumstances. It mattered a lot whether they had full stomachs, whether earlier engagements had been successful, and above all whether they had a chief who could address them in hearty, comradely fashion and win their affection and loyalty, as Suvorov was conspicuously able to do.

This martial valor might not be such a good thing for the other side. If a general "gave the men their head" and allowed them the run of a captured place, they would ransack it and commit atrocities. There were occasions of this on several of Suvorov's campaigns.[48] In 1794, at Praga on the Vistula opposite Warsaw (where Marshal Rokossovskii stopped his advance during the Warsaw insurrection in 1944), the great commander allowed his men to loot the place for three hours. Afterward they made up a ditty about it:

> *Our Suvorov gave us freedom*
> *To take a walk for just three hours.*
> *Let's take a walk, lads,*
> *Our Suvorov has ordered it!*
> *Let's drink to his health . . .*
> *Long live Count Suvorov!*
> *Thou livest by the truth*
> *And leadest us soldiers justly!*[49]

They expressed no pity for the several thousand Polish combatants and noncombatants who were drowned in the Vistula or whose mutilated bodies lay around everywhere.[50]

Atrocities have of course accompanied warfare everywhere from ancient times to the present. The Russians seem to have been particularly bloodthirsty when dealing with Poles—or with Islamic peoples, which may help to account for the Soviets' grave misconduct in Afghanistan; but in the Imperial era they were no worse than others in Europe. The hungrier they were, the more likely they were to loot. When they marched through Germany into France in 1813–14 and the supply trains could not keep up, they took what they needed, just as the Prussians did. Oddly, the first thing they went for was the feather bedding. Clouds of plumage could be seen floating over places that were being ransacked.

Russian soldiers were normally quartered in country districts in the west of the empire for much of the year when they were not away on maneuvers or campaigns. There was a good deal of tension between peasant hosts and their unwanted guests. Soldiers formed a separate caste and seldom made common cause with the people whence they had sprung. Only gradually were barracks built in major towns, and they were insanitary buildings deservedly unpopular with the men, who identified them with "everything that makes the soldier's heart miss a beat," to quote one critic.[51]

Training was elementary and for long consisted mainly of drill, the mechanical repetition of evolutions which units were then supposed to reproduce on the battlefield. Many of the Tsars had an unhealthy fascination with the parade ground. Nicholas I learned off by heart all the bugle calls, which he could reproduce vocally, to the amazement of foreigners.[52] He derived an almost sensual pleasure from the sight of massed formations. After some maneuvers he wrote to his wife: "I don't think there has ever been anything more splendid, perfect or overwhelming since soldiers first appeared on earth."[53] His brother, Alexander I, used to go along the ranks inspecting whether the men's socks were at regulation height, and in 1816 he had three Guards colonels put under arrest because their men were marching out of step. Such severity, he maintained, "is the reason why our army is the bravest and the finest."[54]

It was a shallow view, but one readily transmitted down through the officer corps, which had more than its share of pedantic martinets. This was one of the hallmarks of a semimilitaristic society, where the army was as much a symbol of the autocratic power as it was a fighting force. It certainly looked gorgeous when drawn up on parade before the Winter Palace in St. Petersburg, in a square that could hold nearly 100,000 men.[55] But could it fight well? Its weaknesses were revealed during the ensuing Crimean War when, though the soldiers did fight just as bravely as ever, the infrastructure broke down.[56]

The reforms that followed attempted to encourage a more professional attitude in this sphere, too. Drill was supplemented by gymnastics and weapons training; maneuvers became more realistic; personal arms were modernized, as the musket gave way to the rifle; the artillery received guns of bronze and then of steel, with a greater range; and we hear of millions of

rubles being spent on mysterious "special objects."[57] But unfortunately it was becoming harder for Russia to produce all the arms and munitions her forces needed, since the empire's industrial growth did not get off the ground until the 1880s and lagged behind that of her potential rivals, most obviously Germany. The harmful consequences of this weakness and of the reactionary attitudes that prevailed at the top after 1881 showed up in the war with Japan and even more catastrophically in 1914.

Russia entered the Great War with a crippling shortage of machineguns and small arms' ammunition. Too many heavy guns were immobilized in fortified places, built at great cost and with little realization of the mobile nature of twentieth-century warfare. The generals also complained bitterly about the "shell shortage," but some recent Western historians have argued that this was something of a myth, invented to explain away reverses due to incompetent leadership.[58] Moreover, many deficiencies of equipment were made up in 1915–16, although only at the cost of grievously overstraining the country's economic and social fabric. Once again, as in the Crimean War, it was the system that failed, not the army as such. The crisis was made worse than it need have been by Nicholas II's well-meant but naive decision to lead his armies in person, a role for which he was totally unfitted. At headquarters he only got in the way of the professionals, whereas back in the capital he might have given some stability to his shaky government.[59]

By this time the officer corps was grievously split between the few surviving prewar regulars and the civilian-minded replacements. "A marked clash of views appeared between the two groups," writes one military memoirist; "when politics were mentioned the former would say . . . 'I am a servant of the Tsar and my duty is to obey my superiors,' [while the reservists] followed the gossip about what was going on at home with passionate interest."[60] Increasingly, so too did their men. The hunt was on for scapegoats who could be blamed for defeats, high casualty rates, and neglect or corruption in the supply services. "Treason in the rear" became a popular cry. This politicization spelled the doom of the Imperial Russian Army and of the Tsarist regime as well.

What then did the Imperial Army bequeath to its Soviet successor? Directly, it passed on very little. Some Red Army chiefs, Tukhachevskii for instance, began their careers under the Tsar and gained experience which would prove useful in the Civil War; and the time-honored preeminence of the artillery arm continues to this day. Equally ancient is the tradition of bureaucratic, highly centralized administration which often saps the initiative of commanders in the field. Beyond that there is the age-old "security psychosis" that leads political and military decisionmakers to seek reassurance by militarizing much of the civilian population and by maintaining large armed forces and what we now call "overkill capacity." There is a familiar disregard for the creature comforts that would make life more agreeable for the common soldier, who is expected to bear all his hardships uncomplainingly and to give his life for a sacred cause, if need be. Even the old social divisions have reappeared, in a new form, beneath a veneer of comradeship.

Yet we should not oversimplify. Most of the former ingrained weaknesses have been overcome with industrialization, the technological revolution, and educational progress. In our discussions we shall be hearing about many new phenomena—advanced weaponry, nuclear strategy, political indoctrination, and so on—that make the Soviet Army of today as remote from its Tsarist predecessor as the B–1B bomber is from Kitty Hawk. What we should perhaps remember, as we refine our deterrent power to meet the Soviet challenge, is that its armed forces do not consist of abstract "enemies" or mindless automata but of human beings who are the heirs to a long tradition of honorable service in the profession of arms and who deserve our respect and understanding in their difficult predicament, past and present.

Notes

1. Allan K. Wildman, *The End of the Russian Imperial Army: The Old Army and the Soldiers' Revolt, March–April 1917* (Princeton, 1980); a sequel is expected. On the formation of the Red Army, see John Erickson, "The Origins of the Red Army," in *Revolutionary Russia*, ed Richard Pipes (Cambridge, Mass., 1968), pp 224–58.

2. The best study of this change is John Erickson, *The Road to Stalingrad* (London, 1974); see also Timothy J. Colton, *Commissars, Commanders and Civilian Authority: The Structure of Soviet Military Politics* (Cambridge, Mass., 1979). D. Fedotoff-White's *The Growth of the Red Army* (Princeton, 1944) also is still worth reading.

3. Freiherr S. von Herberstein, *Moscovia*, ed H. Kauders (Erlangen, 1926), p 168.

4. On the southern border defenses, see V. V. Kargalov, *Na stepnoi granitse: oborona 'Krymskoi Ukrainy' russkogo gosudarstva v pervoi polovine XVI v.* (Moscow, 1974). Alan W. Fisher, *The Crimean Tatars* (Stanford, 1978), reverses the conventional pro-Russian view. On Near Eastern expansion, see Matthew S. Anderson, *The Eastern Question 1774–1923: A Study in International Relations* (London, 1966).

5. Marc Raeff, "Patterns of Russian Imperial Policy Towards the Nationalities," in Soviet Nationality Problems, ed Edward Allworth (New York, 1973); A. Kappeler, *Russlands erste Nationalitäten. das Zarenreich und die Volker der Mittleren Wolga vom 16. bis 19. Jahrhundert* (Cologne, 1982).

6. See R. F. Baumann, "Universal Service Reform and Russia's Imperial Dilemma," *War and Society* 2 (1986), pp 31–49, for the period after 1874.

7. S. M. Zagoskin, "Vospominaniia," *Istoricheskii vestnik* 79 (1900), p 60.

8. D. Beyrau, *Militär und Gesellschaft im vorrevolutionären Russland* (Cologne and Graz, 1984)

9. Marc Raeff, *Understanding Imperial Russia*, trans Arthur Goldhammer (New York, 1984) and several earlier studies, notably Raeff's *Origins of the Russian Intelligentsia. The Eighteenth Century Nobility* (New York, 1966). On subsequent changes in the operation of Peter's famous Table of Ranks (1721), much can be learned from two as yet unpublished theses: R. D. Givens, "Servitors and Seigneurs: The Nobility and the Eighteenth-Century Russian State" (Ph.D. diss., Univ. of California, Berkeley, 1975); and J. L. Floyd, "State Service, Social Mobility and the Imperial Russian Nobility, 1801–1856" (Ph.D. diss., Yale Univ., 1981).

10. R. L. Venables, *Domestic Scenes in Russia, in a Series of Letters Describing a Year's Residence in that Country, Chiefly in the Interior* (London, 1839), p 19.

11. De Custine, *Lettres de Russie: la Russie en 1839*, ed P. Nora (Paris, 1975), pp 183–84, 187. Venables was perhaps the better observer, but de Custine was a more penetrating critic.

12. Joseph Frank, *Dostoevskii. The Years of Ordeal, 1850–1859* (Princeton, 1983).

13. Richard Luckett, "Prerevolutionary Army Life in Russian Literature," in *War, Economy and the Military Mind*, ed Geoffrey West and Andrew Wheatcroft, (London, 1976), pp 19–31.

14. G. D Shcherbachev, "12 let molodosti: vospominaniia," *Russkii arkhiv* 1 (1890), p 87.

15. William C. Fuller, Jr., *Civil-Military Conflict in Imperial Russia, 1881–1914* (Princeton, 1985), p 12.

16. Peter Kenez, "A Profile of the Prerevolutionary Officer Corps," *California Slavic Studies* 7 (1973), pp 125–28.

17. _____, "The Ideology of the White Movement," *Soviet Studies* 32 (1980), pp 58–73.

18. For his biography, see Forrestt A. Miller, *Dmitrii Miliutin and the Reform Era in Russia* (Nashville, Tenn., 1968) and P. A. Zaionchkovskii, "D. A. Miliutin: biograficheskii ocherk," in *Dnevnik D. A. Miliutina*, vol 1 (Moscow, 1947).

19. John Bushnell, "The Tsarist Officer Corps, 1881–1914: Customs, Duties, Inefficiency," *American Historical Review* 86 (1981), pp 753–80.

20. Arcadius Kahan, *The Plow, the Hammer and the Knout: An Economic History of*

Eighteenth-Century Russia (Chicago, 1985), p 10.

21. D. de Raymond, *Tableau historique, géographique, militaire et moral de l'empire de Russie*, 2 vols (Paris, 1812), p 527.

22. E. Kimerling [Wirtschafter], "Soldiers' Children, 1719–1856: A Study of Social Engineering in Imperial Russia," *Forschungen zur osteuropäischen Geschichte* 30 (1982), pp 61–136.

23. A. I. Viazemskii, "Zapiska voennaia, pisannaia v 1774 g.," in *Arkhiv kn. A. I. Viazemskogo*, ed S. D. Sheremetev (St. Petersburg, 1881), p 5.

24. Venables, *Domestic Scenes*, p 188.

25. *Polnoe sobranie zakonov Rossiiskoi Imperii* (St. Petersburg, 1830), vol 32, col 1, no 25220.

26. *Polnoe sobranie zakonov Rossiiskoi Imperii*, vol 19, no 13651 (Sep 2, 1771). For the nineteenth century, see J. Tanski, *Tableau statistique, politique et moral du système militaire de la Russie* (Paris, 1833), p 158.

27. I. M. Minaev, "Vospominaniia I. Men'shogo, 1806–1849," *Russkaia starina* 10 (1874), p 53.

28. A. N. Petrov, "Ustroistvo i upravlenie voennykh poselenii v Rossii: istoricheskii obzor, 1809–1826," in *Materialy k noveishei otechestvennoi istorii: graf Arakcheev; voennye poseleniia, 1809–1831*, ed V. I. Semevskii (Moscow, 1871; reprint ed, Newtonville, Mass., 1973), pp 163–68. For another case study see John Keep, "The Case of the Crippled Cadet: Military Justice in Russia under Nicholas I," *Canadian Slavonic Papers* 28 (1986), pp 37–51.

29. For a graphic description by a sympathetic young officer (1847), see N. A. Mombelli's article in *Delo petrashevtsev*, 3 vols, ed V. Desnitskii (Moscow, 1937), vol 1: pp 251–52.

30. *Polnoe sobranie zakonov Rossiiskoi Imperii*, vol 27, no 20115 (Jan 18, 1802) and vol 30, no 23279 (Apr 10, 1808).

31. In 1830 and 1834, N. Vish, "Telesnye nakazaniia v voiskakh i ikh otmena," *Voennyi sbornik* 11 (1904),p 117. On Nicholas I's army, the classic study in English is by John S. Curtiss, *The Russian Army Under Nicholas I, 1825–1855* (Durham, N. C., 1965).

32. USSR, TsGVIA, f 801, op 69, d 31 (1836). See also John L. H. Keep, "Justice for the Troops: A Comparative Study of Nicholas I's Russia and the France of Louis-Philippe," forthcoming in *Cahiers du Monde russe et soviétique*, (Paris). Since there were some 5,000 desertions, several million blows were inflicted annually nationwide.

33. L. G. Beskrovnyi, *Russkaia armiia v XVIII v.: ocherki* (Moscow, 1958), p 435.

34. N. V. Mordvinov, "Iz zapisok voenno-sudebnogo deiatelia," *Istoricheskii vestnik* 111 (1908), p 857.

35. Fuller, *Civil-Military Conflict*, pp 121, 126.

36. P. A. Zaionchkovskii, *Voennye reformy 1860–1870 gg v Rossii* (Moscow, 1952), pp 49–50.

37. The best contemporary study is M. I. Bogdanovich, *Istoricheskii ocherk deiatel'nosti voennogo upravleniia v pervoe 25-letie . . . imperatora Aleksandra Nikolaevicha, 1855–1880 gg.* (St. Petersburg, 1879–81) vol 3, and articles in *Voennyi sbornik* a progressive military journal set up in 1858. See also John Keep, "Chernyshevskii and the Military Miscellany," in *Felder und Vorfelder russischer Geschichte: Studien zu Ehren von Peter Scheibert*, ed I. Auerbach, et al, (Freiburg i. Br., 1985), pp 111–33. Our understanding of popular literacy and taste has been revolutionized by J. Brooks, *When Russia Learned to Read* (Princeton, 1985); for the military see pp 18–21.

38. P. O. Bobrovskii, "Vzgliad na gramotnost' i uchebnye komandy (ili polkovye shkoly) v nashei armii," *Voennyi sbornik* 3 (1871), p 60.

39. M. Grulev, *Zapiski generala—evreia* (Paris, 1930), pp 130–31, cited by P. A. Zaionchkovskii, in *Samoderzhavie i russkaia armiia na rubezhe XIX–XX st., 1881–1903* (Moscow, 1973), p 278; John Bushnell, "Peasants in Uniform: The Tsarist Army as a Peasant Society," *Journal of Social History* 13 (1979–80), p 573.

40. Bushnell, "Peasants in Uniform," p 568.

41. Bushnell, "Tsarist Officer Corps," p 766.

42. Richard Chancellor, cited in *A Source Book for Russian History from Early Times to 1917*, ed G. Vernadsky, et al, (New Haven, 1972), vol 1, p 168.

43. Herberstein, *Moscovia*, pp 106–7.

44. France. Ministère de la Guerre, Services Historiques de l'Armée de Terre, Vincennes, *Mémoires et Reconnaissances*, vol 1495, *De l'armée russe*, pp 4–5.

45. The first such work seems to have been by S. N. Glinka, ed, *Russkie anekdoty—voennye, grazhdanskie i istoricheskie, ili: Povestvovanie o narodnykh dobrodeteliakh Rossiian drevnikh i novykh vremen*, 5 pts, (Moscow, 1822). One of the most recent works is by N. Shliapnikov and F. Kuznetsov, comps, *Iz boevogo proshlogo russkoi armii: dokumenty i materialy o podvigakh russkikh soldat i ofitserov* (Moscow, 1947).

46. A. I. Antonovskii, "Zapiski," in *1812 god v dnevnikakh, zapiskakh i vospominaniiakh sovremennikov*, ed V. Kharkevich, fasc 3 (Vilno, 1904), p 125.

47. J. G. Tielke, *An Account of Some of the Most Remarkable Events of the War between the Prussians, Austrians, and Russians from 1756 to 1763*, trans C. and R. Crauford (London, 1787), vol 2, pp 88–89, 134.

48. W. Buchmuller, "Ein Beitrag zur Geschichte des Russeneinfalls in die Neumark vom Jahre 1759," *Forschungen zur Brandenburgischen und Preussischen Geschichte* 26 (1913), p 226; Count A. E. Richelieu, "Journal de mon voyage en Allemagne, commencé le 2 septembre 1790," *Sbornik Imperatorskogo Russkogo istoricheskogo obshchestva* 54 (1886), pp 175–84 (Ochakov, 1788) (NB: not place of publication, but massacre date!); M. I. Bogdanovich, *Russkaia armiia v vek imperatritsy Ekateriny* (St. Petersburg, 1873), pp 27, 30.

49. *Pesni sobrannye P. V. Kireevskim*, 2d ed, fasc 9, p 326. This song does not feature in Soviet collections.

50. Isabel de Madariaga, *Russia in the Age of Catherine the Great* (London, 1981), p 447: I. N. Engelgardt, *Zapiski, 1776–1836* (Moscow, 1868), p 77.

51. Eger [= Chasseur], "Otryvki iz zapisok unter-ofitsera," *Voennyi sbornik* 6 (1863), p 501.

52. F. W. von Bismarck, *Die Kaiserlich Russische Kriegsmacht im Jahre 1835, oder: Meine Reise nach Sankt-Petersburg* (Karlsruhe, 1836), pp 30,37.

53. T. Schiemann, *Geschichte Russlands unter Kaiser Nikolaus I* (Berlin, 1913), 3, p 328.

54. N. N. Murav'ev-Karskii, "Zapiski," *Russkii arkhiv* 11 (1886), p 249.

55. Bismarck, *Kriegsmacht*, p 12.

56. John S. Curtiss, *Russia's Crimean War* (Durham, N.C., 1979).

57. Zaionchkovskii, *Voennye reformy*. For the "special objects," see I. S. Bliokh, *Finansy Rossii: XIX stoletie· istoriia, statistika* (St. Petersburg, 1882), 2, p 58.

58. For earlier views, consult N. N. Golovin, *Voennye usiliia Rossii v mirovoi voine*, 2 vols (Paris, 1939) and Iu. N. Danilov, *Rossiia v mirovoi voine* (Berlin, 1924). The revisionist view is championed by Norman Stone, *The Eastern Front, 1914–1917* (London, 1975), and by David R. Jones, "Russia's Armed Forces at War, 1914–1918: An Analysis of Military Effectiveness" (Ph.D. diss., Dalhousie Univ., Halifax, 1986), pp 31–36.

59. Wildman, *End of the Imperial Army*, pp 83–84. He sides with the traditional intepretation.

60. A. Lobanov-Rostovsky, *The Grinding Mill. Reminiscences of War and Revolution in Russia, 1913–1920* (New York, 1935), p 167.

Session I

The Military Legacy of Imperial Russia: History and the Environment

The Military Legacy of Imperial Russia: History and the Environment

Introductory Remarks
Nicholas V. Riasanovsky

Members of the Air Force Academy, ladies and gentlemen, it is a great pleasure to open this session of the program. We have distinguished speakers, a distinguished gathering, and a very interesting theme—a theme of essentiality, continuity, and development of the Russian armed forces (Russian and then Soviet) in the broad historical perspective.

The subject of Russian history is of course enormously significant both in abstract academic terms and in so-called practical terms. It is a subject which awakens interest in many countries, primarily in the Soviet Union, but also of course in the United States, Great Britain, and in many others. These interests have their particular characteristics. Broadly speaking there is good, varied, and important scholarship, including British, German, French, and American. I also think very highly of Russian historiography. And we all profit from Soviet historiography, although that creates its own problems and has special difficulties as well as advantages.

The last time I was in the Soviet Union was in connection with research on my book *The Image of Peter the Great in Russian History and Thought*[*] and I was very well received, for which I again thank the Soviet Union. One difficulty, however, was that many of my Soviet colleagues and friends suggested that I not write the Soviet part of the image. Various reasons were given, for example, "You're such a fine historian why deal with these contemporary subjects?" Whereas my teachers at Oxford might have agreed, circumstances were different. People I talked to I usually knew well, but I remember once after a long presentation I made on one of these trips to the Academy of Sciences a person I knew very little showed a great interest. We discussed the matter and then I said, "I appreciate very much the way I was

[*]Oxford, 1985. Ed.

received, but one thing bothered me a little—all this advice not to cover the Soviet period. What's your opinion? Should I listen to these people or not?"

"Don't listen to them, do what your government tells you."

That was the fall of 1979. Carter was busy, and he never told me what he wanted. I must say our government often fails us. Today, I am also not told what to do and so direction for our session will have to be on our own. I think we will do well because this is a good group. The three papers, as it turns out, approach the subject of the Russian armed forces both in related and in somewhat different perspectives.

Dr. Menning's paper is especially concerned with the frontier in the eighteenth and nineteenth centuries, but it has very clear connections going very far back into Russian history, to the frontier and frontier society. Professor Pintner's paper is more narrowly concerned with the basic army problems in the last decades of Imperial Russia. Dr. Jones' paper is concerned with a still narrower focus on the very vital years immediately after revolutionary change. So we have a very interestingly different angle. In terms of chronological perspective, in terms of zeroing in on the subject, all are related to the basic problems of continuity and to the armed forces in their broad and very significant social context.

The Army and Frontier in Russia

Bruce W. Menning

Precedent and focus render this symposium an appropriate forum for a discussion of the impact of the frontier on the Imperial Russian Army. The presentations of two Harmon Memorial Lecturers, Robert Utley on the frontier and the American military tradition (1977) and Peter Paret on innovation and reform in warfare (1966), testify to an interest in two broad subject areas which have often been both prominent and related in Russian history.[1] The theme of this year's symposium, transformation in Russian and Soviet military history, implies a willingness to view Russian and Soviet military development in a broad perspective, of which the frontier and its military legacy remain important parts.

Historians of Russia have long acknowledged a direct though sometimes imprecise link between the frontier in various guises and military-related change. Nearly a century ago, V. O. Kliuchevskii saw in the twin burdens of territorial expansion and frontier defense the origins of the autocratic Russian state and its military, land-owning gentry. He saw these same burdens, which flowed in large part from the Eastern Slavs' historic impulse toward colonization, dictating the reforms of Peter the Great. In brief, over long periods of time, resettlement opened new frontiers for the Eastern Slavs, confronting them with novel circumstances and peoples and imposing on them new military exigencies.[2] Subsequent observers, including Western historians as diverse as B. H. Sumner, William H. McNeill, Richard Hellie, and Joseph L. Wieczynski, have at times estimated the impact of the frontier on various Russian institutions, including the military.[3] However, for reasons of intent and focus, their and other treatments usually concentrate more on consequence within social context than on persistent reciprocal impact between frontier circumstance and fighting institution.[4] This remains particularly true for the Imperial period, for which only scattered accounts exist to trace Russian military evolution against a background of nearly two centuries of incessant warfare in varying degrees of intensity on the periphery. Still less attention has been devoted to an assessment of how these experiences might have made themselves felt either in the Tsarist or Soviet armies.

Both Utley's work on the U.S. Army and Paret's study of innovation and military reform suggest categories of investigation, analysis, interpretation, and comparison. In light of their precedents, a primary objective of this essay is to identify and assess the impact of frontier-style enemy and environment on the evolution of the Imperial Russian Army and related military institutions. A second objective is to trace the enduring effect of frontier-inspired change on longer-term military innovation and reform. The Russian experience suggests similarities and differences with the American frontier and European reform experiences.[5] Whatever the circumstances and consequences, at stake is a fundamental issue: how military organizations assimilate experience and then either apply, misapply, or fail to apply "lessons learned" to accommodate challenge and change.

As preface to discussion, a few definitions and delimitations are in order. In his study of military frontiersmanship, Robin Higham has suggested that the scholar might discern at least eight different kinds of frontiers.[6] In the interests of simplification, the present study borrows from Frederick Jackson Turner by way of the venerable B. H. Sumner to define the frontier more generically as an area—or advancing line—of "struggle for the mastering of the natural resources of an untamed country."[7] For the purposes of this essay, we are concerned primarily but not wholly with the military aspects of this struggle. This study also limits its chronological scope to the eighteenth and nineteenth centuries and its geographical scope to the frontiers of the steppe, mountain, and desert, or the area stretching east from the Danube across the northern littoral of the Black Sea through the Caucasus and on into Central Asia. Finally, the present treatment acknowledges that issues of force composition and style of warfare argue compellingly that Turkey be numbered among Russia's frontier adversaries.

Two centuries of armed struggle over this unfolding frontier established the southern and southeastern limits of Russia and helped endow the Tsarist patrimony with the assets of empire. Frontier conflict also confronted the Russian Army with challenges of enemy and environment quite different from the more conventional circumstances of the north and west. Distances were often vast, the dangers of outside intervention real, material and population resources frequently few, and the enemies usually numerous and unconventional.[8] For long intervals, including at least three decades in the eighteenth century and three or four decades in the nineteenth, the struggle for frontier mastery devoured a major share of the military's resources and played an important but often ill-defined role in determining the very nature of the evolving Imperial Russian Army. The same struggle in many respects also determined the character of Russia's southern expansion effort, endowing it with a quasi-military character that has not escaped the scrutiny of various commentators.[9]

Apart from organizational and operational considerations, one of the Russian frontier's more enduring legacies lay in the mind, where it might alternately liberate, captivate, terrify, or simply bore. For writers such as Pushkin, Lermontov, and Tolstoy, frontier service became a literary vehicle for depicting important rites of passage in several senses of the phrase. For others, the frontier provided an environment in which they might slip the

bonds of convention "to kill like a Cossack."[10] For more than a few others, alternating periods of combat and tiresome garrison duty juxtaposed fear and routine and exhilaration and boredom in strange ways which seemed to encourage bizarre diversions: Lermontov's Pechorin shot flies off his walls, while a subsequent generation's officers shot at the sound of each other's voices in darkened rooms.[11] For the more serious-minded, including apostles of military change ranging from G. A. Potemkin to D. A. Miliutin, the harsh necessities of frontier service were inspiration for innovation.[12] In a word, frontier service held something for nearly everyone, whether author, adventurer, soldier, or reformer.

On the frontier, one learned not only to think, but also how to fight, and sometimes how to die. Over the span of two centuries' intermittent fighting, nearly every campaign held its Russian equivalent of Custer's last stand. In 1717, Peter the Great sent Prince A. Bekovich-Cherkasskii with a 3,600-man detachment to Khiva in search of conquest and gold, and thanks to treachery the Tsar's troops were almost to a man either butchered or sold into slavery. In 1773, the entire rear guard (3 officers and 153 rank and file) of the Apsheronskii infantry regiment perished south of the Danube while covering the withdrawal of an unsuccessful raiding force. In 1839, the Orenburg Governor-General, V. A. Perovskii, in another futile march against Khiva, lost two-thirds of a 5,000-man detachment to cold and disease in the wintry steppe south of the Urals. In 1840, the garrison of Mikhailovskoe fortress in the Caucasus held off repeated Cherkess assaults until the situation became hopeless, then retreated to the inner citadel to earn collective immortality when one of their number ignited the powder magazine. In 1864, Capt. V. R. Serov lost 57 of 112 Cossacks in a Kokandian encirclement outside Russian-held Tashkent before the remainder broke through their tormentors in a last desperate charge to the city gates.[13] The more heroic of these and similar events became the stuff of legend and celebration in regimental messes.

They were also the substance of a little-understood military culture's "lessons learned." To avoid repetition of disaster or to achieve success with greater efficiency and less pain and loss, adaptation and change were crucial to military institutions as they confronted new circumstances, technologies, and enemies. In 1894, A. N. Petrov, a Russian general officer and military historian, succinctly summed up his army's responses, especially its tactical innovations to a century of warfare in the south steppe, by asserting, "They were in complete accordance with the *circumstances of the situation.*" More recently and in more general terms, Peter Paret has reminded us that military institutions remain both responsive and responsible to the world around them.[14] Within the Russian context, the Imperial Army both reacted to and acted upon the frontier in ways that affected how the Russians waged war and how they thought about waging war. Some innovations were persistent, many were not.

Within the larger picture, the issue of interaction between frontier warfare and technology can be dismissed with relative ease. This is in large part because military technology remained static for more than three-quarters of the period under discussion. When breechloaders and smokeless powder

finally appeared, they multiplied with telling effect the firepower of conventional military forces. However, just as in the American case, artillery—except for light artillery—and weapons capable of more rapid fire—except for breechloaders—were usually frowned upon because of weight and difficulty of supply.[15] Only in the Caucasus, where the Murids came into early possession of rifles, did rapid armament of Russian forces after 1856 with corresponding weapons seem to have immediate tactical impact.[16] Otherwise, frontier warfare reemphasized traditional tools, including chiefly the settler's old allies, the ax and pickax, both in fortifying positions and depriving the enemy of cover. Only in the later stages of frontier conflict did the gradual appearance of the telegraph and steam-driven transport produce limited impact. Steam shipping rendered operations more predictable in areas close to water. Although rail lines reduced time required for transit to theater, they were rarely sufficiently developed to affect operations within the theater itself. The telegraph had important tactical and operational implications, but with few exceptions, Russian tacticians failed to perceive the decisive importance of more sophisticated communications until after the Russo-Japanese War.[17] In contrast, military engineering was an important consideration during the entire Imperial period for a variety of reasons ranging from field fortification to road building.

The limited impact of technology meant that the conventional triumphed over the unconventional chiefly through tactical, organizational, and intellectual innovation. As General Petrov so well understood, confrontations on the frontier encouraged daring departures from accepted practice simply because frontier-style circumstances and enemies changed the relationship among primary components within the calculus of combat power. Or, to put it another way, the relative emphasis among the elements of J. F. C. Fuller's "hit, move, protect" formula for calculating combat power fell on the first two elements.[18] Enemies usually moved fast and struck unexpectedly, trusting to mass, speed, knowledge of the terrain, and surprise to carry the day. They rarely waited for conventional foes to bring up their forces and firepower for deployment in accordance with accepted military practice. Rather, enemies from the mountains and steppe, whether Nogai, Kalmyks, or Cherkess, preferred to harass, to fade into the distance, to bide their time, then to fall unexpectedly in overwhelming numbers on poorly led, inexperienced, and tired soldiers.[19]

Answers to these and other challenges frequently came in the form of tactical and organizational flexibility and fluidity. From the second half of the eighteenth century, the Russians began to accumulate sufficient expertise, experience, and confidence to improvise new tactics and formations for confrontations in the steppe with Tatar cavalry and Turkish infantry. Under the pressure of horde-formation attacks, the Russians adopted or refashioned tactical formations which capitalized on flexibility and discipline both in the approach march and the assault. A reemphasis on training and spirit imparted the confidence and expertise necessary to develop both facility in battle drill and trust in the tactical integrity of small formations. This enabled commanders P. A. Rumiantsev (1725–96) and A. V. Suvorov (1729–1800) to march more rapidly to contact over parallel routes in smaller formations.

It also enabled them to engage in the articulated attack, which meant they could anticipate battles of annihilation using hammer-and-anvil style tactics. At the same time, Prince G. A. Potemkin's innovative reforms in uniforms and equipment facilitated readiness and rapidity of movement. However, novel approaches failed to resolve the dilemmas of siege warfare, which continued to be a thorn in the side of Russian commanders until they learned to resolve it either by storm or by ignoring the fortresses to concentrate on their covering field forces.[20]

The campaigns of Rumiantsev and Suvorov also revealed the limitations of frontier-inspired innovation. Although their exploits inspired emulation and envy, too often contemporary and subsequent interpreters ignored context, thus obscuring the frontier origins of departures from convention during a period of relatively static military practice. The exigencies of frontier warfare helped explain why field commanders sought original answers to tactical problems which, although limited in scope, either anticipated or accompanied military changes often associated with the innovations of the French Revolution. Yet, Russian changes were not always persistent because they were written into field regulations only in general terms; therefore, much was left to the caprice of individual commanders in training and application for specific circumstances. Except for the occasional military commission, innovators lacked either the systematic interpreters or the educational institutions which would distill wisdom from successful practice and inculcate it as accepted method within the officer corps. Finally, the commanders themselves often failed to translate tactics from the realm of the unconventional to the conventional. In 1778, Suvorov himself prescribed the following tactical formations to the Crimean and Kuban corps: "against regular forces the linear order as in the Prussian war; against irregulars as in the last Turkish war."[21]

Less eye-catching than novel tactics, although in certain ways more persistent, were changes in force structure and organizational emphasis associated with frontier warfare. Unlike the American frontier, where the U.S. Army scarcely ever exceeded 30,000 men, the frontier wars in Russia devoured manpower: the Turkish wars of the eighteenth century raised the level of the Imperial Russian Army to 300,000, while the Caucasian wars of the nineteenth century eventually engaged the efforts of 200,000 men. Although densities in Central Asia were lower, a chain of forts and related force requirements for active military campaigns regularly engaged 50,000 troops concentrated in several frontier military districts. These considerations, plus the necessity to maintain additional conventional forces in the event of simultaneous war in Europe, were jointly responsible for the tremendous growth of the Russian Army between 1750 and 1881.[22]

The same requirements in large part also determined the mix of components. Speed and maneuverability were assets on the frontier, and corresponding emphasis fell upon light troops, including jaegers and Cossacks, whose numbers multiplied geometrically during the earlier phases of frontier warfare. By the 1790s, the organizational innovations of Prince G. A. Potemkin left the Imperial Army with a jaeger force of 50,000 men, a number equivalent to or larger than a number of standing European

armies.[23] However, differentiation tended to disappear as infantry became more homogeneous in the Napoleonic era and as frontier fighting units such as the Caucasian corps achieved an identity separate from the rest of the Russian Army. Indeed, isolation meant that Caucasian corps trained and fought differently and that only in exceptional instances did frontier regulars (or irregulars) communicate with establishment regulars. This prompted the historian P. A. Zaionchkovskii to note that on the eve of the Crimean War there were in effect two Russian armies: a frontier army in the Caucasus and a regular army deployed elsewhere. He very directly associated the former with the innovating spirit of Suvorov and his spiritual heirs and the latter with the dead hand of military formalism.[24]

In ways unperceived and probably unintended the Cossack forces of Imperial Russia became a curious bridge between the frontier army and the more conventional military establishment. In the American West, Robert Utley has speculated on how the U.S. military tradition might have been altered had the U.S. Army consciously chosen to fight a larger proportion of its battles with auxiliaries. The Cossacks of Imperial Russia afford something of an answer to that speculation. As sometime military auxiliaries of the Tsar, the Cossacks had performed various kinds of frontier service since the days of the formation of Muscovy. During the Imperial period, as the number of frontier enemies multiplied, Cossacks came increasingly to be relied upon to fill an organizational gap created by the absence of adequate numbers of regular cavalry and a tactical and operational gap created by the regulars' inadequate speed, flexibility, and lightness. Thanks to reforms initiated and perpetuated by Prince Potemkin, the number of Cossack hosts proliferated, and they became an important part of the conquest and settlement of the steppe and the Caucasus.

By the first decades of the nineteenth century, Cossacks increasingly supplemented the forces of the regular army cavalry, and many of their attributes which had been necessities on the frontier came to be viewed as virtues in a new vision for the utility of mobile forces, which flowed from the military experiences of the Napoleonic wars. In addition to their frontier functions, the Cossacks came to inherit a number of other missions, ranging from providing security and engaging in the "little war" to composing the nucleus for long-range mobile strike forces and fielding main-battle, mounted combatants. The Cossacks continued usefulness was a vision supported by A. I. Chernyshev (Nicholas I's Minister of War, 1827–52) and shared by other leading military figures of the period, including the Emperor himself. It was this proliferation of missions that accounted for the burst of reform activity that completed the regularization of Cossack military service and which prompted the multiplication of Cossack hosts in the 1830s and 1840s, even as the Caucasian wars raged and Central Asia levied new frontier requirements.[25] Despite the military reforms of the liberal era, the Cossacks remained important and persistent fixtures within the Russian Army, albeit increasingly regularized and increasingly integrated into the formal military establishment. They were destined both to live on the frontier and to outlive it.[26]

This was in part because warfare across vast distances on the frontier encouraged commanders and theoreticians to seek rapid decision through concerted application of mass and mobility. Christopher Duffy has already pointed out that one of Peter the Great's contributions to Imperial Russian military organization was his employment of the *corps volant*, or "flying corps," a large, all-arms mobile force designed to undertake missions either independently or in conjunction with regular forces within a theater of operations.[27] Although the frontier in itself did not figure prominently in Peter's original calculations, forces and experiences drawn from the frontier ensured that the concept would not die with its originator. As Cossack service became increasingly regularized under Peter's successors, light horsemen from the steppe frontier made up a larger proportion of successive flying corps, real and theoretical. In 1760, five Cossack regiments contributed to the advance guard of G. K. Totleben's raid on Berlin.[28] In 1785, Prince Potemkin seriously proposed sending a huge Cossack raiding corps into the Prussian rear in the event that Frederick II decided to invade Russian Poland while the majority of the Imperial Russian Army occupied itself with operations on the southern frontier. The mission of the corps would have been chiefly to operate against Prussian logistics and lines of communication. The idea was that such a mass of cavalry swarming in the Prussian rear would divert Frederick's attention and arrest his advance until additional Russian forces could be transferred to the theater to augment the customary Observation Army.[29]

Potemkin's vision became limited reality during the Napoleonic era, when a new generation of cavalry leaders would benefit from the frontier organizational legacy of Catherine's one-eyed reformer. Between 1812 and 1815, a number of officers, including not only A. I. Chernyshev, but also V. V. Orlov-Denisov and M. I. Platov, would either build or stake military reputations on their ability to launch flying corps in daring thrusts along enemy flanks and deep into the rear. Their versions of flying corps were usually, but not always, of mixed composition, with a majority of Cossacks and other light auxiliaries accompanied by smaller detachments of infantry and horse artillery. During 1813 and 1814, these formations struck out for enemy objectives deep in rear areas, sowing panic and securing information, key population centers, and road junctions for the allied cause.[30]

From the time of the reign of Alexander I (1801–25), therefore, the vision of using mobile forces—often Cossack in composition—on a large scale to achieve what we now might call operational results within a theater of war remained a permanent fixture in Russian military thinking. In addition to Cossack forces, for example, Nicholas I retained a 12,000-man dragoon corps to support independent mobile operations. During the period following the American Civil War, Russian officers such as I. V. Gurko and N. N. Sukhotin saw in the experiences of Jeb Stuart and Nathan Bedford Forrest an affirmation of earlier Russian thinking about the mass use of cavalry even in an era of new weaponry. P. I. Mishchenko's raid against Inkou in early 1905 during the Russo-Japanese War was testimony to the faith in this vision. So also was V. A. Sukhomlinov's scheme of 1912, which resurrected Potemkin's eighteenth-century plan to insert a large mobile raiding force into

Prussia in the event of war with Germany. After World War I, the fluid conditions of the Russian Civil War encouraged the fielding of mobile formations on a scale which might be termed a latter-day reincarnation of a vision originally born on Russia's frontier steppes.[31]

The Cossack experience and mobile strikes aside, frontier circumstances also revealed the limits of traditional order-of-battle style structures in both prosecuting a war and mobilizing the forces and resources necessary for supporting war. In fact, the contemporary Soviet military district owes its origins to organizational departures associated with the names of Prince A. I. Bariatinskii, Viceroy of the Caucasus, and D. A. Miliutin, his chief of staff. While serving together in the Caucasus between 1856 and 1860, the two sought a novel approach to army organizational dilemmas required by centralized orchestration of tighter resources and decentralized tactical execution. From the early nineteenth century, the Imperial Russian Army in times of war and peace had been typically administered, supported, and quartered in a manner reflecting corps- and even army-size order-of-battle dispositions. Within the sprawling Caucasian theater of frontier warfare, the difficulty with such traditional organizational mechanisms was that centralized command and staff institutions proved inadequate for simultaneous control of far-flung operations and management of spare logistical and administrative support.[32]

Grounded at least in part in previous Caucasian experience, Miliutin and Bariatinskii devised a territorial system of military administration which balanced the requirements of centralized command and supervision with the necessity for decentralized tactical execution.[33] They created within the Caucasus a system of five military districts, the boundaries of which roughly corresponded with natural geographic divisions. Each district was assigned its own commander and headquarters staff to coordinate with central administration and to plan and control local military operations. At the same time, the Commander of the Caucasus retained overall supervision of military operations and centralized control of logistics. In a word, the new design left overall responsibility with the Caucasus commander while freeing the hands of district subordinates to prosecute the war in a manner suitable to the peculiarities of geography and enemy within each district.[34] Thus, the system embodied a calculated decentralization for flexibility and effectiveness, which came to be a hallmark of Miliutin's subsequent military reforms. Less than a decade later, Miliutin as War Minister, with appropriate modifications, imposed his system of military districts on the remainder of the Russian Empire.

As the evolution of the military district indicated, frontier fighting encouraged commanders to weigh the totality of their military missions against the totality of their assets. Because of the nature of various theaters, this calculation naturally included naval assets. Early Cossacks had understood the benefits conferred by ability to take to the water; they devoted substantial energy to expeditions on the river systems of the steppe and the seas into which they emptied. Circumstances caused subsequent conquerors and rulers who followed to imitate the Cossack example. Thus, from the time of Peter the Great, naval concerns figured prominently in most

military campaigns on the southern and southeastern periphery. River flotillas moved troops and supplies and provided badly needed firepower. Modest fleets on the Black and Caspian Seas were to a considerable extent dedicated to supporting shore operations in the steppe, mountains, and desert. During the Caucasian wars, only support from the sea enabled the beleaguered network of shoreline fortresses to survive repeated Murid onslaughts. Even in Central Asia, river flotillas played an important part supporting ground operations. Officers from the time of P. V. Chichagov (1767–1849) to S. O. Makarev (1848–1904), the great naval commanders, owed some or all of their early careers to operations on the frontier, which became a kind of leadership laboratory in which successive generations of young naval officers received early experience in independent command. Indeed, one might plausibly argue that some of the first Russian equivalents in joint operations occurred against the Tatars of the steppe and mountaineers of the Caucasus.[35]

In other ways that we do not completely understand, the frontier also helped condition the very manner in which the Russians conceived of waging war within one or more theaters by taking into account overall problems and the resources available for the resolution of those problems. The Russian military historian D. F. Maslovskii has noted that during the Russo-Turkish War of 1787–91, Prince Potemkin had been the first officer in the history of Russian military art to wield the authority of a commander in chief over operations in several theaters.[36] In the nineteenth century, it was no coincidence that D. A. Miliutin pioneered modern military statistical studies of various areas and resources within and without theaters of operations. These and subsequent compilations would figure prominently in the reshaping of Russian military institutions to confront the far-flung military problems of empire. Throughout the second half of the nineteenth century, these statistical and geographical studies went hand-in-hand with theoretical developments associated with G. A. Leer and others at the Academy of the General Staff who sought answers to contemporary military challenges in the undying principles of strategy as embodied in contemporary interpretations of Napoleonic warfare. The problem was that Leer and his disciples tended to view the midcentury innovations associated with the wars of German unification from a purely Napoleonic perspective. Nonetheless, the prospect of war against both conventional and unconventional adversaries within specific theaters heavily influenced Russian military thinking about assets, probable enemies, and issues of command, operations, and tactics.[37] This was the legacy inherited by subsequent theoreticians as diverse as N. P. Mikhnevich (1849–1927) and V. K. Triandafillov (1894–1931). They, in turn, would serve as intellectual midwives in the birth of military theories that would eventually culminate in modern Soviet operational art.

The catalytic effect of the frontier on military intellectual development in Russia thus varied somewhat from the American experience. However, in at least one area the Russian and American experiences were similar: the way that Utley saw frontier war presaging twentieth-century total war.[38] By definition, frontier warfare involves a clash of cultures, and it just might be

that in most cases such a fundamental clash eventually culminates in the death of one or the other of the protagonists. Those who are horrified by Custer's tactics on the Washita have not read of Suvorov in the steppe against the Nogai Tatars and Kalmyks.[39] Those who are horrified by contemporary Soviet operations in Afghanistan have not read of Russian military operations in the Caucasus. With the rise of Muridism, the Caucasian wars assumed an ever more total character, so that by the 1850s, extermination and deportation had become regular features of the Russian way of war against the mountain peoples. By 1864, one contemporary calculated that 450,000 mountaineers had been forced to resettle. Meanwhile, thanks to pacification operations, entire tribes were decimated and relocated to assure Russian military control of key areas, routes, and shorelines.[40]

Numbers were not so obvious in Central Asia, but the population, perhaps because it seemed more Asiatic, evoked what amounted to be racialist responses from Russian commanders. The English observer, George Curzon, for example, remained much impressed by the Russian penchant to apply massive force in the face of native resistance to military penetration. The British, Curzon believed, struck gingerly "a series of taps, rather than a downright blow." In contrast, M. D. Skobelev, hero of the Russo-Turkish War of 1877–78, asserted, "I hold it as a principle that in Asia the duration of peace is in direct proportion to the slaughter you inflict upon the enemy. The harder you hit them, the longer they will remain quiet afterwards."[41] As Skobelev's own actions suggested, this approach did not exclude inflicting mass slaughter on a broad cross section of the population to further Russian interests and subordination of the peoples in question. Central Asia, a locale into which Russia was far less capable of injecting manpower and resources than either the southern steppe or the Caucasus, seemed to breed its own peculiar kind of wars of annihilation. In this respect, the frontier wars were sad precursors of twentieth-century wars of annihilation.

The Russian military frontier also had other negative aspects. To borrow a phrase from the contemporary novelist Reynolds Price, certain segments of the legacy might unexpectedly assume the character of an "unlucky heirloom." Some experiences would always remain valid and could be transferred into other military circumstances. Others, like Price's heirloom, were better left on the frontier. This is precisely what Suvorov had acknowledged in the tactical realm when he advised his Crimean and Kuban corps to fight in the steppe as against irregulars and in the north as in the last war against Prussia. In this century, the Russian military scholar A. A. Svechin pointed out the pitfalls of transferring too much of the frontier legacy. He claimed that A. N. Kuropatkin in fighting against the Japanese in the Far East brought with him habits he had learned on the military frontier in Turkestan, and in part this fact accounted for the Russian commander's inability to deal with the realities of fighting a modern enemy.[42] Always there is the problem of analyzing conventional and unconventional experiences and extracting the useful while discarding the useless, and for this reason modern armies have sometimes devised institutions to sift experience to determine the appropriateness of their lessons to changed circumstances over time.

In conclusion, let us return to Utley and Paret. Various references to Utley have indicated the degree to which the Russian military experience on the frontier corresponded with the American experience. For reasons which merit further examination, frontier fighting appears to have affected Russian military institutions more profoundly than was true for the United States. Within the Russian context, the Imperial Army both reacted to and acted upon the frontier in ways that affected Russian military art from tactics through strategy, that affected methods of mobilizing forces and resources for war, that influenced important conceptions about waging war, and that helped determine the means that Russians deemed necessary to achieve decision in war.

At the same time, the historian must always temper comparisons and judgments with reference to intensity, longevity, and frequency. In light of Paret's analysis of innovation and military reform within other contexts, one might hazard to observe why some of Russia's frontier-inspired innovations were translated into reform and others were not. In the Russian experience, persistence was usually a function of organization and structure. Those changes which were institutionalized early and which demonstrated usefulness beyond the frontier tended to endure. Others which demonstrated unexpected utility under different circumstances at different times also endured. Some innovations were also capable of transcending time and place to appear under altered guises when circumstances caused a reversion to frontier-style combat. Thus, the Russian Civil War saw the rebirth of cavalry armies and theoretical discussions of warfare in near-frontier-style circumstances under Svechin's rubric, "undeveloped theaters of war" (*malokul'turnye teatry voiny*).[43]

Notes

1. Robert M. Utley, "The Contribution of the Frontier to the American Military Tradition," *The Harmon Memorial Lectures in Military History 19* (Colorado Springs, 1977); Peter Paret, "Innovation and Reform in Warfare," *The Harmon Memorial Lectures in Military History 8* (Colorado Springs, 1966).

2. V. O. Kliuchevskii, *Kurs russkoi istorii*, 5 vols (reprint, Moscow, 1937), I, p 20; cf Richard Pipes, "Militarism and the Soviet State," *Daedalus* 4 (fall 1980), p 3. See also Anatole G. Mazour, *Modern Russian Historiography*, 2d ed (New York, 1968), p 120, and Donald W. Treadgold, "Russian Expansion in the Light of Turner's Study of the American Frontier," *Agricultural History* XXVI (1952), pp 147–49.

3. B. H. Sumner, *A Short History of Russia* (New York, 1943), esp. pp 1–48; William H. McNeill, *Europe's Steppe Frontier 1500–1800* (Chicago, 1964); Richard Hellie, *Enserfment and Military Change in Muscovy* (Chicago, 1978), pp 128–29, 209–11, and 237; Joseph L. Wieczynski, *The Russian Frontier: The Impact of Borderlands upon the Course of Early Russian History* (Charlottesville, N.C., 1976), pp 95–101.

4. See Bruce W. Menning, "Military Institutions and the Steppe Frontier in Imperial Russia, 1700–1861," in International Commission of Military History, *ACTA* 5, Bucharest, 10–17 Aug 1980 (Bucharest, 1981), pp 174–94; for a survey of recent historiography, see Walter M. Pintner, "The Russian Military (1700–1917): Social and Economic Aspects," *Trends in History* 2 (1981), esp. pp 50–51.

5. For European response to warfare in the New World, including conflict on the frontier, see Peter Paret, "Colonial Experience and European Military Reform at the End of the Eighteenth Century," *Bulletin of the Institute of Historical Research* XXXVII (1964), 47–59.

6. Robin Higham, "Military Frontiersmanship," International Commission of Military History, *ACTA* 4, Ottawa, 23–25 Aug 1978 (Ottawa, 1979), pp 54–55; cf T. H. Holdich, "Military Aspects of a Frontier," *The Nineteenth Century* LXXVIII (Oct 1915), 936–47.

7. Sumner, *Short History*, p 1; see also Dietrich Gerhard, "The Frontier in Comparative View," *Comparative Studies in Society and History* 3 (Mar 1959), 205–7.

8. For example, Bruce W. Menning, "Russia and the West: The Problem of Eighteenth-Century Military Models," in *Russia and the West in the Eighteenth Century*, ed A. G. Cross (Newtonville, Mass., 1983), pp 286–89.

9. Marc Raeff, "The Style of Russia's Imperial Policy and Prince G. A. Potemkin," in *Statesmen and Statecraft of the Modern West. Essays in Honor of Dwight E Lee and H. Donaldson Jordan*, ed Gerald N. Grob (Barre, Mass., 1967), pp 29–31; Bruce W. Menning, "G. A. Potemkin: Soldier-Statesman of the Age of the Enlightenment," in International Commission of Military History, *ACTA* 7, Washington, 25–30 Jul 1982 (Manhattan, Kan., 1984), pp 322–38.

10. Laura Jepsen, "To Kill Like a Cossack," *South Atlantic Bulletin* 1 (Jan 1978), 86–94

11. John Bushnell, "The Tsarist Officer Corps, 1881–1914: Customs, Duties, Inefficiency," *The American Historical Review* 4 (Oct 1981), 756n.

12. Bruce W. Menning, "G. A. Potemkin and A. I. Chernyshev: Two Dimensions of Reform and the Military Frontier in Imperial Russia," in *The Consortium on Revolutionary Europe Proceedings, 1980*, ed Donald G. Horward, 2 vols (Athens, Ga., 1980), I, pp 238–43; see also Edwin Willis Brooks, "D. A. Miliutin: Life and Activity to 1856" (Ph.D. diss., Stanford Univ., 1970), pp 81–82.

13. A. A. Kersnovskii, *Istoriia russkoi armii*, 4 vols (Belgrade, 1933–38), I, p 40, A. I. Maksheev, comp, *Istoricheskii obzor Turkestana i nastupatel'nogo dvizheniia v nego russkikh* (St. Petersburg, 1890), pp 73–75, 161–73; *Voennaia entsiklopediia*, 1912–14 ed, II, *s.v.*, "Apsheronskii, 81-i pekh., Imperatritsy Ekateriny Velikoi, nyne E. I. Vys., Vel. Kn. Georgiia Mikhailovicha polk," p 617; John S. Curtiss, *The Russian Army under Nicholas I, 1825–1855* (Durham, N.C., 1965), p 159; and Richard A. Pierce, *Russian Central Asia, 1867–1917* (Berkeley, 1960), p 21.

14. A. N. Petrov, *Vliianie turetskikh voin s poloviny proshlogo stoletiia na razvitie russkogo voennogo iskusstva*, 2 vols (St. Petersburg, 1893–94), II, p 335 (the italics are

Petrov's); Paret, "Innovation and Reform in Warfare," p 2.

15. For example, L. G. Beskrovnyi, *Russkaia armiia i flot v XIX v.* (Moscow, 1974), p 321.

16. John F. Baddeley, *The Russian Conquest of the Caucasus* (New York, 1908), p 460n; see also M. N. Pokrovskii, "Zavoevanie Kavkaza," in *Istoriia Rossii v XIX veke*, 9 vols (St. Petersburg, 1907–11), V, pp 330–32.

17. Pierce, *Russian Central Asia, 1867–1917*, p 45; Bruce W. Menning, "Bayonets Before Bullets: The Organization and Tactics of the Imperial Russian Army, 1861–1905," (M.M.A.S. thesis, U.S. Army Command and General Staff College, 1984), pp 92–93, 95–96.

18. J. F. C. Fuller, *The Foundations of the Science of War* (London, 1925), pp 148, 335.

19. Some of these ploys are aptly characterized by A. A. Prozorovskii to P. A. Rumiantsev in *Prisoedinenie Kryma k Rossii*, ed N. F. Dubrovin, 4 vols (St. Petersburg, 1885–92), I, pp 87–88; cf A. V. Suvorov's instruction of October 12, 1787, to the Kinburn garrison in A. V. Suvorov. *Dokumenty*, ed G. P. Meshcheriakov, 4 vols (Moscow, 1949–53), II, pp 354–55. Characteristics of the enemy are summarized in A. K. Baiov, *Russkaia armiia v tsarstvovanie Imperatritsy Anny Ivanovny*, 2 vols (St. Petersburg, 1906), I, pp 103–5.

20. These and related tactical issues are treated at length in Bruce W. Menning, "Russian Military Innovation in the Second Half of the Eighteenth Century," *War and Society* 1 (May 1984), pp 30–38, and in Bruce W. Menning, "Train Hard, Fight Easy: The Legacy of A. V. Suvorov and his 'Art of Victors'," *Air University Review* 1 (Nov-Dec 1986), pp 79–88; see also V. A. Zolotarev, et al, *Vo slavu otechestva Rossiiskogo (Razvitie voennoi mysli i voennogo iskusstva v Rossii vo vtoroi polovine XVII v.)* (Moscow, 1984), pp 115–18, 225–53.

21. Petrushevskii, *Generalissimus Knaz' Suvorov*, 3 vols (St. Petersburg, 1884), p 485; see also Menning, "Russian Military Innovation in the Second Half of the Eighteenth Century," pp 23–24, 37–38.

22. L. G. Beskrovnyi, *Russkaia armiia i flot v XVIII veke* (Moscow, 1958), pp 313–15; Beskrovnyi, *Russkaia armiia i flot v XIX veke*, pp 38–45; and Firuz Kazemzadeh, "Russian Penetration of the Caucasus," in *Russian Imperialism from Ivan the Great to the Revolution*, ed Taras Hunczak (New Brunswick, N. J., 1974), p 259.

23. P. Bobrovskii, "Kubanskii Egerskii korpus," *Voennyi sbornik* 1 (Jan 1893), pp 7–8. Jaegers were light infantry trained to fight in open formation and often armed with rifled weapons.

24. P. A. Zaionchkovskii, *Voennye reformy 1860–1870 godov v Rossii* (Moscow, 1952), p 36.

25. A. I. Chernyshev, "Istoricheskoe obozrenie voenno-sukhoputnogo upravleniia c 1825 po 1850 god," *Sbornik Imperatorskogo Russkogo Istoricheskogo Obshchestva*, 148 vols (St. Petersburg, 1867–1916), XCVIII, p 426; see also A. P. Khoroshkin, *Kazach'e voiska: Opyt voenno-statisticheskogo opisaniia* (St. Petersburg, 1881), pp 40, 48.

26. Robert H McNeal, "The Reform of Cossack Service in the Reign of Alexander II," in *War and Society in East Central Europe*, eds Bela K. Kiraly and Gunther E. Rothenberg, 3 vols (New York, 1979–84), I, pp 409–21.

27. Christopher Duffy, *Russia's Military Way to the West* (London, 1981), pp 30, 239; see also the implications drawn by N. P Mikhnevich, "Partizanskie deistvua kavalerii v 1812 i 1813 godakh," *Voennye besedy ispolnennye pri shtabe voisk Gvardii i Peterburgskogo voennogo okruga v 1887–1888 gg*, serial 5 (St. Petersburg, 1888), pp 265–67, 270–71, 311.

28. Beskrovnyi, *Russkaia armiia i flot v XVIII veke*, pp 282–83.

29. D. F. Maslovskii, *Zapiski po istorii voennogo iskusstva v Rossii*, 2 vols (St Petersburg, 1891–94), I, p 22n.

30 See, for example, "Dokumenty, otnosiashchiesa k voennoi deiatel'nosti A. I. Chernysheva v 1812, 1813, i 1814 godakh," *Sbornik Imperatorskogo Russkogo Istoricheskogo Obshchestva* CXXI, pp 230–36.

31. Elements of this argument appear in "Heirs of Genghis Khan: The Influence of the Tatar-Mongols on the Imperial Russian and Soviet Armies," by Chris Bellamy, *RUSI* 1 (Mar 1983), pp 52–60, and his "Sukhomlinov's Army Reforms" (M. A. essay, King's College, Univ of London, 1978), pp 12, 41–42.

32. Forrestt A. Miller, *Dmitrii Miliutin and the Reform Era in Russia* (Nashville, Tenn., 1968), pp 29–31.

33. Both Miliutin and Banatinskii returned to the Caucasus with preconceived notions of how to make military operations more effective. See, for example, D. A. Miliutin,

Vospominaniia (reprint; Newtonville, Mass., 1979), pp 306–7, and A. L. Zisserman, *Fel'dmarshal kniaz' Aleksandr Ivanovich Bariatinskii, 1815–1879*, 3 vols (Moscow, 1890), II, pp 108–9.

34. Miller, *Dmitrii Miliutin*, pp 30–31; how Caucasian change related to the larger military establishment is described by E Willis Brooks, "Reform and the Russian Army, 1856–1861," *Slavic Review* 1 (Spring 1984), pp 80–81.

35. See, for example, *P. S Nakhimov: Dokumenty i materialy*, ed A. A. Samarov (Moscow, 1954), pp 135–36, 144, 146, and 150–53.

36. D. F. Maslovskii, ed, *Pis'ma i bumagi A V. Suvorova, G. A. Potemkina i P. A Rumiantseva. 1787–1789 gg. (Kinburn-Ochakovskaia operatsiia), Sbornik istoricheskikh materialov*, 14 vols (St. Petersburg, 1892–1904), IV, p viii.

37. See, for example, A. A. Svechin, "Gosudarstvennyi i frontovoi tyl'," *Voina i revoliutsiia* 11 (Nov 1928), pp 98–106, cf Petrov, *Vliianie turetskikh voin s poloviny proshlogo stoletiia na razvitie russkogo voennogo iskusstva*, II, pp 342–45, 364, and Walter Pintner, "Russian Military Thought: The Western Model and the Shadow of Suvorov," in *Makers of Modern Strategy from Machiavelli to the Nuclear Age*, ed Peter Paret (Princeton, 1986), pp 367–69.

38. Utley, "The Contribution of the Frontier to the American Military Tradition," pp 8–9.

39. Philip Longworth, *The Art of Victory* (New York, 1965), pp 128–32.

40. Kazemzadeh, "Russian Penetration of the Caucasus," pp 260–62.

41. Quoted in Pierce, *Russian Central Asia, 1867–1917*, p 45.

42. A. A. Svechin, *Evoliutsiia voennogo iskusstva s drevneishikh vremen do nashikh dnei*, 2 vols (Moscow-Leningrad, 1927–28), II, pp 409–11.

43. R. R. Tsiffer, "Zametki o voine v malokul'turnykh teatrakh i metode ee izucheniia," *Voina i revoliutsiia* 11 (Nov 1928), pp 132–39.

Mobilization for War and Russian Society

Walter M. Pintner

In the context of the decades prior to the First World War, "mobilization" has a very specific meaning: the calling up of reservists and related preparations required to put an early twentieth-century army on a wartime footing, including the collection of the thousands of horses that were still necessary for moving men and supplies from railheads to the points of actual use. In more recent years, as that particular feature of military preparedness has become less prominent, mobilization has come to be used most often in a broader sense. According to one recent official reference work its first definition is: "The act of preparing for war or other emergencies through assembly and organizing national resources."[1] Although both meanings of mobilization will be discussed in this paper it is primarily with the second, broader usage that we shall be concerned.

The story of Russia's problems in mobilization, taken in the narrow sense, is quite well known because of its crucial role in the events leading up to the outbreak of World War I. The famous Schlieffen Plan, which called for an immediate German attack on France once Russia began to mobilize, was based on the fact that Russia's mobilization was, quite correctly, expected to take longer than that of Germany and therefore there was a brief period in which Germany could concentrate its forces against France without fear of a major attack in the east. The relative slowness of Russian mobilization was due both to geographic factors—it was a large country and reserves had to be moved greater distances than those of Germany to reach the locations where they could be put to use—and to reasons of economic and cultural underdevelopment. The Russian railroad network was less dense, and Russian bureaucracy was less efficient than those of more advanced countries.

Furthermore, the particular geography and ethnic makeup of the empire's western frontier complicated the problem of mobilization even further. Russian Poland stuck out to the west, forming a large salient with German territory to the north and west, and Austro-Hungarian territory was to the south and southeast. This geographical configuration put the Russian frontier temptingly close to Berlin, but any move to the west from Russian Poland would require adequate defense of the flanks to both the north and south. Not only was the geographic situation difficult for the Russians, the ethnic composition of the area also presented problems. The most easily mobilized reserves would naturally be those resident in the surrounding area. The local population, however, was largely Polish or Jewish. From a Russian standpoint Poles were politically unreliable, and there was a widespread belief among Russian military men that Jews did not make good soldiers.

The result was that it was considered necessary to keep large numbers of predominantly Russian forces stationed in the western areas (43 percent of the Russian Army in 1909) in peacetime. In case of war these forces could not be quickly augmented from local reserves, but had to wait for those from predominantly Russian areas farther east to be shipped west, making the already complex mobilization effort even more difficult. It did, however, reduce the total number of men and the amount of equipment that moved at times of mobilization since whole units did not have to move from east to west. In 1910 a territorial system was introduced, which meant that units were generally stationed in areas from which they drew recruits. At least to some degree this was due to the desire to have more troops available in the interior to combat civil unrest. It had the effect, at least for a time, of slowing the mobilization process because larger numbers of men, horses, and equipment had to be moved greater distances.[2]

Russian military planners were far from unaware of the problems they faced with respect to mobilization against a prospective enemy to the west (Austria-Hungary, Germany, or both). In the 1830s, in the prerailroad age, mobilization time, even though the Russian Army was then essentially a standing force with few reserves, was five to six months.[3] However, the Austro-Prussian and Franco-Prussian wars demonstrated to Russian military men, as well as everyone else, that railroads were the key to successful modern warfare, and the Russians began to plan accordingly.

Although the first major Russian railroad, which linked St. Petersburg and Moscow, had been constructed in the 1840s when other continental countries were also beginning to build significant lines, no further efforts were made until after the Crimean War. But from the 1860s onward, progress was relatively rapid. The basic problem was lots of space to cover and limited funds, so it was quite natural that the lines built were those most likely to attract traffic, which meant that they went from the interior to the major ports on the Baltic and Black Seas. There was little economic incentive to construct lines running east and west or north and south within the Polish salient. Nevertheless, between 1870 and 1914 very substantial progress had been made, both in the construction of new lines and in double tracking and otherwise raising the capacity of others.[4]

After the conclusion of the Franco-Russian alliance in 1894, the French helped to finance the construction of strategic lines in the west which would facilitate Russia's mobilization to support France in the case of a conflict with Germany. Some of this construction was still under way when the war began in July 1914.[5] Despite French preferences for construction aimed at facilitating an offensive against Germany, much of the available resources were spent on lines to the south which related to an attack on Austria, not Germany.[6] It must also be remembered that a great deal of the "strategic" railroad construction was not in the west at all but in the remote colonial fringes of the Russian Empire, the Caucasus, Central Asia, and the Far East, areas of little importance to the problem of mobilization for a major European war. The expenditure of substantial resources on these far-flung projects reflects the dual nature of Imperial Russia in the nineteenth and early twentieth centuries. It was both a major continental land power and

major imperialist power, like Britain or France, but one that had its extra-European colonial empire overland rather than overseas.

When the First World War began in the summer of 1914, Russia was committed to an attack against Germany within fifteen days of the start of mobilization, a commitment to the French that many, particularly in retrospect, view as overly optimistic. As late as 1911 Gen. Nikolai Alexandrovich Danilov, senior strategic planner in the War Ministry, maintained that twenty-three days were required for Russia to launch a major offensive. There can be no doubt, however, that in the years immediately prior to World War I Russia was making considerable progress in strengthening its military position, recovering from the defeat of 1905 and the concomitant internal disorder that largely occupied the army for several years thereafter. The failure of the Russian military effort in 1914 is primarily a question of the failure to settle on an appropriate strategic plan and not a question of short-term mobilization.[7]

The main issue to be addressed in this paper is the problem of the long-term mobilization of Russian society's resources for war. We shall be primarily concerned with the second half of the nineteenth century, down to 1914, but always in the light of Russia's earlier experience. There are two major components of overall societal mobilization for war: (1) the *effective* mobilization of manpower, a concept which embraces both the actual recruitment process of both officers and men, whatever it may be, and the ability to create an effective and reliable force from the men recruited; and (2) the mobilization of physical resources to support the men recruited, an effort which includes not only weapons and munitions, but quantitatively more important elements, such as food, clothing, shelter, and transport, especially railroads and horses. In general, the effort to mobilize physical resources can be summarized in terms of a monetary budget, although some allowance should be made for nonmonetary or decentralized sources of support, such as quartering on the local population, forced requisitions, and the "regimental economy," that is, the effort of troops to be self-supporting.

The premodern Russian Army (down to the reform of 1874) has recently been described at some length by several Western writers, including John Keep.[8] It was, as Professor Keep has shown so well, a harsh and unjust institution in a harsh and unjust society.[9] It was also, and I have argued this at length elsewhere, a highly effective if not efficient institution.[10] It made possible the transformation of sixteenth-century Muscovy, a small and remote principality, into a great empire encompassing essentially the territory occupied by the USSR today, the largest of any country in the world. All that was done by conscripting peasant boys for life, or at least virtually all of the useful part of it, and putting them under the command of young men from the upper class who had few if any viable career options open to them. The limit on the size of the premodern army was not the number of men available but the number who could be supported by the society in nonproductive activity. The state did not need to pay the peasant conscripts anything to speak of, but it had to provide them with food and clothing. Most of the time it was able to force the reluctant population to house the army. Weapons were, and remained down to 1874 and even later, a small

part of the total military budget. The officers were paid but not very well. Since most were not wealthy, they had to get enough, or be able to steal enough, to get by, and their pay was a substantial item in the military budget.

Thus, the major expenses for the premodern army was food and clothing for the troops, fodder for the horses, and pay for the officers. To meet these expenses the state had three major sources of income: (1) revenue from the sale of vodka, the most important source, providing roughly 30 to 40 percent of the total in the early nineteenth century; (2) the head tax on all male peasants and additional rents paid by state peasants, about 20 to 30 percent; and (3) customs revenues, around 15 percent. The remaining 25 percent or so came from a hodgepodge of taxes and fees.[11] Inevitably the burden of taxation fell on the peasant population. Russia was an almost totally agricultural country populated by peasants who paid the head tax and rents and drank the taxed vodka, plus a good deal more illegally distilled. The only substantial revenue source that fell largely on the upper classes, who were exempt from personal taxation, was revenue from customs, for virtually all imported goods were luxuries used only by the westernized privileged groups.

It was extremely difficult, if not impossible, to increase revenues from any of these sources of the short-term to meet emergency needs, as in wartime. The head tax and rents on state peasants were fixed at a level that was close to the maximum that the peasants could bear. Increases were as likely to produce increased arrears as increased revenues. Indeed, in times of poor harvests, arrears increased to such an extent that the entire state budget was threatened, and these arrears were rarely made up. The vodka revenues were administered much of the time through a system of "farming out" that involved long-term contracts which could only be changed at infrequent intervals. Customs revenues could not easily be increased because smuggling was already so widespread that further increases in rates were viewed as counterproductive. Even in the mid-nineteenth century, not to speak of the eighteenth, the administrative ability of the state to collect revenue was stretched to a maximum, and had it been more effective in collection, there was not much more there to collect. Russia was a poor society and remained so down to 1914.

Nevertheless, despite these handicaps the military system worked well enough from the state's point of view through and beyond the Napoleonic wars. In the post-Napoleonic era Russia had the largest standing army in Europe and viewed itself, and was viewed by others, as the predominant land power in Europe. Although some perceptive Russians had realized long before the Crimean War that all was far from right in Russian society, that defeat brought home to those in charge of the state that the comfortable self-confidence and complacency of the post-Napoleonic age was based on assumptions that no longer held. A whole series of state-initiated reforms ensued, including the emancipation of the serf population. We are, however, only concerned with those that relate directly to the question of mobilization for war.

Alfred Rieber has advanced the hypothesis that the emancipation of the serfs, the greatest of the "Great Reforms," was carried out primarily to permit the introduction of general conscription to form a large trained reserve for the army.[12] Although it is clear that emancipation was a prerequisite for general conscription with short-term service, it has not been generally accepted that military concerns were the primary issue that motivated the emancipators.[13]

There was a thirteen-year gap between the proclamation of serf emancipation in 1861 and the inauguration of the modern military recruitment system in 1874. Any proposed change always provokes opposition, and general conscription was not an innovation to be undertaken lightly. During the interim years Dmitrii Miliutin, Minister of War, did what he could to improve the existing system. Substantial progress was made toward increasing the size of the reserve by somewhat reducing the long-established twenty-five-year term of service for conscripts. As late as his report to the Tsar in 1869 (covering 1868) Miliutin said, "The basic strength of Russia must remain its standing army," and "the present system can supply enough reserves."[14] Like a good bureaucrat Miliutin was certainly trying to make his current efforts look successful in this official document, despite whatever misgivings of or hopes for future change he had. It was probably the dramatic and decisive defeat of France by Prussia in 1870 that convinced enough influential Russians that major military reform was necessary.[15]

Above all, the military reform was a measure designed to make the limited funds available for defense purposes go further. It was fiscally inconceivable to have a standing army that could match the armies of Russia's continental rivals operating with general conscription, short-term service, and a large reserve force. Miliutin's program, "more rifles for the ruble," was a first and essential step in Russia's attempt to maintain its position as a major European power, a position that had been drawn into question by its inability to bring the Crimean War to a successful conclusion.

The military reform was, however, more than a measure establishing a new recruitment system. For Miliutin and his supporters it was part of a major attempt to reunite Russian society that, at least from the time of Peter the Great, had been split into a small westernized upper class and the vast mass of the peasant population whose life, world view, and values had hardly changed since the seventeenth century. If Russia was to compete successfully with its rivals it had to develop a comparable degree of national consciousness and unity. Two features of the 1874 reform specifically reflected this concern. Most controversial was its "class blind" character. Traditionally, peasants and other members of the lower classes were subject to conscription into the ranks. Members of nobility (and some other privileged groups) were exempt from military conscription after 1762 (before that service had been required of nobles, but they generally became officers). After 1874 all males were subject to military service without regard to social origin. Terms of service were reduced in proportion to the amount of formal education the recruit had. Thus a university graduate might have as little as six months active service while an illiterate peasant a full six years.[16] Of course, de facto, this still favored the privileged classes who were generally

better educated, but for Russia the principle involved was a radical departure from the past. A member of the lower classes who had achieved a measure of education (and there were such people in some number) was, for the first time in Russian history, entitled to the same advantages with respect to military recruitment as a noble with similar educational accomplishments.

Another important feature of Miliutin's program, if not of the actual 1874 reform, was his emphasis on teaching soldiers to read. However, mandatory literacy classes were dropped after Miliutin's resignation in 1881 and were not restored until 1902. Even then they were often conducted on paper rather than in actuality.[17] John Bushnell has recently argued, and I am inclined to think he is correct, that Miliutin's attempt to use the army to help create a united rather than a bifurcated Russian society largely failed. He argues convincingly that the gap between the officer and the soldier remained the gap between modern and traditional Russia, total and mutually uncomprehending. It was far greater than the distance between superior and subordinate, common to all military organizations. Members of educated Russian society who found themselves in the ranks either as a result of the workings of the new system of general conscription, or even those being punished for radical activity, were not treated like ordinary soldiers but instead were given light duties and even invited to have tea with their superiors.[18]

The mass mobilization of men for war in western Europe not only had depended on the mechanical process of recruiting, training, and placing in the reserves thousands of men, but was also based on the development and maintenance of a general national consciousness or patriotism, which made the men effective soldiers once they donned their uniforms. The post-1874 military system in Russia was comparable to those systems used elsewhere in the formal mechanical sense, but Miliutin's vision of a society that was able to mobilize men in a more profound sense failed to materialize. Down to the end the Russian Army reflected the sharp and tragic division of Russian society as a whole.

A full explanation of the failure to achieve national unity within the army would require a comprehensive discussion of virtually every aspect of Russian history, for that failure is simply one aspect of that complex story. However, it is abundantly clear that this failure had an important economic dimension. A major reason for the introduction of general conscription was, of course, the desire to make available funds go further, while obtaining forces deemed adequate to compete with Russia's potential enemies without expanding the standing army. The reform helped, of course—no standing army could have coped with the military situation that developed in the post-1870 era—but despite the reserve system Russian military leaders felt compelled to maintain more men in uniform than their rivals because of the long frontiers, greater internal distances, and slower mobilization time. At the same time Russia was confronted with the necessity of keeping up technologically as a series of important innovations demanded substantial new expenditures for the army (rifles and artillery) and for the navy (ships). But despite these new demands, the largest expense remained by far simply paying for the subsistence of the men under arms.[19]

The result for the officers and men of the Russian Army was poverty for the officers and a quasi-military life for the peasant soldier.

John Bushnell has recently drawn our attention to the surprising fact that after a relatively short period of training, Russian soldiers spent very little time doing things that were directly related to their functions as soldiers but were primarily involved in what was called the "regimental economy." To cut costs, the regiment manufactured its own uniforms and boots from raw materials provided by the Ministry of War (or sometimes even obtained with funds earned by a regiment), and when possible it cultivated crops to reduce expenditures for food. In 1907, for example, 12 percent of all enlisted personnel were engaged full time in tailoring. Even more significant was the diversion of soldiers' time and energy to work in the civilian economy to earn money for the regiment (*vol'nye raboty*). Bushnell quotes Gen. Mikhail Ivanovich Dragomirov, Commander of the Kiev military district, writing in 1899:

> *In July enlisted personnel fan out in haymowing, in forests, along railway lines, in towns for building; they sew clothing, they acquire an external aspect entirely unsuitable [for military service], they become unaccustomed to discipline and lose their military bearing.*[20]

Dragomirov opposed the system, but concluded that it was impossible to eliminate it for lack of funds. The officers were necessarily involved as much or more in running an economic enterprise as they were in running a military one. They were very poorly paid and the temptation to divert some of the regiment's income to themselves was great; and when the officers were honest, the soldiers probably assumed that they were not.[21]

Even if one does not accept every detail of Bushnell's argument, the overall picture is convincing, at least to me. Russia in the decades prior to the First World War was mobilizing and training more men than any other power. Russian generals argued that their illiterate peasants needed longer terms of enlistment than better-educated western men to become good soldiers.[22] But in fact they seem to have spent less time in military activity during their four to five years of service than German or French conscripts did in two or three. Military service in Russia did not produce the modern "citizen-soldier" but rather transferred agricultural labor from the private manorial or village economy to the regimental economy on a temporary basis. Thus the experience of army life tended to replicate to a considerable degree the traditional experience of the peasant in his village, both in terms of what he actually spent his time doing and in terms of his relationship to the upper class—officer or landlord—army or village life played a similar role.

The central importance of the noncommissioned officer (NCO) in the modern military system is a truism. Officers issue orders, noncoms execute them. They are the men who deal directly with the recruits and actually transform them into soldiers. The Russian Army had fewer long-term NCOs (that is, men who had reenlisted for more than one term) than any other major European army. The average was only one per company compared to twelve in Germany and six in France.[23] The authorities were very much aware of the problem but were unable to devise sufficient incentives to

induce more men to serve longer. An official report published in 1903 looking back to the preceding decades put it this way: "The ordinary Russian, while readily fulfilling his military obligation, is generally unwilling to remain in service longer than the required term."[24] Given the fact that peasants were voluntarily moving to the growing industrial cities in very large numbers in this period, despite very poor living conditions in the cities, it is somewhat surprising and also revealing that it proved impossible to make a long-term military career attractive to an adequate number of men. The government was trying to stretch the available funds further than they could actually reach and never could make the option attractive in material terms. It may also have been unappealing in other ways, but the sources available do not reveal how.

Even more prominent than complaints about the shortage of NCOs in the Minister of War's annual reports to the Tsar was mention of the shortage of officers and the unsatisfactory economic condition of the officer corps. The most serious aspect was the lack of reserve officers to be called up at the time of general mobilization.[25] The basic reason, of course, was lack of money. Officers were paid very poorly compared to German officers, which is not particularly surprising, but also compared to Russian bureaucrats with comparable ranks. The salary scale in the Ministry of the Interior for bureaucrats was higher than that of the Ministry of War for army officers. Officers could not afford to send their children to school or buy proper clothing for their wives.[26] It is hardly surprising that it was difficult to attract well-educated and talented young men to the army. As the economy grew in the late nineteenth and early twentieth century, more and more attractive opportunities were developing outside of state service in the professions and business. What had traditionally been virtually the only possible career for a member of the upper classes was now becoming an increasingly less attractive option among the growing range of possible choices. Thus, except for members of the lower classes and the most impoverished nobles, a military career was no longer promising. There remained, however, a small elite of wealthy noble families whose sons became guards officers and who dominated, but did not monopolize, the higher ranks.

The system of military education, despite the improvements embodied in Miliutin's 1874 reforms, was generally inadequate, and the differences between graduates of the various military schools of differing quality remained very great.[27] Only in 1912, on the eve of the First World War, were substantial measures taken to improve the economic condition of the officers, when for example the pay of lieutenants was increased 33 percent and staff captains by 42 percent.[28]

The regime was certainly concerned about the shortage of officers and the quality of morale of those in service, but its efforts, after Miliutin's retirement in 1881, were not directed at creating a corps of well-trained professionals but rather at building a traditional "esprit de corps" based on isolation from and contempt for civilian society by means that included the restoration of the practice of dueling, military "courts of honor," and the like. William Fuller has perceptively called this phenomenon the development of

"negative corporatism," a sense of unity and common purpose that was nourished primarily by hostility to outsiders.[29]

Viewed from the perspective of the problem of mobilization, I think it can be fairly said that although the formal mechanisms and training systems were in place to mobilize and train both men and officers for war, the old regime in Russia failed to mobilize either group in terms of the moral or psychological dimension. Instead it seemed to concentrate on perpetuating traditional relationships and attitudes that were increasingly outdated and counterproductive.

Virtually all of the discussion thus far has touched on budgetary problems that affected short-term efforts to mobilize, the quality of military service life for officers and men, and so forth. A basic fact that must never be forgotten is that Russia was by far the poorest of the great European powers, yet it aspired to equality or perhaps superiority among them. Total Russian expenditures on its army generally exceeded those of France or Germany from the early 1890s onward.[30] Of course, the Russian Army was nearly twice as large as either of those powers, so per soldier expenditure was much, much lower. The point, however, is that the strain on the undeveloped Russian economy to maintain even the existing unsatisfactory level of expenditure was very great. Throughout the last forty years of the nineteenth century and up to the very last few years prior to 1914, the share of military expenses in the total state budget was tending to decline, from around 40 percent to around 25 percent or, excluding the navy, from around 30 percent to around 18 percent.[31]

The last thirty years of the old regime was a period of rapid (but uneven) economic growth. The extent of government responsibility for that growth is a matter of some controversy among historians, but there is no doubt that, in general, the Ministry of Finance tried to encourage it, particularly, but far from exclusively, during the ministry of Count Sergei Witte (Minister of Finance, 1892–1903). From the Finance Minister's point of view the Ministry of War was a bottomless pit into which productive resources were poured, resources which otherwise could have been used to enrich the nation and, in the long run, solve its constant financial problems. As Fuller has pointed out most effectively, there was constant struggle between the Ministry of War and the Ministry of Finance. The military men could hardly have denied that economic development might ultimately solve their problems, but there is little evidence that they did or could think in those terms. The promise of ample resources ten or twenty years into the future could mean little to officials charged with maintaining military forces adequate to meet national security needs in the present or the next year. The figures show that down to the last few years before 1914, when the conservative Third Duma supported increased military expenditure, the Ministry of Finance was generally successful in limiting military expenditures as revenues and other expenses rose.[32]

Even after the great industrial boom in the 1890s, the major sources of revenue for the Russian Empire had not changed a great deal compared to those for the prereform era, even though total revenue in absolute terms had increased substantially. The direct payments from peasants had declined

from 20 or 30 percent of the total to 11 percent in 1902, and the share of alcoholic beverage revenues remained about the same at 36 percent, as did customs revenues at 15 percent. The growth of the urban population is probably reflected in the increased share of other excise taxes, 11 percent in 1902, roughly balancing the fall in direct taxation on the peasantry.[33] The prosperous urban and industrial economy producing large new sources of revenue that could solve Russia's problems was still far in the future at the beginning of the present century. Given that, the willingness of the government and the Duma to embark on a major program of increased military expenditure just before the First World War is striking.

In retrospect it is easy to say that much of this money was misspent. Too much went for fortresses and the navy, too little for field artillery, machineguns, and so forth. But what military plan or program ever turns out to be "just right"? No one can know what the next war will really be like. With the advantage of hindsight, one can just as easily fault the great German naval program, for it clearly contributed little to the German war effort in World War I. Despite all its problems Imperial Russia did mobilize reasonably quickly when the war came, and the harshest modern criticism is now directed at an overly ambitious strategic plan, not at its capacity to achieve short-term mobilization.[34]

Initially the army suffered from shortages of supplies, but by 1916 it was receiving adequate amounts of ammunition and other necessities, despite the isolation of Russia from its allies and the difficulties of organizing wartime production.[35] For two and a half terrible years the Russian Army at the front, officers and men together, suffered huge losses, and yet it did not give up, despite the weaknesses that we have described. Only when the workers and soldiers, behind the lines in St. Petersburg, deposed the Tsar did the active army decide that it had had enough. All of us who so easily discern weakness in any aspect of the old regime's system must remember that fact. There was a great deal of resilience and strength in the society which was demonstrated in the time of crisis. Had the First World War been a short one as virtually all contemporary experts expected, we might now be examining the reasons for Russia's successful mobilization rather than the causes of its failure.

Notes

1. U.S. Department of Defense, Joint Chiefs of Staff, *Dictionary of Military and Associated Terms* (Washington, 1986).

2. Jack Snyder, *The Ideology of the Offensive: Military Decision Making and the Disasters of 1914* (Ithaca, 1984), p 171.

3. A. M. Zaionchkovskii, *Podgotovka Rossii k imperialisticheskoi voine* (Moscow, 1926), p 31.

4. J. N. Westwood, *A History of Russian Railways* (London, 1964), pp 141, 169.

5. L. C. F. Turner, "The Russian Mobilization in 1914," *The War Plans of the Great Powers 1880–1914*, ed Paul M. Kennedy (Boston, 1985), pp 253, 257, 267.

6. Snyder, *Ideology of the Offensive*, pp 181–82.

7. On the question of war plans see Snyder, *Ideology of the Offensive*, Chapters 6 and 7.

8. John L. H. Keep, *Soldiers of the Tsar Army and Society in Russia, 1462–1874* (Oxford, 1985); Dietrich Beyrau, *Militär und Gesellschaft im vorrevolutionären Russland* (Köln, 1984); Walter M. Pintner, "Russia as a Great Power, 1709–1856: Reflections on the Problem of Relative Backwardness with Special Reference to the Russian Army and Russian Society," Kennan Institute Occasional Paper 33, Washington, 1978.

9. See also Elise Kimerling Wirtschafter, "Military Justice and Social Relations in the Prereform Army, 1796–1855," *Slavic Review* 44 (Spring 1985); "The Lower Ranks in the Peacetime Regimental Economy of the Russian Army, 1796–1855," *Slavonic and East European Review* 64, No. 1 (1986).

10. Pintner, "Russia as a Great Power" and "The Burden of Defense in Imperial Russia, 1725–1914," *The Russian Review* 43 (1984), pp 231–59.

11. Russia, Ministerstvo Finansov, *Ministerstvo Finansov, 1802–1902*, I, pp 618–19, 624–25, 632–33.

12. Alfred Reiber, ed, *Politics of Autocracy: Letters of Alexander II to Prince A I. Bariatinskii, 1857–1864* (Paris and The Hague, 1966).

13. Keep and Beyrau argue that very substantial reform of the recruitment system could have been carried out without abolishing serfdom and that the substantial progress made between 1856 and 1874 in building up army reserves by reducing the twenty-five-year term of service supports this view to some extent. However, I find it hard to believe that, given the concern over peasant unrest, it would have been possible for the regime to abolish the practice of not returning ex-servicemen to their former owners. During the Crimean War there were massive attempts by peasants to join the army to gain their freedom See Keep, pp 352–53, who cites a manuscript by Beyrau.

14. "Vsepoddanneishii doklad po Voennomu Ministerstvu," 1869 goda, sheets 18, 22.

15. John Bushnell, *Mutiny Amid Repression: Russian Soldiers in the Revolution of 1905–1906* (Bloomington, Ind., 1985) pp 8–9; Robert F. Baumann, "The Debates over Universal Military Service in Russia, 1870–1874" (Ph.D. diss., Yale Univ., 1983), chap I, esp pp 11–12.

16. Keep, *Soldiers of the Tsar*, p 376.

17. Bushnell, pp 8–9.

18. Ibid, pp 9–10, 29–30.

19. Pintner, "Burden," pp 236–44; William C. Fuller, Jr., *Civil-Military Conflict in Imperial Russia, 1881–1914* (Princeton, 1985), Chap 2.

20. John Bushnell, "Peasants in Uniform: The Tsarist Army as a Peasant Society," *Journal of Social History* XIII (1980), p 567.

21. Ibid, pp 569–70.

22. Fuller, *Civil-Military Conflict*, p 53.

23. Bushnell, *Mutiny*, p 18.

24. *Obzor deiatel'nosti Voennogo Ministerstva v Tsarstvovanie Imperatora Aleksandra III, 1881–1894* (St. Petersburg, 1903), p 12. See also *Vsepoddanneishii doklad*, 1877, 1897, 1912.

25. *Vsepoddaneishii doklad*, 1867, 1877, 1887, 1897, 1902, 1912.

26. This discussion is based on Peter Kenez, "A Profile of the Pre-Revolutionary Officer Corps," *California Slavic Studies* 7 (1973), pp 129–33.

27. Pintner, "Burden," pp 257–58.

28. Kenez, *Profiles*, pp 130–31.

29. John Bushnell, "The Tsarist Officer Corps, 1881–1914: Customs, Duties, Inefficiency," *American Historical Review* 86 (1981), pp 753–80; Fuller, *Civil-Military Conflict*, pp 22–26; Pintner, "Burden," p 258.

30. Fuller, *Civil-Military Conflict*, pp 50–51

31. Fuller, *Civil-Military Conflict*, p 49; Pintner, "Burden," p 248. Keep, p 379, citing Paul Gregory, says that the military's share of the state budget in 1885 was 50 percent in 1885, and 56 percent in 1913. The statement refers to Gregory's table giving expenditures of the Imperial government in 1913 prices and excluding a number of categories of state expenditure which cannot be counted as contributing to the national income (essentially various types of transfer payments). Gregory's table of all types of government expenditure in current rubles gives the same proportions as Fuller and Pintner. Neither set of figures is "more correct," but they are not comparable. The Fuller/Pintner approach says that of the current revenues that the state managed to collect a declining share was going to the military. The Gregory/Keep figures suggest that of that part of state expenditures that can be considered as contributing to national income the share spent on the military was high and, roughly constant. See Paul R. Gregory, *Russian National Income, 1885–1913* (Cambridge, Mass., 1982), pp 138, 252, 256.

32. See Fuller, *Civil-Military Conflict*, pp 58–74.

33. *Ministerstvo Finansov, 1802–1902*, pp 646–47.

34. Snyder, *Ideology of the Offensive*, chaps 1, 2, 4 and 5, has similarly harsh words for the other major powers.

35. Norman Stone, "Organizing an Economy for War: The Russian Shell Shortage, 1914–1917," in *War, Economy and the Military Mind*, eds Geoffrey Best and Andrew Wheatcraft (London, 1976).

From Imperial to Red Army: The Rise and Fall of the Bolshevik Military Tradition*

David R. Jones

Revolutionaries, according to the "Anarchist Prince" Peter Kropotkin, seek to overthrow "everything" while taking upon their shoulders "the task of universal reconstruction in the course of a few years . . . like the work of cosmic forces dissolving and recreating the world."[1] And among no one was this aim, and the belief in its possibility, more widely accepted than among Kropotkin's own colleagues, the revolutionaries of his native Russia.

True, in 1917 literate internationalists, such as V. I. Lenin and L. D. Trotsky, believed that in the long run their revolution could only succeed by spreading westward and engulfing the more advanced industrial states of Europe. But for the majority of their radical followers, the era opened by the downfall of Nicholas II was to see the immediate socialist reconstruction of the Tsarist Empire. Peasants began seizing the land, workers began establishing their control over factory managements, and the soldiers began setting up committees to supervise their officers.[2] These impulses merged and peaked in late October when, under the aegis of the Second All-Russian Congress of Soviets, the Bolsheviks at last seized power. Then, "in the shadow of a terrible dawn grey-rising over Russia," it seemed to the young American journalist, John Reed, that the long-desired Revolution at last "had come—rough, strong, impatient of formulas, contemptuous of sentiment; *real*. . . ."[3]

An "adventure" it may have been, but for Reed and millions of others the October Revolution seemed "one of the most marvelous mankind had embarked upon," and "one of the great events of human history." At the time, it seemed to him that the "devout Russian people" were building on earth "a kingdom more bright than any heaven had to offer, and for which it was a glory to die. . . ."[4] Today, millions of corpses later, the Soviet Union's drab exterior seems to mock the enthusiastic expectations and hopes

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*All dates up to March 1918 are old style; that is, thirteen days behind the Gregorian Calendar used in the West. Much of the research originally was carried out under the auspices of the Advanced Studies Program of the U.S. Naval War College.

of Reed and his comrades. Nonetheless, their faith was real enough, and perhaps is to be envied in an age grown cynical through disillusionment. Indeed, since their denouement played a large part in this same disillusionment, the story of the collapse of the ideals of 1917 is of interest to all who follow the tragedy known as history. And while this retreat into reality, as some might see it, can be traced in many areas of Russian life, it is particularly clear in that of the military. For despite Soviet writers' claims that their's is "an army of a new type," this institution is strikingly reminiscent of its Tsarist predecessor.[5]

Bolshevik Military Thought Before 1917

This is somewhat surprising when one recalls the revolutionaries' hatred of the Imperial Russian Army and the latter's reputation—undeserved or otherwise—for conservatism, inefficiency, corruption, and downright stupidity.[6] Indeed, a rebuilt Tsarist military establishment was the last thing intended by the men of 1917. The programs of both Russia's socialist parties, the Social Democrats (SDs) and Socialist Revolutionaries (SRs) had long called for the abolition of the standing army and its replacement with a militia of the entire people in arms.[7] So while Lenin and Trotsky had emphasized different aspects of this programmatic tenet during 1917, ultimately they agreed on the end result.

Both leaders were first and foremost practical revolutionaries who faced a backward economic-social system and, after 1905, a still partially autocratic regime. For this reason both, despite their familiarity with the growing "revisionist" tone of contemporary Marxist writings, continued to be attracted to the older, radical-democratic undercurrents that had surfaced during the Paris Commune of 1871. Thus Lenin and Trotsky, each in his own way, had incorporated into their military programs an insurrectionary, one might say Jacobin, interpretation of the role of the armed people in any revolutionary upheaval. As a result, when these tactics finally brought them to power, they had to relearn many of the same practical lessons of organizing and using armed force as had the French Jacobins of 1793.[8]

Of the two Bolshevik leaders, Lenin had been most impressed by the lessons drawn by Marx from the Paris Commune. The "Commune ideal" appears repeatedly in his writings before 1918 and permeates his celebrated *State and Revolution* of 1917. Indeed, tradition has it that after October, Lenin counted each day his regime had outlasted the Parisian model as "Commune plus one," "Commune plus two," and so on.[9] For him, the validity of these lessons had been amply demonstrated by the events of the Russian revolution of 1905–7. Lenin was convinced that a popular insurrection was the only method of creating a true socialist order. From a military point of view, he insisted this could only be carried through if the workers, supported by the poorer elements of the peasantry, first obtained arms, then demoralized and neutralized the old standing army, and finally formed their own armed force as a proletarian militia. This force could then seize power, after which the proletariat and its leaders must dismantle

completely the old governmental machinery. In its place they would set up the revolutionary organs of the proletarian dictatorship that would serve as a brief prelude to the transition to a truly Communist social order. In a military regard, this meant that while Lenin recognized the importance of negating the old army's resistance, and while he was prepared to use some units that came over to the revolution, his attention focused more directly on the role of the armed people, or rather, armed proletariat. This was the force he actually expected to overthrow the old regime, and it also was to serve as the basis for building the postrevolutionary armed forces. As for the old standing army, like all the other "class-based" institutions of the past, it would be abolished and replaced by a true proletarian, and eventually a true armed people's militia.[10]

Since the dead hand of Stalinism stifled Soviet historians in the 1930s, these teachings usually are represented as being *the* Bolshevik military program of 1917, and Lenin's contributions to it have been extolled *ad nauseam*.[11] Nonetheless, his theoretical formulation tends to play down one other major factor in the revolutionary equation. This was clearly stated by the old Bolshevik, F. Kon, in 1928. Then he stressed that "the question of turning those same bayonets, which the autocracy had directed against the people and the revolution, against the autocracy itself, was a vital task of the revolution." For, he reminded his readers, "without modern arms, without the modern army, and without contemporary technique, it was absolutely unthinkable for the armed people to rise in defense of their rights. . . ."[12] Lenin himself, of course, was fully aware of this fact. Nonetheless, in his pre-1918 writings he necessarily concentrated on the formation of a new armed force rather than on utilizing the old one, a tendency which has been reflected in later Soviet writings.[13]

In part this is because the writings of Leon Trotsky, Lenin's great colleague of 1917, have been banished to oblivion. Despite his many early factional disagreements with Lenin, he too was dedicated to the ideal of seizing power. But unlike Lenin, Trotsky, the leader of the ill-fated Petersburg Soviet in 1905, had witnessed firsthand the power of regular disciplined troops, and the real weakness of the armed workers. So like Marx before him, Trotsky realized full well that the day of popularly manned barricades waging successful street battles with the old army were over. He therefore came to favor arming the workers for actual combat mainly as a morale measure. The struggle in the streets was to be a demonstration of the people's revolutionary determination that shook the soldiers' faith in the old order and promoted their defection to the side of the revolution. He continually counseled that the army would have to be won, not defeated, and that it was utopian to believe that the people, even when armed, could gain power solely by their own might. This achieved, the old regime's soldiers, now merged in victory with the armed masses, would provide the nucleus and necessary technical competence for a militia that would form the revolution's new armed forces.[14]

In 1917, then, Trotsky tended to keep his eyes fixed on the masses of workers and peasants in soldiers' gray, while Lenin kept a close watch on efforts to expand the proletarian militia, or Red Guard. Yet it must be

stressed that this was more a question of emphasis than one of real theoretical disagreement. Furthermore, for both men the question of the real military value of the postrevolutionary army was largely academic. They, like many of their followers, expected a revolutionary victory in Russia to spark off a European-wide upheaval. It was possible, as Trotsky admitted, that the revolutionary wave would not materialize immediately. Even so, he argued that the new revolutionary army, fighting for a democratic peace and in defense of the gains of its own revolution, would do so with a renewed and irresistible vigor. And it seemed certain that this could only provoke a revolution in war-wearied ranks of the opposing Austro-German forces which, in its turn, would spread westward.[15] In the event, such hopes rapidly proved illusory. Nonetheless, these illusions formed the Bolsheviks' policy throughout 1917, continued to haunt them for at least the next half decade, and must be borne in mind in any examination of military questions during this period.[16]

The Military Program Before October

In 1917 the actual military policies pursued by the Bolsheviks embraced both their leaders' views. However, they can best be outlined by examining the general objectives sought, and the practical tactics employed, by the party members most directly involved with creating the revolution's armed forces, the so-called "military workers." As the seizure of power came to head the agenda, a military program was devised which sought to weaken the troops' allegiance to the Provisional Government and to win them for the revolution and, simultaneously, to organize the factory workers of the rear into paramilitary detachments of Red Guards. The eventual merging of these two forces would, Bolsheviks argued, provide a truly armed people.[17]

Three years of war had already greatly changed the nature of the Tsarist Army. The old regulars, both in the ranks and within the officer corps, had been largely decimated in the forests of East Prussia, the fields of Galicia, and the marshes of Poland. As a result, the government resorted to massive mobilizations. These filled the army with men of all ages, ranging from raw, newly conscripted youths to middle-aged reservists of dubious military potential.[18] It can be argued that, in the process, the government also inadvertently armed the workers and peasants. As a result, to some revolutionaries there remained "only one thing" more to be done: "to unite the workers and peasants, and to insist that they not let them (i.e., their weapons) out of their hands but use them against their enemies."[19] In other words, the army already seemed to have gone a long way toward becoming a people in arms. And by 1917, many soldiers not unnaturally shared the average Russian's longing for peace and growing doubts about the competence of the Tsarist leadership. This helps explain the surprising ease with which the old order collapsed, both at the front and in the rear, during the revolutionary days of February-March 1917. Once the middle-aged reservists of the Petrograd garrison had mutinied, Nicholas II—like Louis XVI before him—found himself holding a broken sword. When even the

once trusted battalion of St. George medal holders, formed as an elite guard at *Stavka*, proved unreliable, Nicholas himself was quickly forced to abdicate.[20]

The struggle for control of the army developed against this background during the spring of 1917. In the first days of the February-March revolution, the famous Order Number One of the Petrograd garrison laid the basis for the process of democratization. Officers, whom the revolutionaries regarded with traditional suspicion, were to be stripped of much of their powers, the old forms of discipline were to be abolished, soldiers were given the full rights of citizenship, and they were to elect their own unit committees or soviets. Further, and of the utmost importance in democratizing the army, soldiers in Petrograd and elsewhere began sending their deputies to the workers' soviets. This meant the old gulf between army and population was bridged and that the revolution's new institutions, through the soldiers' deputies, could wield great influence in the armed forces.[21] True, efforts were made to restrict Order Number One's impact to Petrograd and prevent the spread of its influence outside of the capital. But, as soldiers' soviets sprang up even at the front, one British observer concluded that it fast became a question of "*a democratic army or no army at all.*"[22] Thus, the opposition of some bewildered military traditionalists, the hesitations of liberal and moderate socialist politicians, and growing domestic and Allied pressure for a new offensive could only increase the appeal of the Bolsheviks' demands for further democratization and an active peace policy.[23]

Meanwhile, a new armed force had appeared on the scene. As in Paris in July 1789, in Petrograd the collapse of the Tsarist regime and its police had threatened to lead to a breakdown of order. Further, during the first days of the uprising, many feared "the very heart of the revolution" might be left undefended.[24] For these reasons, on February 27 the Petrograd Soviet sanctioned first the formation of a workers' militia and then a general citizens' militia or national guard. The soldiers' mutiny, along with the looting of weapons stores and arsenals, had made arms readily accessible, and over the next few days a formal organization was worked out. District committees took charge of the city's various regions, and the militia as a whole was directed by a "central bureau" established at the Petrograd Municipal Duma or City Council.[25] For the moment, this seemed to assure moderate and middle-class leadership. Nonetheless, the new militia itself comprised a heterogeneous collection of armed students, civil servants, artisans, shopkeepers and, most important, the factory workers. As the pattern of "dual-power" (the simultaneous existence of both revolutionary Soviets and the old organs of local government) spread across the land, similar militias sprang up in every major city or town.[26]

Many Bolsheviks saw an initial advantage in this general arming of the populace as long as the factory workers, or proletarians, could utilize it as an opportunity to acquire weapons.[27] For, as the Bolshevik V. I. Nevskii wrote in *Pravda* on March 17, 1917, "it is impossible to forget the lessons of history." One might well emulate the French revolutionaries of 1789, he argued, and create a "national guard, the army of the revolutionary people,"

but one should also recall the lessons of 1848. At that time, he reminded his readers, "reaction drowned the republic in the workers' blood because the creation of a national guard has been taken out of the workers' hands and fallen into those of the bourgeoisie." Russia's own reaction, he warned, was weakened but not dead. So now was the moment to "demand from the Provisional Government a law—a decree on the immediate arming of the people and the creation of a national guard out of workers."[28]

The radical Bolsheviks in the party's Petrograd Committee who received the belated blessing of Lenin's *Letters from Afar* were thus naturally disturbed at the moderate Soviet leaders acquiescence to the submerging of the workers' guard into a general militia, under the "bourgeois" control of the city Duma. The Soviet moderates, they felt, were surrendering the Soviet's authority and armed force to the class enemy and, in the long run, were seeking to disarm the workers and deprive them of any real revolutionary gains. On March 3, therefore, the Petrograd Committee established its own "militia commission." This body, which eventually merged with the "military commission" created on March 10, took on the twofold task of maintaining ties with the revolutionary units of a mutinous garrison and of speedily drawing up plans for "the organization of proletarian militia cadres."[29] At the same time the party press opened a strong campaign in favor of a workers' guard. Rejecting any attempt to replace the old police with a bourgeois-controlled organization, *Pravda's* lead article for March 8, "The Organization of a Militia," insisted that "the workers' militia must be a strong permanent force" and not merely a "provisional organization for the needs of the moment." A true "workers' army" must be the force to maintain order in working class districts, to defend the workers' civil liberties, and, in this way, prove "by its existence . . . that liberty is no empty word but a living reality."[30] Then, ten days later, V. D. Bonch-Bruevich, in his article "The Armed People," gave this proposed workers' force its famous name of "Red Guard."[31]

Although the left-wing Bolsheviks' struggle for an independent workers' militia under their control at first received little practical support from the party and had to remain muted within the Soviet itself, work progressed at the grass-roots level within the factories themselves throughout the spring of 1917.[32] By the end of April, however, the organizers felt strong enough to air their plans in public. After preliminary meetings, on April 28 a large assembly of 150 representatives gathered in the city Duma to discuss the creation of a citywide workers' Red Guard. In formally proposing statutes for this organization, the Bolsheviks and their allies made their objectives perfectly clear. It was intended, its organizers reported, "for the defense of [the workers'] political gains and the support of the working class in its battle for an economic improvement in its condition and a socialist state." Beyond this tactical utility it was visualized that, "after the war, the standing army is to be dispersed and its place taken by the Red Guards."[33]

Although these statutes and proposals were outvoted,[34] they are still important as a statement of principle. It has been observed that an analysis of Red Guard statutes, instructions, and regulations shows that they generally "lack a military character, but were closer to the statutes of other voluntary

organizations such as [political] parties and unions."[35] Yet although disciplinary, drill, and combat regulations proper only appeared with the Red Army in 1918, in practice, efforts had been made to utilize the regular soldiers, NCOs, and junior officers to train them. Nevskii, for instance, had insisted in March that the new "revolutionary army" must be used to create "not a militia but a standing national guard" of workers.[36] Then the Bolsheviks' April conference, which coincided with the Petrograd meeting on the Red Guards noted above, reaffirmed the party's dedication to the goal of a "democratic proletarian—peasant republic," that is, a state without a professional bureaucracy, police force, or standing army.[37] The Red Guards' place in this system is obvious, and such ideas remained foremost throughout the pre-October period. Thus the Petrograd Red Guard Statutes adopted on October 22, the very eve of the Bolshevik coup, proudly declared this force to be the "organizatic of the armed forces of the working class" and assigned it both civil-police and military roles.[38]

This desire to democratize and win, not destroy, the old army and then to merge it with the workers' guard was the other essential element in this plan.[39] This is clearly revealed in the work of the All-Russian Conference on the Front and Rear Military Organizations of the Russian Social-Democratic Workers' Party (Bolshevik), R.S.D.R.P.(b)., held in Petrograd June 16–23, 1917. Although this meeting has usually been discussed with regard to the growing political crisis that exploded in the abortive Bolshevik uprising of July, it also climaxed three months of work by the party's military workers and allowed them an opportunity to work out a military program that remained in force until late December 1917.[40] Thus this program expressed, as John Erickson has rightly noted, "not naivete but the deepest consideration of the military experiences of the proletariat to date." It was "a precise step in the Bolshevik ideas of 'their' armed force."[41]

The organizing force behind this important conference was the Military Organization of the Central Committee of the R.S.D.R.P.(b). This body had developed out of the various Petrograd Party Committee commissions and had been formally constituted as the Petrograd Military Organization on March 31. In April, with the reorganization of party work that followed Lenin's return, it became directly subordinate to the Bolshevik Central Committee.[42] The *Voenka*, as it became known, took an active part in organizing Red Guards in Petrograd and in creating Bolshevik cells both in the rear garrisons and units of the active army, while eminent party workers (such as N. I. Podvoiskii, V. I. Nevskii, K. A. Mekhonoshin, and N. V. Krylenko directed its activities. These involved soldiers, NCOs, junior officers (up to the rank of staff captain), factory workers, and professional revolutionaries; connected revolutionary Red Guardsmen with soldiers in the ranks; and in the early months of the Soviet regime, served as a bridge between the old army and the new.[43]

In an effort to unite the party's work, the idea of a conference began to be discussed in early May.[44] On the 25th of that month the Military Organization issued an official proclamation announcing that this would be held on June 15. "Revolutionary Social Democracy," it announced, faced the "urgent task" of "winning for itself the army." In this way, the proclamation

argued, all the Russian people could be united. For the army consisted of "the poorest peasants dressed in soldier's gray" and they must be joined "into a single, indivisible whole" with the workers (the Red Guardsmen) "to develop the revolution" and prepare for "the battle for socialism." Hence the winning of the army served as a major method of achieving the union between proletarians and peasantry which Lenin and Trotsky had long recognized as necessary within the Russian context. The final goals of this union were suggested by the five items of the proposed agenda, which included the discussion of the decisions of the party's April conference, mentioned above, and of "the arming of the people and the workers' guard."[45]

By June 16, when the ten-day conference finally opened, the agenda had considerably expanded and included, finally, eleven points.[46] The discussions, occurring in the heavy atmosphere of growing political crises and the government's agitation for a new offensive, involved 167 delegates representing, according to Soviet estimates, over 500 army units and 26,000 party members.[47] Among the subjects discussed was G. V. Zinovev's report on the April conference, Krylenko's and E. F. Rozmirovich's reports on "war, peace, and the offensive," Stalin's report on the nationality issue within the army, Lenin's reports on the "current moment" and the agrarian question, Nevskii's report on a newspaper for the army and peasantry, and others on the aims, tasks, and forms of the military organization.[48]

While these items give an idea of the impressive range of topics considered, two other items are of more direct concern to this discussion: P. V. Dashkevich's report on the general arming of the people and Krylenko's on the subject of democratization within the existing armed forces. The final resolutions on both these subjects deserve detailed examination because, taken together, they comprise a sophisticated expression of the radical Jacobin strain of Marxist military thought and illuminate the often ignored positive, if utopian, assumptions behind many of the Bolsheviks' policies in this area before October.

On the first topic the conference, before outlining the forms suggested for the future armed people, restated the traditional radical social-democratic objections to existing standing armies. Such forces were considered responsible for the continued increase of the tax burden. This, of course, was mainly borne by the same workers and peasants, the best elements of whom were torn from their productive labors to serve in the army's "servile subordination," a condition that "deforms and destroys the human personality."[49]

These objections were not new, but, in the conference resolutions, they were restated within the context of Lenin's recent general theory of capitalist imperialism. Standing armies, since "the time of the decisive victory of the capitalist means of production," had been "one of the mightiest and most loyal tools" available to the ruling bourgeoisie for the pursuit of their selfish class interests. Armies were used to maintain:

> *the basis of its [the bourgeoisie's] class supremacy, for the broadening and expanding of this rule to lands and regions of lower culture—known*

> *as colonies—and, on comparatively rare occasions, for an armed struggle for world hegemony between the leading group of a nationally unified bourgeoisie and other bourgeoisies who are similarly unified on a national basis.*

Thus, although wars were the products of the imperialist-capitalist system and not standing armies as such, the Bolsheviks, like their colleagues in the Second International, believed that the very existence of such forces increased the chances of conflict. Therefore, these forces were injurious to the true interests of the people but, as they served the national bourgeoisie, the latter—as in England—were seen as pressing for the creation of such forces even where they had not previously existed. "Revolutionary Social-Democrats," on the other hand, must oppose such tendencies and could "only demand and fight for the immediate and complete destruction of the standing army and its replacement by a universal militia of the generally armed people."[50]

As a theoretical basis for the new force, the conference affirmed their belief that "the right to possess arms is in itself an inalienable right, like any other civil liberty." Therefore, it was obvious that only reactionaries could insist on "any limitation whatsoever being placed upon the right of all citizens to acquire and legally make use of weapons." The same naturally applied to the formation, by groups of private citizens, of sports hunting-and-shooting associations and the conference's proposal that "training in the handling of arms should be given as one of the courses in the city and village public schools under the control of democratically based institutions of self-government."[51]

The Bolsheviks attempted to anticipate the arguments of opponents who would naturally suggest (like Engels before them!) that militias would be incapable of defending the nation. They thus argued that the battles of the last few years had demonstrated that "the previous onerous three-year term [of service] is unnecessary for the preparation and training of a contemporary soldier, and that two months of training is fully sufficient to enable a soldier to bear the brunt of war. . . ." This accepted, a future militia could aim at as short a term of service for training and as small a personnel establishment as possible, thus providing a mixed system with, at any given moment, a small ever-changing group of militia men under arms. With regard to administrative and command functions, the future militia would have "elective organs in the place of appointed superior officers and officials."[52]

At the same time the conference delegates, who included frontline soldiers, never forgot that Russia was still at war. Their militia program could, of course, not be realized immediately but for the present, "before general transformation of the army," a number of measures could be adopted to facilitate this process. Thus the resolutions demanded:

> *the formation and arming of workers' battalions of the Red Guard, including workers of both sexes; they are to be self-administering and placed under the orders of elected workers' organizations in the districts and suburbs of the great proletarian centers . . . ;*

similar detachments of the peoples' army in county districts;

the destruction of the former police in all its forms and their replacement by a militia controlled by the people;

the replacement of all appointed military officials with elected representatives of the people;

the resolute democratization of all military institutions, the preservation of which is connected at present with the carrying on of a war.[53]

Here, then, the formation of the Red Guard and democratization are closely connected as two immediate tactical steps toward the achievement of the traditional radical military goal. It is interesting to note, however, that the organizers of the conference did not intend originally to discuss democratization, despite its immediate tactical importance, as a separate item on the agenda.[54] According to one Soviet historian, it was finally added "as a result of the initiative of the frontline delegates who had especially sharp feelings about the necessity for a genuine democratization."[55] So, despite the fact that this topic was touched upon in the discussion and resolutions on the militia and although many of the same theoretical propositions were repeated, the final resolutions on democratization had mainly a tactical importance and simply expanded the propositions listed above.

To begin with, the conference rejected the army reforms and limited democratization introduced by the Provisional Government as an attempt to still the hopes stirred up by Order Number One and the resulting agitation.[56] While the Bolsheviks admitted that the new "Declaration of Soldiers' Rights" had "much that is proper and necessary for the soldiers," they nonetheless maintained that many of its provisions ensured that it was really "a declaration of the soldiers' lack of rights." For, once standing armies were recognized as instruments of "coercion and oppression," it was obvious that no true "democratization could be achieved" by maintaining and utilizing those principles which serve as the general basis of all existing armies.[57]

In this context the officers, as the executors of the existing military system, naturally merited particular attention. Among the principles resolutely rejected were those of "appointment, orders, and subordination," which must be immediately replaced by those of "election, self-administration, and the granting of initiative to the lower ranks."[58] Or, as Krylenko boldly put it in his report on this topic: "We must oppose the idea of orders from above by the seizure of power from below."[59] Otherwise the delegates feared the present "conscious selection of, in the majority of class, counterrevolutionary command personnel; the conciliatory policies of the coalition ministry; and the implementation within the army of policies ordered by the bourgeoisie" would succeed in "rendering harmless the revolutionary mood" of the soldiers. So, making the "widest use of the rights granted," the immediate task was to achieve complete democratization and a "practical realization of the reorganization of the command on an elective basis" so as to be able to oppose successfully "the reactionary tendencies of senior commanders."[60]

The conference's general resolutions and demands reflected these same ideas. Seeking, as Krylenko had noted, to unify the army into a revolutionary whole and to democratize its institutions, the Bolsheviks would ensure themselves of the soldier's support, weaken the forces of reaction, and at the same time, take a major step toward educating and winning the peasant masses.[61] To this end, their resolutions called for, apart from elected commanders, an army administered in all its details by a hierarchy of elected soldiers' committees or Soviets. Further, soldiers must retain the full right of citizenship while in the service, receive the right of challenging and approving all promotions and transfers of command personnel, and be permitted to arrest and prosecute officers suspected of counterrevolutionary activities.[62] All this provided a short-term program which, once democratization was complete, would fully prepare the soldiers of the old army for a transition to the old radical Jacobin ideal of the armed people.[63]

The immediate impact of these resolutions is difficult to assess, but it must be stressed that they remained until December 1917, without essential change, as the basis of the Bolsheviks' military program.[64] True, the collapse of the July uprising in Petrograd, the subsequent persecution of the party, and the apparent threat from the right represented by Gen. L. G. Kornilov and his supporters brought a tactical modification of the slogan of the armed people.[65] Prior to July a radicalization of the Soviets and, with this, a "constitutional" seizure of power by the revolutionary Left seemed possible to the Bolsheviks. But after the disastrous events in Petrograd, it seemed power could only be won by force; and in this situation, the arming of all the people meant weapons for both proletarians and their class enemies. Hence a first, and supposedly provisional, retreat from the general principles enunciated by the June Conference was dictated by the tactics of revolution.[66]

Lenin, hiding in Finland and writing his famous *State and Revolution*, resurrected his call of 1916 for a proletarian militia and conceived it as the sole armed force allowed for by his transitional proletarian dictatorship.[67] Trotsky, now a full member of the Bolshevik Party, also became a strong proponent of the Red Guards who, he argued, were the only true bulwarks against reaction.[68] But again it was the military organization which most succinctly restated the party's military demands. An August 31 meeting, for instance, arguing that the "power of the people" must be organized to resist Kornilov's advance, demanded the following: the arrest of all counterrevolutionary officers, with the soldiers' committees having the right of decision in this matter; the introduction of the principle of election into the army administrative and command system; and the arming of the workers "under the leadership of soldier-instructors, to organize from a workers' guard."[69] Yet despite restricting the demand for arms to the workers alone, no one suggested any change in the "arming of the people" and the militia system as the final goal for the postrevolutionary, and, most important, classless, state.

Ironically, it was Kornilov who, by raising the spectre of Russian "Bonapartism," unintentionally gave the Bolsheviks a chance to realize their tactical objectives. Frightened, the Provisional Government turned to the

workers and armed them with the very weapons which, three months later, brought down Kerensky. Throughout the autumn of 1917 the Bolsheviks' military organization and military workers frantically organized and trained new Red Guard formations and prepared for the coming confrontation.[70] Then, on October 11, the eve of their successful uprising, the Petrograd Red Guard units at last received unified regulations and a centralized command structure that greatly facilitated the forthcoming seizure of power.[71]

Kornilov's ill-advised adventure had even greater repercussions within the army. The Bolsheviks, playing on the soldiers' increasing weariness with the war, anger at the restoration of the death penalty for military offenses, and dramatically increased distrust of their officers and senior commanders, demanded complete democratization and successfully struggled for control of the soldiers' committees.[72] Many officers now found their position untenable: a few were lynched, others were arrested, some were hounded from their units, and many found pretexts to leave the army, devising their own forms of "self-demobilization." Those who remained grew depressed by the continual suspicion of their men and watched disconsolately as their once-proud army seemed to dissolve as a fighting force.[73]

To the Bolsheviks, however, the democratization seemed startlingly successful. The power of the old command personnel, the defenders of the old order and possible Bonapartists, was broken. Further, by the end of October most of the army was, if not an active supporter of the Bolshevik uprising, at least a benevolently neutral observer of events: attempts to organize the front in support of the Provisional Government came to nothing, leaving the Red Guard the master of the field. On the morrow of the new era it only remained to be seen whether the peasants at the front could be successfully stiffened with the proletarian Red Guardsmen capable of supporting the Council of Peoples' Commissars (*Sovnarkom*) in its negotiations with the Central Powers and battles with the scattered opposition of small groups of domestic opponents.

The Collapse of the Militia Program

Prior to October, then, the traditional radical socialist, or Jacobin, ideal of an armed people had suffered only a small, and seemingly temporary, revision by limiting it to the arming of the toiling people to meet the needs of a Civil War fought on a class basis. Yet, by the end of 1920, the vision of 1917 had lost much of its force and remained present only in a feeble and mutilated form. These changes naturally had a tremendous impact on the party's and Soviet government's views about the command personnel and proper form for the exercise of authority within the revolution's armed forces.

The chronicle of the Bolsheviks' abandoning of the militia ideal has been examined elsewhere and need only be briefly reviewed here.[74] During their first months in power (November–December 1917), the Bolsheviks continued their policies of democratization within the old army. These

culminated in the decrees of December 16, 1917, which abolished all ranks and titles and simultaneously introduced the principle of an elective command staff throughout the military system.[75] Such measures completed the process begun earlier in the year. From the political point of view, they made the army useless as a base for counterrevolutionary action against the new government, and for the moment at least, the revolutionaries' control of the old *Stavka* (General Headquarters) seemed to make Bonapartism unlikely.[76]

Nonetheless, by the end of 1917 it was obvious that the fears of the old officers had been realized and that democratization had also rendered the army useless as a fighting force. True, the Baltic sailors and individual military units and soldier recruits had proved a useful support to the Red Guard units successfully operating against various bands of "White Guards" in the Ukraine, along the Don, and in the Urals. But the old army itself was rapidly dissolving as the soldiers, tired of the trenches and anxious to gain their share of the former landed estates, clogged the railways home. All the new government could do was attempt to impose some sort of order upon this elemental process, to which end an All-Army Demobilization Congress met in Petrograd from December 15, 1917, to January 3, 1918.[77] Meanwhile, as the peace negotiations dragged on, the new government, the members of the Military Organization, and the handful of professional officers who had elected to serve the Bolsheviks, began to search desperately for some force capable of opposing the powerful armed forces of the Central Powers, in case this need arose.

At the end of December 1917, a number of meetings were held in Petrograd which coincided with the Demobilization Congress. The collapse of the frontline units and real military deficiencies of the Red Guards meant that efforts to create a true armed toilers' militia had to be shelved and, as a result of various discussions, a new Workers' and Peasants' Red Army was created by the decree of January 15/28, 1918. The units and men salvaged from the old army were, where possible, to be merged with the Red Guard formations to provide a small standing force of volunteers which could defend the Soviet Republic until its position became stabilized and the long-awaited socialist revolution matured in the West. Thus, once more the Bolshevik leaders had retreated from the platform of 1917, and once more this was justified as a provisional measure, forced upon them by the exigencies of the situation. The new army was recruited on a class basis, ensuring that it properly reflected the social basis of the new regime, the dictatorship of the proletariat and toiling peasantry. But although the foundations were now laid for a standing revolutionary force, and while some old professional officers were employed by the new regime, the "democratic" institutions of elected commanders, soldiers' soviets, and "revolutionary self-discipline" remained intact.[78]

The breakdown of the Brest-Litovsk peace negotiations left this new force—which was still in the process of formation—and the remnants of the old army to face the well-organized and efficient advance of the Austro-German forces. Like the French predecessors of 1792–93, Lenin and his compatriots declared their *patrie*—the "socialist fatherland"—to be in

danger, hastily threw their newly organized battalions to the front, and appealed to the old professional soldiers to lend their services to the common, and now patriotic, cause. But for the Bolsheviks there was no "miracle of Valmy," and in the end they were forced to accept the humiliating peace terms dictated by the Central Powers. And, given the bad showing of their new volunteer units in the face of the Austro-German regulars, in March another grim reappraisal of their military strength was under way.[79]

As a result Leon Trotsky was appointed Commissar of War. Under his guidance, with the full support of Lenin, a series of sweeping reforms were carried out which eradicated most of the practices and institutions introduced as part of the democratization program: the soldiers' committees had their powers drastically curtailed, officers were appointed, not elected, and "revolutionary self-discipline" was replaced by more traditional military forms in all their strictness. Party opposition was naturally strong and not all "military workers" yet accepted the need for such measures. At the end of March 1918, for instance, Lenin—now in Moscow—had to intervene personally in support of the Commissar of War. In Petrograd, too, bitter debate surrounded this further retreat from the principles of 1917. Yet once again this course was defended as provisionally necessary in view of the continuing military threats to Soviet power. It also was argued that a continuation of recruitment on a class basis and the strengthening and consolidating of the institution of military commissars, the watch-dogs of the revolution, preserved the essentials of the revolutionary ideals.[80]

At the same time the expanded standing force remained based on volunteers while, in the countryside as a whole, the institution of *Vsevobuch**—the Universal Military Training of Toilers—seemed to provide the basis for a future militia. Thus the Bolsheviks had been forced, like the Jacobins before them, to adopt traditional military forms but, ever mindful of the dangers of standing armies, retained the radical-Jacobin ideals for implementation in the future. But for the moment Trotsky and Lenin settled for a mixed regular-militia force, not unlike that advocated by Engels in 1852 as suitable for France.[81]

The late spring and summer of 1918 subjected the new system to still greater strains. The mutiny of the Czechoslovak Legion and the sudden spread of Civil War fronts, along with the beginnings of Allied intervention, proved even the expanded volunteer force to be inadequate. Even most of Trotsky's bitter opponents now accepted the need for a strong, disciplined army, and the mobilization of toilers replaced the system of volunteer recruiting.[82] The concurrent mobilization of former officers was accepted

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*Described by E. Jones as "a system of universal military training for adult males . . . ; by the end of 1920 five million men had been through the program, which provided ninety-six hours of military training on a part-time basis without interruption from work" (*Red Army and Society: A Sociology of the Soviet Military*, Boston, 1985, p. 36). Ed.

less readily and, after various cases of treason by such "military specialists" (*voenspetsy*), resentment grew. This was further fueled by the reappearance of the more "democratic" types of units and partisan bands who occupied the Ukraine as the Germans withdrew in November-December 1918 and by Stalin's self-made military colleagues on the Tsaritsyn front. Thus, by the time of the VIII Party Congress in March 1918, a loose coalition, known as the Military Opposition, was prepared to challenge Trotsky and his military policies.[83]

After a bitter debate, in which Lenin intervened decisively to defend his absent Commissar of War, the Congress approved the policies adopted to date. These decisions are often cited by Soviet writers to mark the decisive defeat of the militia ideal and the acceptance of the Workers' and Peasants' Red Army as a regular, traditionally organized military force with its revolutionary spirit preserved by the class nature of the Soviet government and the class basis of recruitment.[84] Nonetheless, the Congress explicitly retained the militia program as a long-term goal and, at the IX Party Congress of March–April 1920, Trotsky proposed a new mixed system in which the militia (as in Jaures's system) played the major role. This program was adopted and this fact is in itself indicative of the influence exerted by the radical military ideal upon the Communist leadership. So the VIII Party Congress decisions were meant as just another temporary retreat from the principles of 1917, justified by the same arguments of revolutionary necessity which had been used on former occasions.[85]

By the end of 1920, the situation had again changed. The invasion by the White Poles, combined with continuing fears of further Allied efforts at intervention and the failure of the revolutions elsewhere in Europe, convinced the Soviet leaders that the militia program of the IX Party Congress would have to be further postponed. In addition, the growing domestic crisis (which in early 1921 exploded in the Kronstadt mutiny) and fears of nationalist separatism recommended a standing army as one institutional bulwark for continuing unity and domestic order. For as long as the young Soviet regime remained surrounded by a capitalist sea and plagued by problems of domestic development, arguments of revolutionary expediency, as well as the self-interest of many Red Army leaders—both *voenspetsy* and new revolutionary commanders—could be used to justify the retention of a standing, professional "class" army, supported by a militia.

Hence, on December 16, 1920, a series of meetings finally concluded that the Workers' and Peasants' Red Army would continue as an institution of the Soviet state. The alternate militia proposals of the old "military worker," N. I. Podvoiskii, were rejected in favor of those of professional *voenspetsy*.[86] In the years that followed, although discussion continued of the problems of militia building,[87] the actual militia aspect of the Red Army assumed less and less importance. The further failure of the revolutionary movement abroad seemed to leave the young Soviet regime surrounded by a threatening capitalist international system, and the adoption of Stalin's policy of "Socialism in One Country" signified that the USSR recognized the implications of this failure. Henceforth a standing regular army appeared to be a necessity of state; and this fact, along with the professional interests

of the military themselves and the growing social conservatism of Stalin's Russia, condemned the radical military ideals of 1917 to a sure if lingering death.

Nonetheless, these ideals left their mark on the traditions and rhetoric of the Red Army and on the composition of its command establishment. As a result of the varying shifts and compromises in Bolshevik military policy, by 1921 it had a heterogeneous collection of commanders. They included the products of the revolution itself—the soldiers, NCOs, and Bolshevik "military workers," who had risen by dint of luck and merit; the *voenspetsy*, who either voluntarily or otherwise had entered Soviet service; and the young Red Commanders (or *Kraskoms*), who, hastily trained in the midst of civil war, represented the Soviet government's hopes for its own professional, Communist officers. However, in the end, it was the old regulars, seconded by the NCOs, who left their imprint on its structure, discipline, and professional thought.[88] Thus the concepts of "deep battle" later developed by V. K. Triandafillov and M. N. Tukhachevskii have roots in the concepts of modern war developed before 1914 by men like A. A. Neznamov, who himself served in the new Red Army.[89] Meanwhile, in 1927, the Comintern's Plenum officially declared the militia slogan to be inappropriate for the Soviet Union and other advanced nations of Western Europe and held it to be relevant only for "colonial countries that have not yet passed through the stage of the bourgeois-democratic revolution."[90] After this, Russian military men not surprisingly felt perfectly free to rebuild their nation's armed forces ever more closely along the lines of the model that they knew best—that of the Imperial Russian Army. But since the rhetoric of 1917 and victories of the Civil War gave justification to the existence of both the new Soviet state and its military establishment, these too had to be incorporated into the new military outlook. It is this necessity that explains the curious amalgam of the old Russian and newer radical-revolutionary traditions that went into the making of today's Soviet Army, a force that few of the "military workers" of 1917 would recognize as the product of their dreams.

Notes

1. Peter Kropotkin, *The Great French Revolution, 1789–1793*, trans N. F. Dryhurst, 2 vols (New York, 1927), I, p v.

2. There are numerous studies of 1917 illustrating this point. In particular, readers will find especially stimulating Alexander Rabinowitch's *Prelude to Revolution: The Petrograd Bolsheviks and the July 1917 Uprising* (Bloomington, Ind., 1968), the same author's *The Bolsheviks Come to Power: The Revolution of 1917 in Petrograd* (New York, 1976), and John L. H. Keep's, *The Russian Revolution: A Study in Mass Mobilization* (London, 1976).

3. John Reed, *Ten Days that Shook the World*, foreword by V. I. Lenin (New York, 1935), pp 111, 133.

4. Ibid, pp xii, 259.

5. See, for example, N. I. Shatagin and I. P. Prusanov, *Sovetskaia armiia—armiia novogo tipa* (Moscow, 1957), pp 3ff. On the similarities between this army and that of the Tsar, see my "Continuity and Change in the Russian Military Tradition," *RUSI*, Jun 1975, pp 31–34, and "Russian Military Traditions and the Soviet Military Establishment," in *The Soviet Union. What Lies Ahead? Military-Political Affairs in the 1980s*, eds K. M. Currie and G. Varhall (Washington, 1985), pp 21–47.

6. The Imperial Army's record both before and during World War I has recently been reassessed in a number of works and shown to be somewhat better than usually suggested See, for example, Norman Stone, *The Eastern Front, 1914–1917* (London, 1975); W. C. Fuller, Jr., *Civil-Military Conflict in Imperial Russia, 1881–1914* (Princeton, 1985), and the present writer's *Imperial Russia's Armed Forces at War, 1914–1917: An Analysis of Combat Effectiveness* (Ph.D diss., Dalhousie Univ , 1986).

7. See the programs as printed in Sidney Harcave, *First Blood The Russian Revolution of 1905* (London, 1964), pp 263–73.

8. The point here is that having "revolutionized" the army and "democratized" the National Guards in 1791–92, Robespierre and his Jacobin colleagues on the Committee of Public Safety in 1793 found themselves overseeing the reimposition of discipline in conventionally organized armies in order to "save" the Revolution. The Bolsheviks remembered the first stage of insurrectionary glory well, as is evidenced as late as early 1919 by the articles, poetry and illustrations in such journals as *Voenno-revoliutsionnaia mysl'* · *Voenno-obshchestvennyi i literaturno-khudozhestvennyi zhurnal*, two numbers of which appeared in Petrograd in that January and February. However, the Jacobins' subsequent return to a nonmilitia form of armed force had taken little hold on their historical memory or, for that matter, that of European radicalism in general.

9. A. Horne, *The Terrible Year: The Paris Commune, 1871* (New York, 1971), p 170. The whole issue of the influence of the Commune on the military thinking of Lenin and his fellow Bolsheviks is considered at length in G. Ritter, *Das Kommunemodell und die Begründung der Roten Armee im Jahre 1918* (Berlin, 1965), pp 42–52. The more general influence of this model on his thought is indicated by the works (including extensive portions of *State and Revolution*) published in K. Marx and V. I. Lenin, *Civil War in France: The Paris Commune* (New York, 1968).

10. Lenin's military writings are conveniently collected in V. I. Lenin, *O voine, armii i voennoi nauke*, 2 vols (Moscow, 1957), and a useful thematic index on this and other questions is provided in N. N. Azovtsev, *Voennye voprosy v trudakh V I. Lenina* (Moscow, 1972).

11. A typical Stalinist discussion of these issues is Vl. Melikov, "Stalinskaia armiia," *Molodaia gvardiia* (1940), kn. 2, pp 110–18. More recent, and more balanced, treatments are Iu. Korablev, "V. I. Lenin i pervye shagi sovetskogo voennogo stroitel'stva," *Vestnik voennoi istorii Nauchnye zapiski* (Moscow, 1970), No 1, pp 9–47, N. N. Azovtsev, *V I. Lenin i sovetskaia voennaia nauka* (Moscow, 1971), pp 13–75; and V. S. Lakushkin, *Voennye organizatsii rossiiskogo proletariata i opyt ego vooruzhennoi bor'by, 1903–1917* (Moscow, 1974), pp 13–50

12. Ia. Kon, "Kak soldatskie shtyki povernulis' v zashchitu revoliutsii," in *V tsarskoi kazarme Soldaty i matrosy v pervoi revoliutsii*, F. Ia. Kon, et al (Moscow, 1929), p 7. Official Communist attitudes toward the "revolutionizing" of "capitalist" armies at this time are well presented in Lev Varshavskii, *Krizis i revoliutsionnaia bor'ba imperialisticheskikh armiakh*, ed L. Petrov (Leningrad, 1934).

13. The most frequently cited of Lenin's articles on the role of regular units who join the revolution is "The Revolutionary Army and the Revolutionary Government," which represents his reaction to the mutiny on the battleship Potemkin in 1905; see V. I. Lenin, *Collected Works*, Vol 8: *January-July 1905* (Moscow 1962), pp 562–568. From April 1917 on, however, his attention turned more to forming and disciplining a new, traditionally organized revolutionary army. This soon became the main theme of the works of other early Soviet military writers such as N. Lukin-Antonov, whose *Iz istorii revoliutsionnykh armii* (Moscow, 1923), discusses the process as revealed in Cromwell's "New Model Army," and those of France in 1789–95 and of the Paris Commune. For recent Soviet discussions of Lenin's military thought that stress similar themes see the works cited in Note 11, and N. P. Pankratov, et al, *Voenno-boevaia rabota partii Bol'shevikov, 1903–1917* (Moscow, 1973), pp 16–32; his *V. I. Lenin i Sovetskie vooruzhennye sily*, 3d ed (Moscow, 1980); D. M. Grimishin, *Voennaia deiatel'nost', V. I. Lenina* (Moscow, 1957), pp 116–151 and the same authors' *O voennoi deiatel'nosti V. I. Lenina* (Kiev, 1970), pp 40–76. A recent assessment of Lenin's views on winning the regular army as such is S. S. Khesin, "Marksizm-Leninizm o privlechenii vooruzhennykh sil na storonu revoliutsii," in *Revoliutsionnoe dvizhenie v russkoi armii v 1917 godu. Sbornik statei*, ed I. I. Mints (Moscow, 1981), pp 20–30. But significantly, this last draws more heavily on his writings of 1905–1907 than those of 1917.

14. On Trotsky's early military thought see David R. Jones, "Armies and Revolution: Trotsky's Pre-1917 Military Thought," *Naval War College Review* (Jul–Aug 1974), pp 90–98.

15. L. D. Trotskii, *Sochineniia* (Moscow, 1925–27), v. 3, pt. 1, pp 18–19, 235.

16. For example, see Ritter's discussion (pp 52–56) of these expectations and their impact during the first stage of the Civil War.

17. On the eve of his return from exile in New York, Trotsky made exactly this point in an article published in *Novy Mir*; see his *Sochineniia*, v. 3, pt. 1, p 13.

18. Apart from the works cited in note 6 above, see M. Frenkin, *Russkaia armiia i revoliutsiia, 1917–1918* (Munich, 1978), pp 23–31; Allan K. Wildman, *The End of the Russian Imperial Army: The Old Army and the Soldiers' Revolt, March-April 1917* (Princeton, 1980), pp 75–120.

19. Kon, p 12.

20. On the collapse of efforts to crush the revolution militarily see S. P. Melgunov, *Martovskie dni 1917 goda* (Paris, 1961), pp 156–59; George Katkov, *Russia 1917: The February Revolution* (London, 1967), chapters 11–12; Tsuyoshi Hasegawa, *The February Revolution: Petrograd, 1917* (Seattle, 1981), pp 459–86.

21. On Order No 1, see Hasegawa, pp 400–410; Katkov, pp 367–74, Wildman, 182–201; Frenkin, pp 52–57; John Boyd, "The Origins of Order No 1," *Soviet Studies* 19 (1968), No 3, pp 359–72; E. N. Burdzhalov, *Vtoraia russkaia revoliutsiia Vosstanie v Petrograde* (Moscow, 1967), pp 286–307; and S. Tokarev, "Prikaz No 1 Petrogradskogo Soveta rabochikh i soldatskikh deputatov," *Vospomogatel'nye istoricheskie distsipliny* (Leningrad, 1973), v. 5, pp 49–60. For the memoirs of some of the men who drafted it, and the text of the order itself, see R. P Browder and A. F. Kerensky, *The Russian Provisional Government, 1917: Documents*, 3 vols (Stanford, 1961), v. 2, pp 845–49.

22. M. S. Farbman, *Russia and the Struggle for Peace* (London, c. 1918), pp 106–7. For the text of Order No 2 and its immediate results, see Browder and Kerensky, v. 2, pp 849–56. Among the works describing the rise of soldiers' soviets and spread of democratization outside of Petrograd, see Melgunov, pp 242–399; Frenkin, *Russkaia armiia*, chapters 3–4; Wildman, chapters 6–7; E. N. Burdzhalov, *Vtoraia russkaia revoliutsiia: Moskva, front, periferiia* (Moscow, 1971), pp 130–59; Marc Ferro, *La Révolution de 1917; la Chute du Tsarisme et les Origines d'Octobre* (Paris, 1967), pp 198–203; Mikhail Frenkin, *Zakhvat vlasti bolshevikami v Rossii i rol' tylovykh garnizonov armii Podgotovka i provedenie Oktiabr'skogo miatezha, 1917–1916 gg* (Jerusalem, 1982), pp 30–68; V. I. Miller, *Soldatskie komitety russkoi armii v 1917 g (Vozniknovenie i nachal'nyi period deiatel'nosti)* (Moscow, 1974), pp 16–70; L. M. Gavrilov, ed, *Voiskovye komitety deistvuiushchei armii (mart 1917 g.—mart 1918 g.)* (Moscow 1982), pp 17–73.

23. For *Stavka*'s early attitude to the soldiers' committees see Miller, pp 70–132, and Wildman, pp 258–75. The Bolsheviks' campaign for democratization is described in Frenkin, *Russkaia armiia*, chapter 4, and from the orthodox Soviet point of view, in the classic by M. I Akhun and V. Petrov, *Bol'sheviki i armiia v 1907–1917 gg.* (Leningrad, 1929), pp 88ff; P. Golub, *Partiia, armiia i revoliustsiia Otvoevanie partiei bol'shevikov armii na storonu revoliutsii, mart 1917—fevral' 1918* (Moscow, 1967), passim; L. G. Beskrovnyi, et al, *Bor'ba bol'shevikov za armiiu v trekh revoliutsiiakh* (Moscow 1969), pp 102ff; N. M. Iakupov, *Bor'ba za armiiu v 1917 godu (Deiatel'nost' bol'shevikov v prifontovykh okrugakh)* (Moscow, 1975), passim, among others. On the question of the offensive, see R. S. Feldman, "The Russian General Staff and the June 1917 Offensive," *Soviet Studies* 19, No 4 (1968), pp 526–43.

24. N. N. Sukhanov, *The Russian Revolution, 1917: Eyewitness Account*, trans J. Carmichael, 2 vols (New York, 1962), I, p 98.

25. Ibid, pp 62–77; Browder and Kerensky, v. 1, pp 61–62, 217–21; M. G. Fleer, "Rabochaia krasnaia gvardiia v fevral'skuiu revoliutsiiu," *Krasnaia letopis'* (Petrograd, 1926), No 1 (16), pp 23–24; V. I. Startsev, "Ustavy rabochei Krasnoi gvardii Petrograda," in *Voprosy istoriografii i istochnikovedeniia istorii SSSR. Sbornik statei*, ed S. N. Valk (Moscow, 1963), p 178; G. A. Tsypkin, "Krasnaia gvardiia—udarnaia sila Oktiabria," *Voenno-istoricheskii zhurnal* (hereafter cited as VIZh) 10 (Oct 1968), pp 3–4; G. A. Tsypkin and R. G. Tsypkina, *Krasnaia gvardiia—udarnaia sila proletariata v Oktiabr'skoi revoliutsii* (Moscow, 1977), pp 25–30; V. Verkhos, *Krasnaia gvardiia v Oktiabr'skoi revoliutsii* (Moscow, 1976), pp 93–95, 115–17; Rex Wade, *Red Guards' and Workers' Militias in the Russian Revolution* (Stanford, 1984), pp 48ff; T. Hasegawa, "The Formation of the Militia in the February Revolution: An Aspect of the Origins of Dual Power," *American Slavic and East European Review* 32 (1973), pp 303–22.

26. For more of these formations, as well as useful bibliographic guides, also see G. A. Tsypkin, *Krasnaia gvardiia v bor'be za vlast' sovetov* (Moscow, 1967); V. I. Startsev, *Ocherki po istoriia Petrogradskoi krasnoi gvardii i rabochei militsii* (mart 1917—aprel' 1918) (Moscow, 1965); T. A. Logunova, *Moskovskaia krasnaia gvardiia v 1917 godu* (Moscow, 1960); R. G. Tsypkina, *Sel'skaia krasnaia gvardiia v Oktiabr'skoi revoliutsii* (Moscow, 1970), and the pioneering English-language study, David N. Collins, *The Origins, Structure and Role of the Russian Red Guard* (Ph.D. diss., Leeds, 1975). The importance of the Red Guards in Bolshevik military thought is usefully discussed in Ritter, pp 56–71.

27. A. Geronimus, *Partiia i Krasnaia armiia* (Moscow, 1928), pp 49–50.

28. *Pravda*, Mar 17, 1917, No 11. Lenin made a similar point in the third of his *Letters from Afar*, which is entitled "Concerning a Proletarian Militia"; see his *Collected Works*, Vol 23: *August 1916—March 1917* (Moscow, 1964), pp 324–29. The relationship of such a force to the regular garrison troops in Bolshevik planning is discussed at length in Frenkin, *Zakhvat vlasti*, pp 253–79.

29. Startsev, "Ustavy," pp 178–79.

30. *Pravda*, Mar 8, 1917, No 3.

31. Ibid, Mar 18, 1917, No 12.

32. Fleer, pp 23–25. Collins, pp 82–93, demonstrates that despite the appeals of their press and later claims, the Bolsheviks gave the infant Red Guards little beyond moral support. Also see Wade, pp 82ff.

33. An extensive contemporary account is the article "Krasnaia gvardiia i sovet rabochikh deputatov," published in the Cadet Party journal *Rech'* (29 Apr/12 Mar 1917), No 99 (3841). The view of the non-Bolshevik leaders found expression in an official statement that declared that "the 'Red Guard' in the form projected is a direct threat to the unity of the revolutionary forces." They therefore called on the workers to reject the proposal and to join instead the existing militia; see *Novaia zhizn'* (29 Apr/12 May 1917), and the discussion in Collins, pp 101–8; Startsev, *Ocherki*, pp 109–18; and Wade, pp 85–99. A Stalinist treatment is M. Gorky, V. Molotov, et al, *History of the Civil War in the USSR*, 2 vols (Gulf Breeze, Fla., 1974–1975), I, pp 140–46.

34. *Rech'* 99 (3841). Also see Startsev, "Ustavy," p 179.

35. Startsev, "Ustavy," p 177.

36. *Pravda*, Mar 17, 1917, No 11.

37. For the resolutions of the April Conference, see *Voennye voprosy v resheniiakh KPSS, 1903–1917*, ed N. N. Tsvetaev (Moscow, 1960), p 172.

38. These statutes are published in N. Podvoiskii, "Voennaia organizatsiia RSDRP(b) i voenno-revoliutsionnyi komitet 1917 g.," *Krasnaia letopis'* 6 (1923), pp 64–97.

39. As the Bolsheviks' Moscow Oblast Conference noted in April 1917: "We are disorganizing the war, not the soldier masses. We are revolutionizing the army, calling for it to be reorganized on the elective principle . . . and we are preserving its revolutionary strength for the final battle against the oppressors of all lands," as cited in Tsvetaev, p 456. Also see Pankratov, p 289. Interestingly enough, in retrospect the Socialist Revolutionary leader Viktor Chernov admitted the correctness of his opponents' policy. He wrote that "the Bolsheviks showed that a revolutionary army could be less only by going ahead of it in the revolutionary process," in V. Chernov, *The Great Russian Revolution* (New York, 1966), p 315.

40. At a meeting of the Military Organization on December 26, 1917, Podvoiskii and others agreed on the need to establish a small standing force rather than push for an immediate transition to a militia army. This can be taken as marking the moment when the Party's military workers openly discarded the militia program adopted in that June; see the protocols of the December meeting in P. K., "Sobranie voennoi organizatsii pri TsK RSDRP(b), 26 dekabria 1917 g.," *Krasnaia letopis'* (1928), No 1(25), pp 126–35.

41. John Erickson, *The Soviet High Command: A Military-Political History, 1918–1941* (London, 1962), pp 6–7.

42. Fleer, p 24; Golub, pp 78–95; N. I. Podvoiskii, *God 1917* (Moscow, 1958), pp 33–36, 51–56; A. A. Geronimus and V. Orlov., *VKP(b) i voennoe delo* (Moscow, 1928), pp 149–51; A. Zhenevskii, "Voennaia organizatsiia RSDRP(b) i 'Soldatskaia pravda'," *Krasnaia letopis'* (1926), No 1(16), pp 58–72; E. P. Tarasov, *Nikolai Il'ich Podvoiskii (Ocherk voennoi deiatel'nosti)* (Moscow, 1964), pp 18–21; and L. Stebakova, "Boevoi rukovoditel' soldatskikh mass (K 50-letiiu sozdaniia voennoi organizatsii pri TsK RSDRP(b)," VIZh 3 (Mar 1967), pp 120–23.

43. Sketches of the major personalities involved in the *Voenka*'s work are presented in N. I. Podvoiskii, "'Vot kto sostavlial kadr Voennoi organizatsii.' Zametki predsedatelia VRK," M. P. Alekseev, et al, eds, *Prometei, 1967. Istoriko-biograficheskii al'manakh serii "Zhizn' zamechatel'nykh liudei"* (Moscow, 1967), v. 4, pp 156–63. Some echoes of their work may be found in the correspondence of the Central Committee; see *Perepiska sekretariata TsK RSDRP(b) s mestnymi partiinymi organizatsiiami (mart—oktiabr' 1917) Sbornik dokumentov* (Moscow, 1957), pp 426–27, 441–42.

44. Golub, pp 95–96, Podvoiskii, *1917*, pp 56–58.

45. D. A. Chugaev, ed, *Revoliutsionnoe dvizhenie v Rossii v mai-iiune 1917 g.: Iiun'skaia demonstratsiia* (Moscow, 1959), pp 46–47.

46. Geronimus and Orlov, pp 149–50.

47. Golub, p 98; Podvoiskii, *1917*, p 58. The only real discussion of this conference in English concentrates on its role in the growing political tension in general, not its programmatic debates; see Rabinowitch, *Prelude to Revolution*, pp 111–12.

48. Geronimus and Orlov (pp 149–50) outline the final agenda.

49. *Bor'ba partii Bolshevikov za armii v sotsialisticheskoi revoliutsii Sbornik dokumentov*, P A. Golub, et al, eds (Moscow, 1977), p 207.

50. Ibid, pp 206–7.

51. Ibid.

52. Ibid, p 207.

53. Ibid.

54. Chugaev, p 47.

55. V. Miller, "Vserossiiskaia konferentsiia frontovykh i tylovykh organizatsii RSDRP(b), 16–26 iiun 1917 g.," VIZh 6 (Jun 1967), p 122. This does not mean that the Bolsheviks had ignored this topic. The "Resolution on the War," adopted by the Bureau of the Central Committee in Petrograd on March 9, for instance, had demanded "the democratization of the army at the front and in the rear with the election of . . . committees and of commanders, with Order No 1 of the Soviet of Workers' and Soldiers' Deputies being taken as the guide"; *Pravda*, Mar 10, 1917, No 5.

56. For the details of the reforms introduced by the Provisional Government see Miller, *Soldatskie komitety*, chapter 3, and Browder and Kerensky, v. 2, pp 853–54, 875–86, 892–99. The text of the "Declaration of Soldiers' Rights" is given on pp 880–83.

57. *Bor'ba*, pp 209–10.

58. Ibid, pp 209–10 Bolshevik hostility to the officers found public expression as early as

March 10, 1917. On that day *Pravda*, No 5, published an article entitled "Revoliutsionnaia armiia i ofitserstvo." This noted that "only an insignificant part of them [the officers] from the very first did their civic duty in the battle for freedom, and it was only after the victory that the *ofitserstvo* joined the revolution."

59. Miller, "Vserossiiskaia," p 122.

60. *Bor'ba*, p 209.

61. Miller, "Vserossiiskaia," p 122.

62. *Bor'ba*, pp 209–10.

63. This goal is explicit in the resolutions adopted by the Fifth Congress of the Latvian Social Democrats on July 19, 1917. In discussing military organization, these noted that out of "such an armed force" as a standing army, one could "create the armed people," and that until the whole people were armed, the army would have "a decisive significance in the revolutionary struggle"; see L. S. Gaponenko, ed, *Revoliutsionnoe dvizhenie v russkoi armii, 27 fevralia—24 oktiabria 1917 goda. Sbornik dokumentov* (Moscow, 1968), p 227.

64. Yet these resolutions did serve as a basis for the actions of local party organizations. See for example, the instructions on democratization issued by the Military Bureau of the RSDRP(b)'s Moscow Committee in mid-July 1917; Tsvetaev, p 487. For recent Soviet assessments of the process of democratization and the significance of the conference, see Golub, pp 100–1; Iakupov, pp 71ff; and Pankratov, pp 289–97.

65. On the "July Days," during which the Bolsheviks lost control of the radical workers and soldiers in Petrograd, see Rabinowitch, *Prelude to Revolution*, passim. In their wake Lenin and his colleagues, branded as German spies, were forced to curtail their activities. For the moment, the Bolsheviks seemed finished as a political force. However, the growing conflict between moderates and conservatives within the Provisional Government, and the "Bonapartist" threat that General Kornilov seemed to personify, soon revived Bolshevik fortunes.

66. This of course meant a retreat in terms of the principles enunciated, not one in terms of actual policy. Previously the Bolsheviks had espoused the slogan of "arming the people" as a means of gaining weapons with which the "toilers"—the "overwhelming majority of the people"—could support the soviets. Now that the latter's moderate leaders had entered the Provisional Government, they called for the arming of the "toilers" alone, which would allow the radicalized soviets to seize power from the moderates. But as pointed out earlier, from the first the Bolsheviks had sought the creation of an independent workers' or toilers' militia. These distinctions are usefully elaborated in Geronimus, pp 49–51.

67. *State and Revolution*, of which numerous editions are available, is fundamental for understanding Lenin's conception of the "dictatorship of the proletariat," and it is the fullest expression of the influence of the Jacobin Commune upon his thought. For this and his other writings of this period, see his *Collected Works*, v. 15 and 16 (Moscow, 1964), passim.

68. Trotsky's major statement favoring the formation of Red Guards came only in September 1917; see his *Sochineniia*, v. 3, pt. 1, p 293.

69. Tsvetaev, pp 256–57.

70. On this activity, see Podvoiskii, "Voennaia organizatsiia," pp 88–97, his *1917*, pp 84ff, Iakupov, pp 102ff; and Golub, pp 119ff. Typical appeals of this period are "K oruzhiiu!," *Sotsial Demokrat* (Aug 30/Sep 12, 1917), No 146, and that of the Military Organization published in *Soldat* (Sep 6/19, 1917), as republished in *Bol'shevistskaia pechat' (Sbornik materialov)*, v. 4: *1917 god* (Moscow, 1960), pp 161, 194–95. The second calls for joint action between the "comrade soldiers and workers" to form the armed force of the revolution. This connection between the formation of Red Guards units and further democratization is particularly explicit in the appeal of September 1 of the Moscow District Bureau of the Bolshevik Central Committee; Tsvetaev, p 260. For a concise analysis of the success in forming such workers' units, see D. N. Collins, "A Note on the Numerical Strength of the Russian Red Guard in October 1917," *Soviet Studies* 24 (Oct 1972), pp 270–80. On this topic, also see Verkhos, pp 71–92. A Soviet assessment of the military forces available to Lenin and his colleagues in October is V. G. Kolychev, *Vooruzhennye sily Velikogo Oktiabria* (Moscow, 1977).

71. Podvoiskii, "Voennaia organizatsiia," pp 95–96.

72. The details of the "Kornilov Affair" and its consequences for the army have been outlined most recently in George Katkov, *Russia, 1917. The Kornilov Affair* (London, 1980). For recent Soviet accounts of work in the army see Golub, pp 144–277; Iakupov, pp 117–83.

A. M. Andreev, *Soldatskie massy garnizonov russkoi armii v Oktiabr'skoi revoliutsii* (Moscow, 1975), chapter 3; T. F. Kuz'mina, *Revoliutsionnoe dvizhenie soldatskikh mass Tsentra Rossii nakanune Oktiabria* (Moscow, 1978), chapter 4.

73. A typical complaint about officers is the resolution passed by the Guards Cavalry Corps on the need of a further democratization of the command cadres, which is reprinted in Gaposhenko, p 397. Also of interest is the list of officers discharged or arrested on the Southwest *Front*, which is dated as early as 15/28 July, in Gaposhenko, pp 217–21. For examples of officers' "self-demobilization," see V. N. fon Dreier, *Na zakate imperii* (Madrid, 1965), p 217, and P. N. Vrangel [Wrangel], *Vospominaniia* (Frankfurt-am-Main, 1969), pp 48–52. A young officer's impressions of the state of the army during this period is presented in V. Littauer, *Russian Hussar* (London, 1965), pp 240–41. For a general discussion of this issue, see David R. Jones, "The Officers and the October Revolution," *Soviet Studies* 28, No 2 (Apr 1986), pp 207–23.

74. Standard Soviet accounts are S. M. Kliatskin, *Na zashchite Oktiabria. Organizatsiia reguliarnoi armii i militsionnoe stroitel'stvo v Sovetskoi Respublike, 1917–1920 gg* (Moscow, 1965); Iu. I. Korablev, *V. I. Lenin i sozdanie Krasnoi armii* (Moscow, 1970); his latter *V. I. Lenin i zashchita zavoevanii Velikogo Oktiabria*, 2d ed (Moscow, 1979); P. A. Golub's more theoretical *Revoliutsiia zashchishchaetsia Opyt zashchity revoliutsionnykh zavoevanii Velikogo Oktiabria* (Moscow, 1982). The role of the Red Guards as such in this process is discussed in A. M. Konev, *Krasnaia gvardiia na zashchite Oktiabria* (Moscow, 1978). In Western languages, see the works of Ritter and Erickson cited above; the latter's "The Origins of the Red Army," *Revolutionary Russia*, ed Richard Pipes (Cambridge, Mass., 1967), pp 224–58; and David Footman, "The Beginnings of the Red Army," in his *Civil War in Russia* (London, 1961), among others.

75. For the text of these decrees, see *Oktiabr'skaia revoliutsiia i armiia (25 oktiabria 1917 g.—mart 1918 g.) Sbornik dokumentov*, ed L. S. Gaponenko (Moscow, 1973), pp 282–84.

76. For reports on the effectiveness of these measures, see Gaponenko, pp 301–3, 338–48; Golub, *Partiia*, pp 268–94, Kliatskin, pp 49–50. Also see P. Selivanov, *Na zashchite zavoevanii Oktiabria* (Minsk, 1971), pp 20–25, for the impact of democratization on the Northern *Front*.

77. Erickson, "Origins," pp 235–36.

78. Ibid, pp 223–25; Kliatskin, pp 71–80. For the minutes of these meetings, see P. K., "Sobranie," pp 126–35, and the references listed in Erickson, "Origins"; as well as Gaponenko, *Oktiabr'skaia*, pp 309–35, who provides the text of the decree of January 15, 1918, pp 376–77. These events are outlined in "Letopis' boevoi slavy," VIZh 7 (Jul 1966), pp 118–20, and discussed at greater length in Korablev, "Pervye shagi," pp 25–39.

79. The decree, entitled "The Socialist Fatherland is in Danger," appeared in *Pravda*, Feb 22/Mar 1, 1918, No 32 (258), and is reprinted in *Plamennoe slovo Listovki grazhdanskoi voiny (1918–22 gg.)* (Moscow, 1967), pp 27–28. An equally interesting appeal is entitled "To All Regular Officers!," *Pravda*, Feb 17/Mar 2, 1918. Good Soviet accounts of these events are A. I Cherepanov, *Pod Pskvom i Narvoi Fevral' 1918 g* (Moscow, 1963), A. L. Fraiman, *Revoliutsionnaia zashchita Petrograda v fevrale-marte 1918 g.* (Moscow-Leningrad, 1964).

80. Erickson, "Origins," pp 240–43; Kliatskin, pp 140–76. The debates in Petrograd over Trotsky's policies give a good idea of the issues involved and are detailed in G. S. Pukhov, "Pervye shagi k reguliarnoi Krasnoi armii," *Krasnaia letopis'* (1929), No 2(29), pp 75–100. A more recent but still useful account is N. P. Nenarokov, "K voprosy o nachal'nom periode stroitel'stva Krasnoi armii," I. M. Maiskii, et al, *Oktiabr' i grazhdanskaia voina v SSSR Sbornik statei* (Moscow, 1966), pp 433–44.

81. Ritter (pp 93–17) suggests Engels had laid the basis for Trotsky's program On *Vsevobuch*, see I. A. Peshkov, "Vseobshchee voennoe obuchenie trudiashchikhsia respubliki sovetov v 1918–1920 gg.," *Istoricheskie zapiski* 42 (Moscow, 1953), pp 3–18.

82. "Origins," pp 245–51; Nenarokov, pp 436–43.

83. The "Military Opposition" is discussed in R. V. Daniels, *The Conscience of Revolution· Communist Opposition in the Soviet Union* (Cambridge, Mass., 1965), pp 104–5. For typical Soviet views, see Geronimus, pp 57–59, N N Tsvetaev, *Voennye voprosy v resheniiakh VIII s'ezda VKP (9b)* (Moscow, 1960), pp 15–18.

84. See, for example, the comments of S. A. Tiushkevich, et al, eds, *Marksizm-Leninizm o voine i armii*, 5th ed (Moscow, 1959), pp 16–21, 143–59, 339–41, 421–23; and the assertions that the Congress guaranteed a "new type" of army in Golub, "Revoliutsiia," pp

143ff.

85. The provisional nature of the Eighth Congress' decisions was still recognized in 1928 by Geronimus and Orlov, p 222. It is also evident from the proposals of Trotsky approved at the Party's Ninth Congress, which are outlined in Geronimus and Orlov, pp 256–64, and *Deviatyi s'ezd RKP(b) Protokoly* (Moscow, 1960), pp 384–86.

86. Kliatskin, pp 447–57; Erickson, "Origins," p 254. The latter has dealt at greater length with the militia issue in his "Some Military and Political Aspects of the Militia Army Controversy, 1919–1920," in C. Abramsky, ed, *Essays in Honour of E H. Carr* (London, 1974), pp 204–28.

87. See, example, D. Petrovskii's "Militsionnoe stroitel'stvo," *Voennaia mysl' i revoliutsiia* (Aug 1923), No 4, pp 1–11. Frunze's position on this question is outlined in W. D. Jacobs, *Frunze: The Soviet Clausewitz* (The Hague, 1969), pp 128–36. On this issue and the decline of the militia ideal in general see, apart from Erickson, D. Fedotoff-White, *The Growth of the Red Army* (Princeton, 1944), pp 178–79; Roger Pethybridge, *The Social Prelude to Stalinism* (London, 1974), pp 73ff; and more generally, M. Liebman, *Leninism Under Lenin* (London, 1975), pp 218ff.

88. The entry of ex-officers and NCOs of the Imperial Army into the Red Army is dealt with in David R. Jones, "The Officers and the Soviets, 1917–1920: A Study of Motives," *Sbornik No 2* of the "Study Group on the Russian Revolution" (Leeds, 1976), pp 21–33; and "Motives and Consequences of the Red Army Purges, 1937–1938," *Soviet Armed Forces Review Annual*, ed D. R. Jones (Gulf Breeze, Fla., 1979), No 3, pp 256–64.

89. Compare, for example, A. A. Neznamov, *Sovremennaia voina*, 2d ed (St. Petersburg, 1912) and V. K. Triandafillov, *Kharakter operatsii sovremennykh armii*, 1st ed (Moscow, 1929). Also see the discussion in David R. Jones', *The Advance Guard and Mobility in Russian and Soviet Military Thought and Practice* (Gulf Breeze, Fla., 1985), pp 83ff; Jacob W. Kipp, et al, *Historical Analysis of the Use of Mobile Forces by Russia and the USSR* (College Station, Tex., 1985), pp 15–158.

90. Geronimus and Orlov, pp 223–24

Commentary

William C. Fuller, Jr.

It seems to me that interest in western historical circles in the Tsarist military experience is very definitely on the rise, and the three interesting papers that we have heard reflect this phenomenon. I think these papers not only have illuminated some key problems of Tsarist military history, but have also provided information about what parts of the heritage of the Imperial Army was absorbed by the new Workers' and Peasants' Red Army (RKKA), and what parts were not. What I will do is briefly discuss each of the papers before proceeding to talk about some thematic relationships. Let me begin with the paper of Professor Pintner.

Professor Pintner has given us a study of what we may describe as Imperial Russia's capacity for military mobilization in the broader sense. He is not dealing here with the purely technical facts of mobilization—the drafting of mobilization plans, the assembling of mobilization schedules, and the development of railway time tables. All of these were exercises which Imperial Russia performed extremely well, in fact much better than even the Germans had expected, as was proved in 1914. What Professor Pintner is concerned with is the mobilization of resources for war, and he has two main categories of analysis: the mobilization of motivated and trained soldiers and the mobilization of economic resources. It is his contention, and it is a contention with which largely I agree, that as the nineteenth century progressed, as the twentieth century began, the Russian state developed weaknesses precisely in these two areas of mobilization. Now there were a host of reasons for this, but one of the chief ones, as he also quite properly suggests, was the relative poverty of Russia compared to the other states of Europe, poverty which is explained by Russia's failure until somewhat later in the century to break out of the preindustrial cycle.

Now, this poverty disadvantaged Russia in several ways. First, it meant that Russia found it hard to compete in the European arms races of the late nineteenth century. But poverty also had consequences for military readiness, since as a result of it much of the soldier's time was spent on nonmilitary activities, or the so-called systems of *vol'nye raboty*, or free work. The government simultaneously believed that it had to have a large army, also that the army had to be as self-supporting as possible. In fact, this is

something that you might say is a dominant theme of Tsarist military history, and even Soviet military history. To this date there are still some farm troops in the Soviet Union which primarily grow vegetables as their military service.

Now, in my view, Professor Pintner has painted slightly too somber a picture of the Russian military performance. Some other armies, in particular the French Army before 1914, actually had less out-of-garrison training than did the Russian.[1] Yet his depiction of Russia's military dilemma—the financial constraint—is correct. But a paradoxical question then arises, because Russian generals were aware of the implication of the problem. One then has to ask, how did Russia's generals expect to win wars, leading relatively less well-trained soldiers, and relatively less well-equipped soldiers, against enemies whom they expected to be better off in both departments? Now, there are some different answers that could be given, but one answer that was given by the key Tsarist generals was that Russia had certain compensatory advantages that inhered precisely in the quality of its human personnel. The Russian soldier was in fact a soldier who was a soldier of an ideal type. Many reasons were adduced for this: the bracing character of the Russian climate, the supposed racial characteristics of the Slavs, and national piety and loyalty to the Tsar. Qualities of bravery and endurance were in fact expected to turn the tide. As Gen. M. I. Dragomirov, one of the most famous generals of the second half of the nineteenth century, declared, "Capable of fighting, capable of dying—this is the basis of the martial prowess peculiar to the Russian soldier."[2]

In a strange way, what flowered in the nineteenth century, particularly in the post-1860 period, was really a theory I would describe as the theory of the advantages of relative backwardness in Russian military thinking. The argument was implicitly made that precisely because Russia was relatively less urban than was the West she was actually potentially stronger than the West. In this view Russia's peasant soldiers were held to have better *morale* than the scrawny, class-conscious, conscripted industrial workers of more advanced societies. The big blow to this style of thought was the Russo-Japanese War of 1904, because it appeared to demonstrate that Russia was incapable of motivating its soldiers while the Japanese could.

There are many reasons why Russia was incapable of correctly motivating her soldiers or indoctrinating them. One reason noted by other scholars, yesterday and today, was the complacent and static character of the nineteenth century Tsarist autocracy. The complacency in part resulted from Russia having been so successful in the campaign of 1812 against Napoleon. Almost all the countries that warred against Napoleon, including such conservative polities as Austria and Prussia, had to make some concessions to nationalist forces, or liberalism, even to the extent of promising some sort of constitution after the war had been won. But Russia was able to wage war against the French emperor without recourse to such political or social concessions. Therefore, one might argue that one source of the socio-economic and political and military weakness of Russia from 1800–1856 was precisely that she was not beaten badly enough by Napoleon before she in fact defeated him, because it is this which helped postpone substantive and timely

reform. Even after the Crimean defeat had inaugurated the era of the "Great Reforms" (1861–74), the Tsarist government was reluctant to innovate to build mass support for its policies or to neutralize social opposition.

Professor Pintner's paper has described a host of weaknesses that plagued the Russian Army, but interestingly enough, can we directly translate these weaknesses into poor military performance in World War I? As Professor Pintner himself suggests, the Russian Army hung on quite a considerable period of time in the war; and there are some scholars, including myself, who hold that Russia's military performance from 1914–17 has been quite underrated. Professor Pintner seeks to suggest that Russia's military endurance in world war is in part explained by a tardy, but important, victory in the industrial war. I would take slight issue with him here. He suggests that by 1916 the Russian Army was self-sufficient in artillery ammunition; in fact, it really was not. Although by 1916 Russia could produce all of the shells needed for the 3-inch field gun, these shells were chiefly loaded with shrapnel. By contrast, Russia was never during the entire course of World War I able to produce as many heavy guns or high-explosive shells as were required given the conditions of trench warfare. Thus, despite the fact that the Russian Army was technologically disadvantaged, it not only fought on, but showed a surprising amount of skill—beating the Germans in 1914, and smashing the Austrians in 1915. And in 1916 Russia demonstrated quite clearly that she was one of the first powers fundamentally to solve the problem of trench warfare by pioneering the same sort of infiltration tactics that would be used later by Ludendorff in the Michael Offensive in France.

Now we turn to Dr. Menning's paper, which reminds us of something that is often overlooked: the fact that the Russian Army was involved in struggles on the frontier as well as it was in Europe. If we should look to the military model and challenge of Berlin to understand part of the Russian military experience, then we must look to places like Vladikavkaz to understand the rest.

In Dr. Menning's opinion, the experience of frontier warfare had many important consequences for the Russian Army: it stimulated initiative; it helped to promote techniques such as the employment of mobile cavalry; and it was the source of vital and long-lived military institutions, such as the military district system, which is still in place in the Soviet Union today. He also seems to be suggesting, if I comprehend him correctly, that frontier warfare was also a school really for cruelty and brutality in warfare, at least when Russia's enemies were Muslims or pagans.

Dr. Menning also suggests that the frontier experience had negative consequences for Tsarist military power, that it accustomed soldiers to forms of war unsuitable when the empire's opponents were in fact modern armies, although I would strongly disagree with his contention that Kuropatkin's failure in Manchuria resulted from his use of Central Asian methods against the Japanese. I have three questions for Dr. Menning, and one of them concerns the issue of massacres and deportations. It seems to me that the Russians didn't really have to go to the frontier to learn about those practices because they date back to the period of "the gathering of the Russian lands," or at least to that of civil wars of Vasilii the Blind (1428–55). Policies of

mass deportations and even massacres had long been in the Russian political tradition.

The second thing at issue is that of force mix. Dr. Menning has placed a great deal of emphasis on the techniques of mobile raiding, but it seems to me that when the Russians enjoyed the greatest success it was by combining regular and mobile operations. Cossacks were very good for raiding. You could take prisoners with them, you could seize booty with them, and you could inflict punishment with them. You could not, however, employ these mobile cavalry armies actually to occupy territories or important points, a problem that cost Russia much time and much blood to resolve. To this extent, I wonder whether he is not overrating the military contribution of the Cossacks.

The third thing I would consider is the other ways in which this frontier heritage might be relevant to the Soviet military today. Dr. Menning mentioned the cavalry raids of the Civil War—a subject that is commanding increasing study by Soviet military scholars and strategists at present. However, I wonder if there are not other ways in which the experience of frontier war is still alive for the Soviet military.

Finally, I come to the interesting paper of Dr. Jones. Dr. Jones shows that the Bolsheviks in their attitude toward standing armies were typical of European socialists, because European socialists generally deplored the army both because they saw it the recipient of revenues that should be otherwise spent on programs of social use and because they viewed it as the instrument of oppression that kept the ruling class in power. Therefore, European socialists wanted militias. In fact, the socialist pamphleteer, M. Pavlovich, writing in 1905 under the pseudonym "Volunteer," chose two armies as the ones that he wanted the future Russian state to emulate.[3] The armies that he admired, to tell you the truth, were, as one might expect, first the Swiss, because the Swiss Army was the true militia army, and the other was the United States Army, curiously enough, precisely because it was small, insignificant, and cost so little money.

Dr. Jones has demonstrated not only the antistatism of the Bolsheviks with the proposal in their military program in July 1917 to arm everyone, but also suggests in his discussion that in a strange way the Bolsheviks really did not understand what was happening in the army and were not really on top of the whole process of revolutionary change, even in the ranks of the frontline army. He further reminds us of the Bolshevik proclivity to substitute historical analogy for rigorous analysis. He shows very well the way in which Lenin was captivated by the experience of the Paris Commune.

I would disagree with a couple of Dr. Jones' points, which are minor issues. I think he has made too much of Bolshevik proposals for a universal right to bear arms in July 1917. I would argue that this was actually a tactical ploy. Bolshevik programs in 1917 often consisted of ratifying reality; that is, the slogans of land, bread, and peace really expressed what had happened. The peasants had already seized the land; the army wasn't really interested in fighting (especially after the collapse of the Kerensky offensive); and insofar as you had a massive diffusion of firearms in Russia, really to argue for universal arms isn't more than saying that we are going

to have more of what there is. But I do not believe for a moment that Lenin or any other important leader in the Bolshevik party actually intended to permit the gentry or the bourgeoisie to retain arms in a socialist Russia. However, this July proposal is enormously ironic because Bolshevik practice, once power was consolidated, consisted in the most rigorous gun control. The policy consisted of disarming practically everyone, beginning with massive attempts to disarm the villages in the 1920s and culminating in a rather interesting way with Stalin's orders that the individual members of the party be stripped of their right to bear personal sidearms in the immediate aftermath of Kirov's murder in 1934.

The second place that I might take issue with Dr. Jones is the degree to which Bolsheviks were firmly committed to democratizing the army. I fully agree there were many Bolsheviks who were authentic idealists, and we should not denigrate these people, but I wonder if in fact the Bolsheviks' principles of democratization were in and of themselves really rather attempts to subvert and undermine the army. Lenin, captivated as he was by the French revolutionary experience, saw the army as a potential source of counterrevolution. That is why I believe that what he was consistently trying to do was, in many respects, to destroy it as an organized military force, both to prevent any possible right wing coups and because he did not really think he would need it, because he fully expected a wave of revolution to engulf all central Europe. He was of course vastly surprised when this did not happen and had to confront the armed might of the still quite active and even more powerful German Army in the east. Despite these quibbles, I would, in the main, agree with Dr. Jones, for the Bolsheviks did find that their improvised methods—the attempt to use Red Guards, the attempt to have *Vsevobuch*—did not work. Only when they understood that a military can neither be run nor built by rank amateurs, did the Bolsheviks begin to establish mass armies. It was in fact an act of improvisation, that gradually began with the drafting of Communist Party members. When the supply of these was depleted, industrial workers in those cities that had strong pro-Bolshevik majorities were inducted. Thereafter the regime moved to peasants in home districts that were close enough to centers of Bolshevik power so that the process of recruitment could be controlled.[4]

The fact remains that there was still tremendous difficulty with the kind of mass armies that were built. Dr. Jonathan R. Adelman has pointed out that the Red Army's level of desertion is almost unparalleled in modern military history, and the performance of the Red Army in the Civil War is extremely spotty indeed.[5] Nonetheless, given that the party had to be shown to be correct, then shortly after the closing down of the Civil War, even more dramatically in the 1930s, history was rewritten not only to exclude and denigrate Trotsky, but also to propagate the fundamental concept that Lenin had known what he was doing from the beginning in military affairs. You also had the rise of such myths as the one that held in 1919 the party fought and won the "battle for the allegiance of the middle peasants," thus creating the truly effective mass army, which in fact the Red Army was not.

It was precisely the sorry performance of the Red Army in the Civil War, despite the purges of many former Tsarist officers in the early 1920s,

that intensified the need of the RKKA for military specialists from the *ancien régime*, not necessarily to command but to be military historians, to be professors, and to write the textbooks.

In my view the RKKA turned to many of the old imperial intellectuals who had been arguing since the 1890s in favor of the mass mobilization of the population for war. In a sense the Soviet military found itself in the 1920s in the same position the Tsar's army had been in in the 1860s, that is, confronting poverty. It was a country which could not afford very much in the way of modern arsenals, and it nonetheless had to figure out ways in which it was going to fight and to win wars. So what the Soviets did was to create the concept of the army to mobilize the people. It would in fact mobilize them, militarize them, and indoctrinate them. Once you discarded the militia army, which would only work if people were effectively indoctrinated *before* they came to the service, you turned around and got the concept of the army itself as agent of political socialization, which is what the Red Army in the 1920s was very much about. In fact, if we are to believe Dr. Mark von Hagen of Columbia, as I think we should, it was astonishingly effective. Owing to the fantastic weakness of the party in rural Russia, the Red Army was the single most effective institution which the Bolsheviks had in the 1920s for propagandizing the people in the villages.[6] For if the peasant was indoctrinated at all, it appears that it happened during his military service.

As Dr. Jones interestingly suggested at the end of his talk, the RKKA of the 1920s almost embodied the ideal of the military reformers of the 1890s and the post-1905 period. These were the officers who in the end concluded that the autocracy was incapable of creating a patriotic citizens army. These were the officers who foresaw the desirability of using the army as the agency of political indoctrination. This is a role which has persisted in importance to the present. If you examine any current Soviet military publications designed for mass distribution, you discover quite striking similarities of tone, if not content, to the military literature of the 1890s.

In a curious way it is possible to argue that the idea of employing the army to educate and indoctrinate the masses originated in 1890, not 1919. And if Dr. Ellen Jones is correct, political indoctrination is still one of the most important functions performed by the Soviet armed forces even today.[7]

Notes

1. William C. Fuller, Jr, *Civil-Military Conflict in Imperial Russia, 1881–1914* (Princeton, 1985), p 43.

2. M. Dragomirov, "Zametka o russkom soldate," *Ocherki* (Kiev, 1898), p 139.

3. See Volunteer [M. Pavlovich], *Russko-iaponskaia voina: Prichiny, khod, i posledstviia* (St. Petersburg, 1905).

4. One of the best treatments of the problem of conscription during the Civil War is still V. V. Britov, *Rozhdenie Krasnoi armii* (Moscow, 1961).

5. Jonathan R. Adelman, *The Revolutionary Armies: The Historical Development of the Soviet and the Chinese People's Liberation Armies* (Westport, Conn., 1980), pp 30–39, 50–51.

6. Dr. von Hagen's study of the Red Army from 1917 to 1928 will be published by Cornell University Press.

7. Ellen Jones, *Red Army and Society: A Sociology of the Soviet Military* (Boston, 1985), p 165.

Session II

Soviet Military Doctrine

Introductory Remarks

Colonel Robert E. Berls, Jr., USAF

Welcome to Session II on Soviet Military Doctrine. I believe it is most appropriate that this topic is being discussed at the Air Force Academy's Military History Symposium, because it was the Air Force that was largely responsible for making available to the English-speaking world a large volume of Soviet military literature through its translations in the Soviet Military Thought Series.*

Before I introduce our panelists for this session, I would like to make a few brief remarks about our session topic—Soviet Military Doctrine. For you purists in the audience it might, perhaps, be better to call our topic Soviet Military Thought. I make this suggestion in order to extend our discussion beyond the somewhat restrictive framework of the Soviet definition of military doctrine. This certainly would correspond more accurately with our discussion here since our papers will take us into several different directions of military thought, that is, into the realm of military science and military art. All of this, of course, will be presented and related directly to our common theme of Transformation in Russian and Soviet Military History.

I think it is extremely important that several days are devoted to this theme, since in the Soviet Union military history has played and continues to play a very prominent role in Soviet military thought. Every month, for example, new articles in this field appear in *Voenno-istoricheskii zhurnal (Military History Journal)*. In addition, the Soviets publish a vast number of monographs, memoirs, and historical and fictional accounts of events in the area of military history, the overwhelming majority of which are from the annals of the Great Patriotic War. These works are studied seriously in the USSR and the appropriate lessons are drawn.

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*A series of publications from Soviet military literature translated and published by the United States Air Force as the Soviet Military Thought Series. The series is discussed and the volumes in the series are listed on page 369 in the Appendix. Ed.

But as the world moves further and further away from the events of 1941–45, the question of what role this tumultuous event should play in the history of the Soviet Union and in Soviet military thought must and does change. What for decades has been the source, the inspiration for much of Soviet military thinking, must become more and more difficult to relate to as newer generations grow up and a new leadership emerges, a leadership for whom World War II is now only a childhood memory. How the Soviets will treat this great event in the future and what lessons they will continue to draw from it, particularly in view of changing military technology, doctrine and strategies, are questions deserving of our attention during the next two days.

In this connection, I would note that in our discussions of Soviet military history, and particularly in our examination of the role of military history, a topic which Peter Vigor will address directly, we should ask ourselves a number of questions. What should be the function of military history in the formulation of military doctrine, military strategy and tactics, and military force planning? What guidelines can and should be drawn from military history as we plan for the future? What can military history teach us? And equally important, what traps must we avoid as we apply military history to military thought?

As regards the Soviet Union, for example, is there justification to the argument that the Soviets have concentrated too much on preparing for a large-scale land war in Europe based on their World War II experience and consequently were ill-prepared, at least initially, to fight an insurgency in Afghanistan? And finally, what role can and should we anticipate the Soviets' war in Afghanistan will play in Soviet military history and Soviet military thought in the future? I raise these issues because I believe that they are appropriate questions for discussion during this session and during the entire course of the symposium.

Mass, Mobility, and the Origins of Soviet Operational Art, 1918–1936*

Jacob W. Kipp

The first requirement incumbent upon the author of this paper is to define exactly what is meant by the three terms employed in the title. Mass in the Russian context has a triple meaning. To students of Soviet history and Marxism-Leninism it refers to the political linkage forged by Lenin and the Bolsheviks between the masses and the conduct of modern war. It embraces what Gen. Gerua and his co-author called "the strategy of the masses," where the social and class struggle are merged with modern war, i.e., the fusion of regular war and partisan war into an organic whole.[1] As A. S. Bubnov and the other Red Army commanders asserted in 1930:

> *Partisan warfare during the Civil War often took on a completely independent significance. One can assume that warfare of a similar type in future European class wars and in the national-liberation wars of the nations of the East will be the perfect fellow-traveler of regular warfare. Because of this one of the immediate tasks for the theoretical work of our military-scientific thought is: the study of the nature of modern 'partisan warfare' and the establishment of a forecast for the future.*[2]

Under this rubric Marxism-Leninism provided a new content to Clausewitz's classical definition of war as an extension of politics by infusing that politics with a class content in the form of the masses' intervention into the politics of war.[3]

To military historians, the term calls to mind the image of the Russian "steamroller," which gave nightmares to Schlieffen and other German General Staff planners in the decades prior to World War I. A simple process of extrapolation based upon the size of Russia's standing army, the number of conscripts being inducted in any year under the universal military

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*The author wishes to acknowledge the assistance of the following scholars in the research and writing of this essay: Professor John Erickson, Dr. Bruce W. Menning, and Colonel David Glantz, U.S. Army.

service statute, and the empire's total population provided a rough estimate of the total number of rifles and sabers which the Tsar could put into the field. The Imperial government's adoption of the Grand Program for rearmament in 1912 thus threatened to change the military balance on the continent.[4] Those forces would mobilize slowly, but, like a steamroller, their momentum would carry all before them.

Given the predominance of a short-war paradigm among European general staffs, this threat was real but not immediately compelling. The Germans assumed it could be answered by a rapid victory over France before such numbers could make their weight felt. It led German officers to influence their Austro-Hungarian counterparts to undertake initial offensive actions to reduce pressure upon the German covering forces protecting East Prussia and Silesia.[5] The major modernization and expansion of Russian forces, for which the "Grand Program of 1912" provided, seemed to create a window of vulnerability which German officers assumed would open around 1917. This in its own way contributed to an enhanced sense of impending threat. At the same time, fears that Russian manpower would not affect German deployments against their own offensive led French generals and politicians to press for commitments to immediate offensive operations by the Russian Army, even before mobilization was completed. In this context the myth of the Russian steamroller played its own special role in shaping prewar military policy and the maneuver phase of World War I.[6]

Ironically, the Russian steamroller embodied one of the central contradictions of military affairs in the decade prior to World War I, i.e., the confusion of mobilization and concentration with deployment and maneuver. Mobilization and concentration through the systematic exploitation of the national railway system had, since Moltke's victories, been interpreted as the key to strategic success. War plans, which were the domain of the various European general staffs, became a matter of defining the operational line which would permit the most decisive concentration of troops against the enemy's center of gravity during the initial phase of war. The location and capacity of the railroad net, when combined with a rational system for its rapid exploitation for the movement of standing and reserve formations, assumed paramount importance, while the maneuver of army groups was confined within the operational lines dictated by the mobilization process and the rail net. This has been described in some recent scholarship as the "cult of the offensive" since it envisioned using speed of mobilization as a means of gaining the initiative and imposing one's will upon the adversary by conducting offensive operations.[7]

Mass or the massing of forces and means was one of the problems of industrial war and war planning which most troubled the Russian General Staff prior to World War I. These officers were well aware of the relative disadvantages under which the empire labored in its efforts to mobilize, assemble, and deploy its forces at the start of hostilities. The scale and density of the German and Austro-Hungarian rail nets favored their mobilization, not Russia's. Until two years before the outbreak of hostilities Russian war plans had, in fact, counted upon a covering force action in the initial period of war, while the mobilization was executed.[8]

To military analysts, mass or more precisely the massing of forces and means (*massirovanie sil i sredstv*) refers to one of the principles of military art relating to the concentration of such forces and firepower upon the decisive sectors in order to secure a decisive superiority over the enemy and thereby achieve the goals of an operation or battle.[9] As Soviet authors assert, the massing of forces and means has long been a principle of military art. However, its application in practice has depended upon the level of development of the means of armed struggle and the talent of the military leader (*polkovodets*) to apply it in practice. This essay will address the way these three understandings of mass fused in Soviet military thought in the two decades following the Bolshevik Revolution.

Mobility (*podvizhnost'*) traditionally has referred to the ability to move forces and means rapidly prior to combat and in battle. Speed of deployment and redeployment were said to be relative to the capabilities of an opponent and have been characterized as a force's maneuverability. Gen. H. A. Leer (1829–1904), Russia's strategic theorist of the last part of the nineteenth century under the influence of Lloyd, Jomini, and Napoleon, distinguished between strategic and tactical mobility. Strategic mobility took the form of the "march-maneuver," by which the commander sought to bring his forces to bear at the decisive point, in superior numbers at the decisive time. Successful march-maneuvers set the stage for the general engagement. Thus, maneuvers were only a means of preparing for the decisive battle and not its conduct.[10] The distinction between strategic and tactical mobility was absolute. Under the influence of a world view which sought out universal, unchanging laws, Leer sought to fit maneuver into the preexisting categories of military art. For him, Moltke's genius consisted of the application of those laws in new circumstances. Leer sought those elements which united Moltke and Napoleon, not what made them different sorts of commanders in different sorts of wars.

The Russian Army and the Industrialization of War

With the industrialization of war in the mid-nineteenth century, the problems of mass and mobility became infinitely more complex. The new weapons extended the breadth and depth of the battlefield, increased the lethality of firearms, played havoc with well-established concepts of combined-arms, and made possible the more rapid mobilization of manpower for the conduct of the campaign. The traditional definitions of tactics as the direction of forces on the field of battle and strategy as the control of units as they maneuvered prior to engagement began to break down. This industrialization process had a number of salient features, which impacted upon all European armies, including that of Tsarist Russia. First, it stimulated and guided a process of professionalization within the military, which emphasized technical mastery of the new means of destruction in a relatively narrow, applied form.[11] Second, it placed greater emphasis upon the problems of mobilization, concentration, and deployment of forces. This, in turn, led to a fixation upon the problem of strategic war plans, which

became identified with the most rational and expeditious means of getting men and materiel into the theater of military action.

Following the Crimean War and during the period when Prussian victories were reshaping military concepts, Russia embarked upon those reforms which would shape the way Russians would prepare for and go to war for the next half century. The Russian War Ministry executed its first mobilization and deployment plan in 1876–77 in the Balkan and Caucasian theaters for the war against Turkey.[12] While Miliutin's reformed War Ministry and Gen. N. N. Obruchev's war plan proved equal to the task of getting troops into the theater and across the Danube, they did not provide effective guidance for the conduct of sustained operations, and the Russian campaign against the Turks bogged down north of the Balkan mountains. This crisis drew attention to the problem of the command and control of ever larger formations under conditions where the field commander could not exercise direct supervision. Russian dilemmas south of the Danube in the summer of 1877 were in good measure a result of the inability of the theater commander and his staff to provide effective command and control of the various detachments. This, in turn, led to a situation where the massing of forces for the decisive thrust over the Balkan mountains and on to Constantinople could not be achieved.

For Russia the central lessons of the Russo-Turkish War were not easily assimilated. Partly this was the result of command politics, involving members of the imperial family, who did not want their reputations sullied.[13] On the other hand, it was also a result of a particular mindset among the army's most important strategic thinkers, especially General Leer, who taught strategy at the Nikolaevskaia Academy of the General Staff. Leer, interpreted by Moltke as a mid-century Napoleon, believed in eternal principles and laws and had a disdain for the recent unpleasantness in the Balkans. Neither his book on strategy, which dominated the field until his death, nor the guide to his lectures at the Academy, which was published in 1887, addressed the lessons of 1877–78. Leer and his generation looked for didactic tools, rather than evolutionary concepts. In a time of radical change they sought a firm doctrine. The latter slowly ossified into dogma. Such was the critical judgment of A. A. Svechin, one of the military specialists (*voenspetsy*), who provided the young Red Army with its intellectual links to the Tsarist Army and its general staff.[14] Yet, Svechin, who was critical of narrow, technical specialists because they lost sight of the larger picture of war as a social phenomenon, did believe that Leer had provided an aiming point or compass (*bussol'*) for Russian military theorists to use in addressing modern war. Leer emphasized and reemphasized the role and function of the operational line in determining the strategic direction of a campaign.

When Russia went to war in 1904, the problems of industrial war came back to haunt Gen. Kuropatkin and his staff in Manchuria. Kuropatkin had been an excellent chief of staff to Gen. Skobelev in the Balkans, had written extensively on that experience, and had later campaigned effectively in Central Asia.[15] As Minister of War he had directed Russia's rearmament in the years before the outbreak of war and proved a talented logistician. Russia mobilized a half million men and sent them over five thousand miles by rail.

Kuropatkin was also a devoted disciple of Leer. His initial deployments and the slow buildup of his operations on the Mukden–Port Arthur axis were clear proof that he understood and was applying the concept of the operational line. What he could not do was provide effective command and control of his forces in the field. He spent the entire war in Manchuria seeking the single set-piece battle which would decide the campaign.

The Japanese, using the German mission-oriented tactics of Sigismund von Schlichting, seized the initiative, threatened his flanks and repeatedly forced him to abandon the field after a spirited but inconclusive defense. The Japanese commander, rather than waiting to deploy his forces and then enter into a general engagement, allowed his troops to engage the enemy from the march, thereby seizing the initiative and frustrating Kuropatkin's elaborate plans.[16] Russian reserves found themselves marching from one side of the battlefield to the other and either taking no decisive part in the action or being so exhausted by the process that they had lost their effectiveness. In Manchuria the battlefield had assumed a breadth and depth, a size that was unthinkable only a half century before. At Mukden in 1905 three Russian armies, numbering 300,000 men, 1,475 field guns, and 56 machineguns, faced five Japanese armies, numbering 270,000 men, 1,063 guns, and about 200 machineguns. The fighting lasted for six days and covered a front of 155 km and a depth of 80 km.[17]

Critics, including Svechin, concluded that the impact of technology on the scale of battle was in the process of working a radical change in the conduct of war. Russian officers began to speak of a new focal point in military art between strategy and tactics, war and battle. They sought a new terminology to give expression to this intermediary level of combat and employed engagement (*srazhenie*) to define the scale of combat above battle, and operation (*operatsiia*) to describe the linking together of maneuver and combat into a series of "individual bounds of the attacker forward and the defender backward."[18] For Lt. Col. A. A. Neznamov (1872–1928), the Russian defeats in the Far East had one basic cause: "We did not understand modern war."[19] Already in 1909 Neznamov had used a public lecture to identify the central changes in the art of military leadership, which were arising from the demands of mass, industrial war. Much of what Neznamov said was taken from German writings, especially Schlichting, but they were presented within a very Russian context. Neznamov redefined control (*upravlenie*) and initiative (*pochin*) so as to stress the role of the commander in imposing order from above in the form of his plan of action. Initiative among junior commanders became subject to the limits imposed by their understanding of their unit's role in that plan and the subordination of their actions to its needs. Initiative no longer was shouting hurrah and leading the troops forward into battle but the application of professional skills to the persistent development of the attack in the necessary direction. Control embraced a feedback loop as well, for the commander could only develop his operational plan on the basis of timely intelligence and situation reports.[20] The available technical means of control and communication were not, however, equal to the demands of time and space, which the new weapons imposed.

This attention to the operation as the keystone of modern war stirred considerable controversy within Russian military circles and within the imperial government. On the one hand, critics were accused of presenting foreign, i.e., German or French, military theory without regard for Russian traditions. B. M. Shaposhnikov, then a student at the Academy of the General Staff, reports in his memoirs that when a Russian translation of Schlichting's work became available in 1910 it was apparent that his professor, Colonel Neznamov, "had been bringing us German views on operational art."[21] Much later Svechin openly acknowledged the influence that Schlichting had on his own concepts of strategy. A close reading of Svechin's presentation suggests that the German's ideas also influenced the views of Gen. N. P. Mikhnevich (1849–1927), the officer who succeeded Leer in the Chair of Strategy at the Academy and who later became Chief of the General Staff (1911–17).[22]

Some senior faculty members were particularly concerned that such foreign ideas would evolve into an undigested dogma, stifling critical thought and promoting stereotyped solutions among junior officers.[23] On the other hand, the competing conceptions quickly degenerated into intrigue and back stabbing among the teaching staff of the General Staff Academy. B. V. Gerua, who taught there during the period, reports in his memoirs that he and his fellow "Young Turks" associated with the Francophile approach to the teaching of applied tactics that N. N. Golovin championed were removed thanks to the denunciations carried to the suspicious V. A. Sukhomlinov, then the Minister of War. The "informer," according to Gerua, was Col. M. D. Bonch-Bruevich, an intimate of Sukhomlinov's during the latter's tenure in the Kiev Military District as Chief of Staff.[24] At the same time Shaposhnikov, then a student at the Academy, complained about the total domination of French ideas and concepts at the institution. For that reason the war game (*Kriegsspiel*) did not figure in the educational program.[25] The subtext to much of this intrigue and animosity at the Academy was the hostility between the professional officers, drawn from the poor nobility and service estates of the empire, and the higher aristocracy with its access to the Court, the Corps of Pages, and the Guard.

Colonel Neznamov's advocacy of a unified military doctrine to prepare the entire state for the conduct of modern war brought the young professor into conflict with Nicholas II himself, who ordered the colonel to cease his writings on that topic.[26] Neznamov's views were in no way radical or subversive of the autocracy. As General Mikhnevich stated in his book on strategy, Russian military theorists had concluded that modern war required a centralized, coordinated effort which would mobilize the nation's total resource for war. The ideal state structure for such an effort was, according to Mikhnevich, "*a powerful monarchy*" which could maintain internal political unity and sustain the war effort to make maximum use of time and space in the conduct of the struggle.[27] The fumbling, disjointed, and ineffective national leadership provided by Nicholas II's government during the war years hardly fit what Mikhnevich or Neznamov had in mind.

These interwar debates did, however, have some impact upon the way in which Russia went to war in 1914. On the one hand, the critics were able

to get the concept of a unified supreme headquarters (*Stavka*) accepted and were able to introduce the intermediary command of *front* to control the operations of a group of armies in a given sector of the theater. New Russian field regulations placed greater emphasis upon effective combined-arms, the meeting engagement, and land march-maneuver. In addition, thanks in part to changing diplomatic circumstances and bureaucratic politics, Russian war plans shifted from General Mikhnevich's covering force strategy to one of initial offensive action, a position in keeping with Colonel Neznamov's views on the decisiveness of initial operations.[28] Yet, war plans "A" (Austro-Hungary) and "G" (Germany) as drafted did not provide for a decisive massing of forces and means against either opponent. When war came in the summer of 1914, after the false start of the proposed partial mobilization against Austro-Hungary, Russian forces under Plan "A" were committed to immediate offensive operations against German forces in East Prussia and Austro-Hungarian forces in Galicia. Gen. A. M. Zaionchkovskii (1862–1926) noted that both operational plans were remarkable for their "diffusion and distribution of means." Nowhere did Russian forces achieve an overwhelming superiority, which would have brought about a decisive victory. In their advances to contact, the Russian armies quickly found that their logistical systems were totally inadequate to sustain the pace of operations.[29] Thus, while the Academy of the General Staff had begun the work of studying the operational level of war, the results of its work were not in evidence in the initial maneuver phase of World War I. The Russian Army did not achieve the mass, which worried its adversaries and consoled its allies. Nor did it achieve the operational massing of forces, which the professors-*genshtabisty* had advocated. Zaionchkovskii argues that such did not occur because the General Staff Academy was cut off from the rest of the army. Its generals were professors in uniform who were frequently incapable of command. On the other hand, the higher leadership of the state and the army did not take its ideas seriously. New concepts were proposed in *Russkii invalid* and *Voennyi sbornik*, but they seemed to have little positive impact on either the Chiefs of the General Staff or the Ministers of War. Gen. Sukhomlinov's memoirs are typical of the lack of attention paid to the Academy by senior officers.[30] The Academy was not the "brain" of the General Staff, and the General Staff hardly qualified as the "brain of the army."

In spite of the reformers' efforts, the Russian officer and NCO corps were hardly prepared for modern war. This was particularly true regarding the ability of Russian units and formations to maneuver with dispatch. Zaionchkovskii argued that Russia went to war in 1914 with "good regiments, average divisions and corps and poor armies and *fronts*. . . ."[31] The meeting engagements fought at Gumbinen in East Prussia and along the Gnilaia Lipa in Galicia in the first weeks of the war seem to confirm this judgment. Here Russian regiments and divisions fought without operational direction or coordination. In both cases they won initial victories. At Gumbinen no follow-up advance ensued to make use of the victory, but in Galicia the victories along the Gnilaia Lipa were the first Russian successes on a path which would culminate in the capture of Lvov.[32] To borrow from the language of A. A. Bogdanov on the science of control systems, the

army's organism had a stronger skeleton than nervous system. Its training created good junior officers but not an effective staff system or high command structure.[33]

The Red Army and the Search for a Soviet Military Art

Intellectual speculation about the nature of operations took second place to the praxis of war for Russian officers over the next six years. World War I and the Civil War tore apart the fabric of Russian society and with it the old army. Russian officers did, however, build up a rich fund of experience in modern war, and some of these officers, especially those who joined the Red Army as military specialists (*voenspetsy*) had an opportunity to develop a theory of operational art on the basis of the prewar speculations and experience in World War I and the Civil War. This opportunity was to some measure the product of the Bolsheviks' and Lenin's attitude toward the expertise of the professional soldier.[34] In part, it was a product of ideological commitment to a transcendent Russian nationalism of the type which moved Gen. Brusilov to offer his services to the Soviet state during the Polish attack in the spring of 1920. Finally, it was partly a matter of luck.

At the start of World War I, on the assumption that it would be a short war, the War Ministry had closed the Academy of the General Staff and mobilized its faculty and students. However, as the war dragged on and the need to train more general staff officers became evident, the Academy was reopened in late 1916. During the next turbulent year the Academy resumed its mission under the most difficult circumstances.[35] Following the October Revolution and the German advance on Pskov toward Petrograd, the Commandant of the Academy ordered most of the faculty and students and the library moved to safety. In this case safety was Kazan, where most of those who went joined Kolchak. The minority of faculty and students moved to Moscow, where the Soviet government set about organizing its own Academy of the General Staff.[36] As I. A. Korotkov has acknowledged, the first steps taken by Soviet military science during the Civil War were carried out by *voenspetsy* associated with the Tsarist General Staff and its Academy. The first Soviet professional military journal, *Voennoe delo*, carried articles on military doctrine by Neznamov, Svechin, and P. I. Izmest'ev—the last being the author of a major study on the significance of the estimate in developing and conducting military operations.[37]

What emerged during the years of the Civil War was an atmosphere conducive to the development of operational art. On the one hand, the experience of Russian forces on the Eastern Front during World War I never degenerated into the absolute linearity of positional warfare in the trenches of the Western Front. In part this was a result of the correlation of area, i.e., the very length of the front; density, i.e., relatively lower number of forces and means available along the front, making it difficult to create deeply echeloned defenses like those seen in the west; and the underdevelopment of the transportation and communication assets of the theater, which reduced the defender's relative advantage in responding to an attack. Thus, scale,

density, and economic backwardness combined to create greater opportunities for maneuver. War in the east became a "*Gummikrieg*" (*rezinovaia voina*) as one captured Austrian officer described the autumn fighting in the Carpathians to his Russian interrogators at 8th Army Headquarters.[38] Operational maneuver persisted throughout three years of fighting without either side being able to gain the upper hand. Commanders on both sides developed the techniques necessary for a breakthrough but were unable to transform the breakthrough into a sustained drive, which would destroy the opposing force, overcome the enemy's reserves as they redeployed to meet the threat, and bring about decisive victory. General Brusilov's Southwestern *Front* provided a model for such a breakthrough operation on the Russian side, one which Red Army staff officers would study in detail.[39] It is probably fair to describe the 1914-17 struggle as a semimobile war in which neither side was able to execute decisive maneuver.

The disintegration of the old army and the mounting prospects of civil war and foreign intervention created a situation in which the newly established Soviet Republic had to set about the creation of its own armed forces. The RKKA, or Workers' and Peasants' Red Army which emerged during the Civil War, relied heavily upon Tsarist military specialists for combat leadership, staffing, and training. By the end of the Civil War, about one-third of all Red Army officers were *voenspetsy*, and in the higher ranks the ratio was even greater. Thus, 82 percent of all infantry regiment commanders, 83 percent of all division and corps commanders, and 54 percent of all commanders of military districts were former Tsarist officers.[40]

The forging of this union between the new Bolshevik government and the Tsarist military specialists had not been easy. Lenin and his new Commissar of War, L. D. Trotsky, had faced criticism from Left-wing advocates of partisan warfare and critics who doubted the loyalty of the Tsarist officers. In March 1918 Trotsky wrote:

> *We need a real armed force, constructed on the basis of military science. The active and systematic participation of the military specialists in all our work is therefore a matter of vital importance. The military specialists must have guaranteed to them the possibility of exerting their powers honestly and honorably in the matter of the creation of the army.*[41]

Over the next six months the young Soviet state created a Main Staff, initiated the publication of *Voennoe delo*, formed a military-historical commission to study World War I and later the operations of the Civil War, and began creation of an Academy of the General Staff.[42] Some *voenspetsy* did change sides, but the system of political commissars, the holding hostage of military specialists' relatives in some cases, and the infusion of party cadre into the military kept such defections within bounds. S. I. Gusev, an old Bolshevik with close ties to General Staff circles in the prewar period when he served as one of the editors of the *Military Encyclopedia*, noted the loyalty of the military specialists with whom he served at the front.[43]

In spite of reservations among many Bolsheviks and even among their fellow officers, the *genshtabisty* proved an increasingly vital component in

the Red Army's conduct of the Civil War. M. N. Tukhachevskii, a former Tsarist officer and the dashing commander of the 5th Army, had initial reservations about the *genshtabisty*, whom he considered with the exception of the cohort of officers educated after 1908 to be totally unprepared for modern war or the special conditions of a civil war between social classes. Tukhachevskii called for the creation of a "Communist command cadre."[44] Tukhachevskii himself, however, as the scale of the fighting and the quality of the opposing forces improved, changed his tune. In explaining the setbacks which he suffered during the Western *Front*'s May offensive against the "White Poles," he pointed to the lack of staff support under which he suffered at the division, army, and *front* levels.[45] By the end of the Civil War S. S. Kamenev, himself a *genshtabist* and the Commander in Chief of the Armed Forces of the Soviet Republic, described the new relationship as one of combination, in which the Communist and *genshtabist* joined to create the perfect command team.[46] One of the best examples of such a combination was that of M. V. Frunze, who went from political commissar to Red Army commander under the guidance of such *genshtabisty* as F. F. Novitskii, A. A. Baltiiskii, and V. S. Lazarevich.[47]

On their side the Red *genshtabisty* understood the most pressing needs of the new Workers' and Peasants' Army. A. Neznamov set the immediate goal of officer education in the Red Army at the level of Tolstoy's Captain Tushin, i.e., to give these officers the ability to act in combat. The Red Army did not need young Fredericks or Napoleons. The basic education of junior officers was to consist of teaching them uniform tactics so that they might be "good executors" of orders.[48] Many junior officers suffered from that independence of action, associated with the *partizanshchina*, out of which many Red Army units emerged. At the operational level Neznamov prized creativity.[49] But here the commander's plan and his orders had to limit the creativity of his subordinates. Neznamov's approach had three specific consequences which would shape the Red Army's officer corps. First, uniform tactics put a high premium on battle drills as a way of providing a general response to tactical developments. Second, it emphasized the dissemination of such uniform tactical views to all combat arms so that combined-arms would come naturally at the tactical level. Third, it established a specific need to educate senior commanders in the conduct of operations. Creativity was to be most prized here.[50]

The marriage of the RKKA with the *voenspetsy*, while stormy, created a climate for the study of the operational level of war. The experience of the Civil War set in motion a process of evaluation. The historical orientation of Marxist ideology served as a powerful stimulus, while the Academy of the General Staff provided focus, military-historical perspective, and professionally competent judgment of that distinctive experience. As is well known, the evaluation of that experience set the context for the political-ideological polemics between Frunze and Trotsky regarding the appropriateness of a "unified military doctrine" for the Soviet state and the Red Army. On one side, Trotsky argued that the Civil War experience had not created the basis for a Marxist military science; and on the other, Frunze argued that the nature of new state, the Red Army, and its combat exper-

ience in the Civil War had forged the preconditions for the formulation of a unified military doctrine, which he described as the concept "which determines the character of the construction of the country's armed forces, the methods of combat training for troops and command personnel." The ruling group's concept of its military system was, in turn, shaped by class relations, external threat, and the level of the nation's economic development.[51] Trotsky, like the prewar opponents of a unified military doctrine, worried that giving official sanction to a particular concept would invite the transformation of doctrine into an ossified dogma. He feared efforts to universalize the validity of the combat experience derived from the Civil War.[52]

Clearly, the Soviet experience in the Civil War had been qualitatively different from that of World War I on either the Western or the Eastern Fronts. If the Imperial Army had suffered from the economic backwardness of old Russia, enduring a shell crisis in 1915 which radically reduced its combat capabilities, the Red Army had to confront the utter disintegration of the national economy. Revolution, civil war, international boycott, and foreign intervention combined to undermine national economic life. The regime's response, War Communism, was less social utopia and more a form of barracks socialism, in which all resources were organized to field a mass army equipped with the most basic instruments of industrial war—the rifle, machinegun, and field artillery. And even in the procurement of these vital weapons the level of production fell radically in comparison with what had been achieved by Russian industry during World War I. Thus, in 1920 the production of rifles was only one-third of that in 1917.[53] It was the Whites who, thanks to foreign assistance, were able to field in small quantities the latest weapons of war, especially the tank.[54] By the end of the Civil War the Soviet Republic put into the field a ragged force of 5.5 million men.

The Civil War was also noteworthy for a number of politico-geostrategic features, which had a profound impact on the nature of the struggle. First, it was in every sense a civil war in which neither side asked nor gave any quarter. The Russia over which the Reds, Whites, and Greens struggled might be described as a few island-cities in a sea of peasant villages. The cities emptied as the links between town and countryside collapsed. Red Guard detachments swept through Tiutchev's "poor villages," seizing grain and recruiting soldiers. Red Terror and White Terror mounted in scale and intensity. At times it was difficult to distinguish between combatants and brigands. The Red and White Armies were notoriously unstable with a persistent problem of desertion. In 1920 when he was preparing for the Western *Front*'s offensive, Tukhachevskii had to face the fact that the Commissariat of War could not find many additional troops to support the operation, and so he instituted a campaign to extract 40,000 deserters from the region's villages into service. Within a month, the Western *Front* found that it had "extracted" 100,000 deserters, whose presence taxed the supply and training capacity of the *Front*.[55] Such reinforcements were none too stable in the attack and tended to vanish at the first sign of disaster.

The second reality of the Civil War was the fact that the Bolsheviks controlled the central heartlands around Moscow and managed to maintain an effective, if much reduced in scale, rail system, which permitted them to

use their internal lines of communication to great effect. On the other hand, the White Armies fought on the periphery of Russia, in lands often inhabited by non-Russians who had no great interest in the revival of a centralized Russian state. The presence of the White Armies on the periphery, especially in south Russia, the Kuban, and Siberia, meant that operations were frequently conducted in "underdeveloped (*malokul' turnye*) theaters of military action." As R. Tsiffer observed in 1928, the Civil War seemed to confirm the general rule that the more developed the theater of war, the more likely the emergence of positional forms of warfare; and, conversely, the less developed the theater of war, the greater the opportunities for the employment of maneuver forms of combat.[56] This situation, when linked to the low density of forces, the ineffectiveness of logistical services, and the low combat stability, created conditions for a war of maneuver. It was not uncommon, as Tukhachevskii pointed out, to have each side launch operations that would sweep 1,000 *versts* (600 miles) forward and another 1,000 *versts* back.[57] The instability of the rear in military and political terms meant that a successful offensive, if a vigorous pursuit could be maintained, would often lead to the routing of the opponent and the disintegration of his political base.

Maneuver in this case took the form of a "ram" of forces directly at the enemy in the hope of disorganizing and demoralizing him. It would be fair to characterize this operational approach as an attempt to substitute mobility for maneuver, since the Red Army lacked either the staff assets or communication facilities to sustain the necessary command and control to carry out more complex maneuvers which might lead to the encirclement and destruction of enemy forces.[58] In Tukhachevskii's case this approach was linked with the concept of political subversion and class war as a combat multiplier, what he called "the revolution from without."[59]

One of the most conspicuous developments of the Civil War was the resurgence of cavalry as a combat arm. Russian cavalry had not distinguished itself particularly during World War I. Now under civil war conditions, cavalry recovered its place as the combat arm of a war of maneuver. The loyalty of the Don Cossacks and the support of many senior cavalry commanders gave the Whites substantial initial advantages in the use of this arm. Trotsky's famous call, "Proletarians to horse!" initiated the process of creating a "red cavalry."[60] Soviet cavalry units were raised from the beginning of the war; however, greater attention was paid to creating troop cavalry detachments to provide the eyes and security screens for the newly formed infantry divisions. Army cavalry, i.e., cavalry units organized into independent brigades and divisions, were gradually formed into corps and later armies.[61]

The raid mounted by Gen. K. K. Mamontov's cavalry in August–September 1919 provided the stimulus for the creation of the First Red Cavalry Army, Budennyi's legendary *Konarmiia*. In order to take pressure off Denikin's forces, Mamontov's IV Don Cavalry Corps (7,500 sabers) undertook an independent raid deep into the rear of the Southern *Front*. The 36th and 40th Divisions which held the 100 km section of the line through which Mamontov's corps passed were widely dispersed, and Mamontov used air reconnaissance to find a sector where his cavalry could slip through

without serious opposition. Using his air reconnaissance to avoid contact with Bolshevik units, Mamontov struck deep into six *guberniias*, wrecking the rail lines and destroying military stores as they advanced.[62] The *Revvoensovet* of the Republic took this threat seriously and created an internal *front* under the command of M. M. Lashevich to deal with Mamontov's corps. On its return to Denikin's lines, the corps' pace slowed under the weight of booty, and Lashevich was able to concentrate Red forces against the strung-out columns. Mamontov reached Denikin's lines but suffered serious losses on the retreat south from Kozlov to Voronezh.[63] The use of air assets to provide effective reconnaissance for large-scale cavalry raids was noted by the Red Army and became an important part of its own concept of strategic cavalry.[64]

In November the *Revvoensovet* ordered the creation of the *Konarmiia* under the command of S. M. Budennyi, a former NCO in the Tsarist Army and then the Commander of the I Cavalry Corps. *Konarmiia* was initially composed of three cavalry divisions, an armor car battalion, an air group, and its own armored train. Later two other cavalry divisions were added and an independent cavalry brigade was also included.[65] The basic units of the *Konarmiia* were its cavalry divisions, armed with rifles, sabers, revolvers, and hand grenades. Each division was also to have, according to its Table of Organization, 24 machineguns mounted on *tachanki*,* but in practice the number was often two or three times higher. The most effective commanders used such guns to provide concentrated fire. Each division also had its own artillery, three batteries of light field guns and one battery of horse-howitzers (45-mm). In offensive operations it also became common practice to assign a "mounted infantry" to each cavalry army. This force amounted to about one battalion for each cavalry division—a battalion being between 1,000-1,300 men and 18 machineguns mounted on roughly 200 *tachanki*.[66]

Budennyi's Red Cavalry quickly became the stuff of legends. Isaac Babel, who served as a political commissar with one of its units, immortalized its exploits in a cycle of short stories.[67] The legend later turned into official myth as Budennyi, Voroshilov, and Stalin invented history to fit their own cults of personality. In the decade after the Civil War it was still possible to give a reasonably objective evaluation of the contribution of the *Konarmiia* and strategic cavalry in general to Soviet operations on the various fronts of the Civil War. Strategic cavalry repeatedly played the role of shock force striking deep into the enemy rear, disrupting his command and control, and demoralizing his forces. Among the most celebrated of these operations were those in the Ukraine in June–July 1920, when *Konarmiia* was redeployed from the Caucasian *Front* to the Southwestern *Front* to form the strike group for a drive to liberate Kiev and push the Poles out of the Ukraine. At the start of the operation, Budennyi's *Konarmiia* had 18,000 sabers, 52 guns, 350 machineguns, five armored trains, an armored car detachment and eight aircraft. The Polish 3d Army was spread thin and had few effective reserves. Thus, one cavalry division was able to slip

*Horsedrawn, sprung carriages. Ed.

through the lines and mount a raid on Zhitomir-Berdichev in the first week of June. The Polish commander responded by shortening his lines and giving up Kiev. The blows of the *Konarmiia* were in this case combined with pressure from the Soviet 12th Army, and this created the impression that the Polish defenders faced the possibility of being surrounded and cut off.[68] Polish cavalry proved totally ineffective in maintaining contact with Budennyi's forces. Over the next month the *Konarmiia* took part in heavy fighting around Rovno, taking that town by a flanking maneuver on July 4, losing it to a Polish counterattack on July 9, and regaining it by direct assault the next day.

Budennyi's force engaged in 43 days of intensive combat without effective logistical support. Cavalry brigades which at the start of the campaign had numbered 1,500 sabers were down to 500 or less by the end of the fighting. The fighting at Zhitomir and Rovno exemplifies the combined-arms approach which typified Soviet employment of strategic cavalry. It also showed its limited ability to engage in sustained combat.[69] At the same time, the Zhitomir and Rovno operations exemplified the psychological impact of the strategic raiding force. Marshal Pilsudski credits Budennyi's *Konarmiia* with an ability to create a powerful, irresistible fear in the deep rear. Its effect on the Polish war effort was like the opening of another, even more dangerous front within the country itself.[70]

The Red Cavalry's success at Rovno set the stage for one of the most controversial and frequently studied operations of the Civil War, i.e., Marshal Tukhachevskii's general offensive of July–August 1920, in which his Western *Front* struck beyond the Vistula to threaten Warsaw. Pilsudski's counterattack, coming at the very gates of Praga and resulting in the destruction of major Soviet formations pinned against the Polish–East Prussian border, became known as the "Miracle of Warsaw." More realistic Soviet assessments of the campaign doubted this implied connection between the Vistula and the Marne and said that the "miracle" was that the bedraggled, unfed, poorly armed, ragtag divisions of the Western *Front* got as far as they had. Tukhachevskii's general offensive took place without adequate reserves, effective command and control, and logistical support.[71] Believing his own theory about "revolution from without," he fell into the trap of assuming that the psychological weight of the advance would break the will of the Polish defense without having to destroy those forces in the field. His forces did manage to push the Polish defenders back over several natural defensive positions and the line of German emplacements along the Auta.[72] However, Pilsudski's counterattack struck the overextended forces of the Western *Front* near Siedlce and drove a wedge between Tukhachevskii's 13th Army and the Mozyr Group. The attack threw the Western *Front* back in disarray and trapped the RKKA's 4th Army against the East Prussian border.[73]

The geographic peculiarities of the theater, i.e., the fact that Belorussia and the Ukraine are split by the Pripiat Marshes, created two distinct axes of advance toward the Vistula. The existing Soviet command structure called for Tukhachevskii's Western (Belorussian) *Front* to direct the fighting north of Polesie and Egorov's Southwestern *Front* (Ukrainian) to direct the fighting south of Polesie. This military case of "dual power" combined to

frustrate Soviet control of the Vistula Campaign. In addition to directing the fighting in the Kiev sector, the Southwestern *Front* also had to combat Wrangel's army based in the Crimea and to cover the potential threat of Rumanian intervention. Memoir literature by the principal commanders on both sides addressed the issue of strategic-operational direction and control. Budennyi's *Konarmiia* persisted in its attacks toward Lvov, even after Kamenev as Commander in Chief had ordered it and the 12th Army to regroup, join the Western *Front*, and undertake a drive toward Lublin to relieve pressure on the Western *Front*. Southwestern *Front* Commander A. I. Egorov, in the words of Triandafillov, found himself caught trying to manage operations on two axes without staff support and did not feel "the beating pulse of the operation."[74] Thus, Tukhachevskii's Western *Front* lacked support from the south when its 4th, 15th, and 3d Armies tried to turn Warsaw from the north by crossing the Vistula between Modlin and Plock. Since Joseph Stalin served as the Political Commissar of the *Konarmiia*, Budennyi's independence and insubordination became entangled in the political struggles following Lenin's death. Under Stalin's cult of personality the unpleasant truth about Lvov and Warsaw was covered up by blaming Trotsky, the Commissar of War, for ordering the regrouping of forces to support a drive on Lublin.[75]

The Development of Operational Art

Before Stalin, Budennyi, and Voroshilov were able to rewrite history to their own liking, a host of Soviet works in the 1920s addressed the Vistula Campaign in a critical and fruitful manner. Some of this was undoubtedly fueled by the usual postwar "battle of the memoirs." However, there was something more to the Soviet debates. Marshal Pilsudski caught the kernel of this difference when he observed that Tukhachevskii's published account of the campaign showed an "extraordinary penchant for the abstract" and noted that the underlying theme of the work was "an attempt at the solution of the problem of handling great masses on a large scale."[76] The Soviet military authors, including Tukhachevskii's defenders and critics, seem to have taken seriously Neznamov's assertion regarding the role of historical criticism in the development of military theory: "It would seem that nothing could be higher than combat experience in war itself, and yet historical experience shows that without the criticism of science, without the book, it, too, is of no use."[77]

The emphasis was on the development of military theory, and A. Verkhovskii, a *voenspets* and professor of tactics at the Military Academy, seems close to the truth when he describes the internal struggle among military intellectuals as a contest between right and left flanks for support. The former wanted to take the realities of World War I and the Civil War and codify them into military doctrine while the latter sought to envision a future "class war" which negated the more mundane concerns of the military art.[78] The debate and a very sharp, almost brutal criticism, which did not spare personal feelings, seem to have kept these two flanks in a dynamic balance,

creating the necessary conditions for the emergence of a distinctive Soviet operational art, which addressed the conduct of initial operations in a future war.

The emergence of operational art as a specific topic of study within the Red Army coincided with the end of the Civil War, the introduction of the New Economic Policy at home, and the recognition of a temporary restabilization of the capitalist system. The party's leadership and the military had to deal with the pressing problem of postwar demobilization and the creation of a military system which would provide for standing cadre forces and mobilization potential. By the mid-1920s and simultaneously with Lenin's death and Trotsky's removal from the post of Commissar of War, these reforms were enacted under the party's new collective leadership. Frunze was entrusted with the task of putting these measures into practice. For him, as for the party leadership, the nature of the threat confronting the Soviet state was quite clear. As opposed to Trotsky, who had told the Red Army's leadership that it should use the postwar period to master mundane matters of troop leadership and leave strategy to the party, Frunze had explicitly defined the threat posed by capitalist encirclement as one demanding constant vigilance and military preparations:

> *Between our proletarian state and the rest of the bourgeois world there can only be one condition—that of a long, persistent, desperate war to the death: a war which demands colossal tenacity, steadfastness, inflexibility, and a unity of will. . . . The state of open warfare may give way to some sort of contractual relationship which permits, up to a certain level, the peaceful coexistence of the warring sides. These contractual forms do not change the fundamental character of these relations. . . . The common, parallel existence of our proletarian Soviet state with the states of the bourgeois world for a protracted period is impossible.*[79]

This threat created a need to study future war (*budushchaia voina*), not as an abstract proposition but as a foreseeable contingency. In the 1920s the study of past campaigns, current trends in weapons development, and force structure requirements coalesced around the concept of operational art (*operativnoe iskusstvo*).

Svechin, Frunze, and Tukhachevskii, the linchpins in this development, promoted the development of Military Scientific Societies and identified a group of talented officers, some of whom were destined to become the first Red *genshtabisty*. Many of these officers entered the newly renamed Military Academy during Tukhachevskii's short tenure as its Commandant in 1921–22. Others came later, when Frunze took over as Commissar of War. Two of the Red *genshtabisty* were N. E. Varfolomeev and V. K. Triandafillov. For the first few years of the Academy, the problem of how to conceptualize warfare remained unresolved. Its academic program reflected the conventional divisions of strategy and tactics, but new terms were being used to describe the more complex combat of World War I and the Civil War. "Grand tactics" and "lower strategy" were employed but without rigor or definition. Only in 1923–24 did Svechin tackle the problem by proposing an intermediary category, which he called operational art. This he defined as the "totality of

maneuvers and battles in a given part of a theater of military action directed toward the achievement of the common goal, set as final in the given period of the campaign."[80] These lectures served as the basis for Svechin's *Strategiia* which appeared in 1926. Here Svechin for the first time wrote about the nature of "operational art" and its relationship to strategy and tactics.[81] As Svechin formulated this relation:

> *Then, battle is the means of the operation. Tactics are the material of operational art. The operation is the means of strategy, and operational art is the material of strategy.*

This is the essence of the three-part formula given above.[82]

Svechin's own work then turned toward the study of the problem of national preparation for war. Here he emphasized the need to address the political and economic preparation of the nation for war. His formulation of two competing strategic postures, i.e., annihilation (*sokrushenie*) and attrition (*izmor*), raised a host of issues regarding the relationship between operational art and the paradigm of future war. Drawing upon the work of Delbrück, Svechin was critical of the German General Staff's one-sided emphasis upon the conduct of decisive operations in the initial period of war.[83] Svechin saw the seeds of disaster in such short-war illusions. He stressed the need to prepare for a long war, given the geo-strategic and political situation confronting the USSR. Here Svechin emphasized political and economic objectives for strategy at the expense of the enemy's armed forces as the center of gravity.

This focus led Svechin and others into a consideration of the problem of the relationship between the civilian and military leadership in the conduct of war and preparation for war. Svechin argued that one of the legacies of Russia's heritage of frontier warfare was the tendency of military commanders to turn their own rear areas into satrapies, where immediate supply requirements of *front* commands took precedence over a rational mobilization of the entire state economy. He criticized such a narrow perception of military logistics and emphasized the need for a unification of *front* and rear through the planned mobilization of the entire "state rear" by which he meant the national economy to the purposes of supporting *front* operations.[84] Using Conrad von Hötzendorff's memoirs as a vehicle to explore the role of the general staff in modern war and preparations for war, the *voenspets-genshtabist* Boris Mikhailovich Shaposhnikov characterized that role as "the brain of the army."[85]

The problem of studying operational art was left to a newly established "chair" at the Military Academy, named "Conduct of the Operation." This chair, which was founded in 1924, immediately took on the problem of studying the conduct of operations during World War I and the Civil War. Special attention was devoted to the summer campaign of 1920 against Poland. Leadership of the new chair went to N. E. Varfolomeev, who had fought with the Western *Front* during the Vistula Operation and served as chief reporter on the large-scale maneuvers which Tukhachevskii conducted with that *front* in 1922.[86]

Following the Civil War Varfolomeev had turned his attention to the difficult problem of conducting deep pursuit so as to bring about the conditions for the destruction of the enemy. The focus of his attention was the advance on Warsaw and the failure of the Western *Front* to turn that operation into a decisive victory. Varfolomeev emphasized the need to organize a relentless pursuit by advance guards, the use of army cavalry to turn the enemy's flanks and to preclude the organization of a defense on a favorable line of terrain, the sustainment of close contact between the advance guard and main forces to allow for the timely commitment of fresh forces to the attack, and the maintenance of a viable logistical system in support of the advance. Varfolomeev still spoke in terms of pursuit to "the field of the decisive engagement," but his attention was focused on the utilization of reserves to maintain the pace of the pursuit without risking pauses in the advance, which would permit the enemy to recover.[87]

Varfolomeev's arrival at the Military Academy in 1924 coincided with Tukhachevskii's return to Moscow as Deputy Chief of Staff of the RKKA. Over the next three years, 1924–27, the chair addressed the problem of how to conduct operations of annihilation to bring about the total destruction of enemy forces in the field. Varfolomeev summed this up in two propositions. First, there was the need to combine breakthrough and deep pursuit so as to destroy the enemy forces throughout their entire depth. Under conditions of modern warfare this could not be achieved in a single operation but required successive, deep operations, "the zigzags of a whole series of operations successively developed one upon the other, logically connected, and linked together by the common final objective." Second, success in such successive, deep operations depended fundamentally on the "successful struggle against the consequences of the attendant operational exhaustion." Logistics, the unity of front and rear as an organizational problem, thus assumed critical importance as an aspect of operational art. In both teaching and research the faculty sought means of defining the operational norms which would set the parameters of such deep operations.[88]

Varfolomeev found the roots of the theory of deep, successive operations in Tukhachevskii's attempt to use the techniques of class war and civil war in an "external war" against a much better prepared adversary. He saw the failure of the Vistula Operation as rooted in Tukhachevskii's overly optimistic evaluation of the potential for "intensification of the revolution" within Poland by means of "a revolution from without" (*revoliutsiia izvne*) and the mounting exhaustion with the Red Army, brought on by attrition and the total disorganization of the rear services during the advance.[89] Prudent operational plans, which took into account the need to break through and penetrate the enemy's defenses throughout their depth, sobered revolutionary elan. In the 1930s he turned his attention to the employment of shock armies in the offensive and the problem of overcoming enemy operational reserves as they joined the engagement. In these studies he focused upon the German and Allied offensives of 1918, especially the Anglo-French offensive at Amien in August 1918. The Amien Operation was noteworthy for both the achievement of surprise and the mass employment of armor and aviation to achieve a breakthrough.[90]

The logistical parameters of such deep, successive operations to a great extent depended upon the visions of the Soviet Union as a political economy and the nature of the external threat. In the hands of Svechin and those like him who emphasized the need to prepare for a long war, the maintenance of the workers' and peasants' alliance became the central reality of the Soviet Union's domestic mobilization base. Such a view assumed that Lenin's New Economic Policy with its emphasis upon agriculture's recovery would be the long-term policy of the USSR. Such authors could not ignore postwar developments in military technology, but they concluded that Europe was, in fact, divided into two parts, two military-technical systems. The West was industrial, and the potential for a mechanization of warfare was there to be seen. Eastern Europe, which included the USSR, was dominated by a peasant economy and a "peasant rear" (*krest'ianskii tyl*).[91]

One of the most important advocates of an operational art adapted to the realities of a future war fought on the basis of a peasant rear was V. K. Triandafillov. Triandafillov had served in the Tsarist Army during World War I, took an active part in the revolutionary politics within the army in 1917, and joined the Red Army in 1918, where he commanded a battalion, regiment and brigade. He fought on the Ural *Front* against Dutov and on the South and Southwest *Fronts* against Denikin and Wrangel. Joining the party in 1919, he was a natural choice for education as a Red *genshtabist* posted to the Academy in the same year. During his four years with the Academy he divided his time between theory and praxis. As a brigade commander with the 51st Rifle Division, one of the best in the Red Army, he took an active part in Frunze's successful offensive at Perekop Isthmus against Wrangel. At the same time, Triandafillov began writing military analyses of operations from the Civil War as his part in the activities of the Academy's Military Scientific Society. These included essays on the Southern *Front*'s offensive against Denikin and the Perekop Offensive against Wrangel.[92] He also took part in the suppression of the Tambov Insurrection in 1921, where he served under Tukhachevskii. Following his graduation from the Military Academy in 1923, Frunze chose his former subordinate to join the Main Staff of the RKKA, where he took over as Chief of the Operations Section in 1924. From there he moved on to command a rifle corps and then returned to Moscow as Deputy Chief of Staff for RKKA in 1928.

Charged with putting operational art into practice, Triandafillov authored what became the chief work on the nature of the operations of modern armies. The work laid out in detail the military context of the theory of successive, deep operations. Triandafillov called attention to the process of technological development which was making possible the "machinization" of warfare, but noted its limited impact upon the economically backward regions of Eastern Europe with their peasant rear. New automatic weapons, armor, aviation, and gas would affect such a war but would not become decisive. He also treated the problem of manpower mobilization and the reality of mass war quickly becoming a war of conscripts and reservists. This brought him to the problem of addressing the means of achieving breakthrough and sustaining pursuit in successive deep operations. Here he drew upon Frunze's use of shock armies for the breakthrough and the use of echeloned forces to facilitate exploitation

and pursuit. Much of the success in such operations turned upon two related problems: the organization of an effective command and control system to coordinate the operations of several *fronts* and the establishment of realistic logistical norms in keeping with the geographic-economic realities of the theater of military action.[93]

As Deputy Chief of Staff to the RKKA, Triandafillov's views reflected some basic assumptions regarding the sort of war the Red Army would fight in the future. The Field Regulations of 1929 in their treatment of the offensive touched on many of the same themes developed by Triandafillov in greater depth.[94] While the new regulations did provide for successive, deep operations based upon a combined-arms offensive, the armies described by Triandafillov and the regulations were modernized versions of the Red Army from the Civil War. This vision was in keeping with what Svechin had described as the political-military context of Soviet strategy.

The Mechanization of Deep Operations

Triandafillov died in an airplane crash in 1931 before he had a chance to complete a new and revised edition of his book. The outline for this revision, which was published in the posthumous editions of his book, does contain some clues as to the major changes which he envisioned. First, in keeping with the new party line on the external threat, Triandafillov addressed both the crisis of capitalism and the increased risk of direct attack upon the USSR by one or more major capitalist powers. Second, Triandafillov began to address the problem of employing massed armor in the offensive. The first Five-Year Plan had promised to industrialize the USSR, and now it was possible to put the USSR within the ranks of the modern Western European states and the United States. Third, Triandafillov specifically turned his attention to the problem of mechanized combined-arms in the conduct of deep operations. The outline is at best a sketch without details. Soviet officers have been willing to say that these few remarks anticipate the mechanization of successive deep operations as presented in the 1936 Field Regulations.[95]

There were other advocates of operational art who argued that technological developments and the nature of the external threat made it absolutely essential to carry out a total mechanization of the Red Army and Soviet rear. One of the leading proponents of such views was M. V. Tukhachevskii, who was Triandafillov's immediate boss as Chief of the RKKA Staff from 1925 to 1928. Tukhachevskii argued that what was required to make the new operational art into a sound strategic posture was nothing less than "complete militarization" of the national economy to provide the new instruments of mechanized warfare. Committed to an operational art which would end in the total destruction of the enemy, Tukhachevskii crossed pens with Svechin, whom he accused of being an advocate of attrition.[96] According to G. S. Isserson, one of his closest collaborators in the 1930s, Tukhachevskii came forward with a master plan for the mechanization of the Red Army in December 1927, only to have it turned down by

the party leadership under Stalin.[97] In 1930, Tukhachevskii's views won favor, when Stalin broke with Bukharin's thesis on the stabilization of capitalism and began to associate the Depression with a rising threat of war to the Soviet Union. The party leadership openly used this threat to justify the brutal processes of industrialization and forced collectivization by now linking them with an improvement in the level of national defense.

During the intervening two years Tukhachevskii had left the RKKA Staff to take over as the Commander of the Leningrad Military District, where he conducted a number of experiments relating to mechanization. These experiments came at a time when motorization versus mechanization emerged in Western Europe as alternative solutions to the problem of integrating the internal combustion engine into the armed forces. The former implied grafting automobile transport on to existing combat arms, while the latter called for the creation of "self-propelled combat means" with an emphasis upon armor, especially tanks, armor cars, and self-propelled artillery. Soviet officers who followed developments in France, England, and the United States noted that all armies were exploring both paths but that, owing to strategic, operational, tactical, political, and financial circumstances, the French Army was more sympathetic toward motorization and the British toward mechanization.[98] Tukhachevskii, in his comments on the training exercises of the troops of the Leningrad Military District, emphasized the need to increase their mobility as a combined-arms force, which could engage in a multiechelоned offensive. His interest in the development of tank, aviation, and airborne forces during this period marked him as an advocate of mechanization.[99]

At the XVI Party Congress and IX Congress of the *Komsomol* in 1930–31, K. E. Voroshilov, the Commissar of War and Stalin's closest collaborator, spoke out regarding the mechanization of warfare as bringing about a qualitative change in the nature of future wars. But in Voroshilov's case, mechanization would in the future bring about the possibility of a short, bloodless war, carried quickly to the territory of the attacking enemy.[100] Such views emerged at a time when it appeared that world capitalism had gone back into a profound political-economic crisis which was creating greater instability and increased risks of war. This, in turn, was creating the basis for the formation of a broad anti-Soviet alliance, which threatened war on every frontier. At home the strains of the first Five-Year Plan were also underscoring the possibilities of an alliance between the external threat and the so-called internal enemy, i.e., the forces of counterrevolution.

In 1930 Tukhachevskii came forward with his own powerful arguments for a mass, mechanized army as the means to execute the new operational art. He used a number of forms to present this argument. One was the foreword to the Russian translation of Hans Delbrück's *Geschichte der Kriegskunst im Rahmen der politischen Geschichte*, which provided a forum in which to attack Svechin's concept of attrition as the appropriate strategy for the USSR.[101] This work was conspicuous for the tenor of the political-ideological assault mounted by Tukhachevskii against the old *genshtabist*. In a time of heightened suspicions toward all specialists as wreckers, Tukhachevskii called his colleague an idealist in Marxist dress.

Worse attacks followed within the confines of the Section for the Study of the Problems of War in the Communist Academy, organized in 1929 as part of an effort to infuse Marxism-Leninism into military science. Within the Section, as within the Academy, the notion of a struggle between an old, bourgeois past and a young, dynamic Communist future was given free reign. There, Tukhachevskii, armed with the appropriate citations from Stalin and Voroshilov, attacked Professors Svechin and Verkhovskii because their writings were infested with bourgeois ideology. In Svechin's case the fault was that he did not believe in the possibility of decisive operations but defended the idea of limited war. Verkhovskii was charged with favoring a professional army at the expense of mass. Tukhachevskii spoke positively of Triandafillov's book, but noted some shortcomings.[102] His line of criticism fit that offered in a review of Triandafillov's book, published in the spring of 1930, in which the reviewer took the author to task for talking of a peasant rear without noting the possibility of transforming that rear through industrialization. That industrialization, the reviewer pointed out, would make it possible to speed up the massing of forces and their maneuver, creating opportunities for decisive operations, if the political, i.e., revolutionary, possibilities were exploited.[103] As we have noted above, Triandafillov was himself responding to this new situation when he died in 1931.

That same year Tukhachevskii became Deputy Commissar of Military and Naval Affairs, a member of the *Revvoensovet*, and Director of Armaments for the RKKA. Over the next six years he directed the mechanization of the Red Army, laying the foundations for the creation of mass, mechanized force designed to conduct successive, deep operations in a war of annihilation. The Stalinist industrialization did make the USSR into a major industrial power with the capacity to mechanize its armed forces to an extent undreamed of by Triandafillov. During that same period the nature of the military threat confronting the USSR became more complex and serious. To his credit, Tukhachevskii never fell into the trap of assuming that mechanization would negate mass war. He was an informed critic of "*Blitzkrieg* theory," and his criticism of the works of Fuller, Liddell Hart, and others deserves serious attention. It contains a good clue about the emerging Soviet way of war. In 1931 he wrote regarding the professional mechanized army:

> *Let's imagine a war between Great Britain and the USA, a war, for example, which breaks out along the Canadian border. Both armies are mechanized, but the English have, let's say, Fuller's cadres of 18 divisions, and the U.S. Army has 180 divisions. The first has 5,000 tanks and 3,000 aircraft, but the second has 50,000 tanks and 30,000 planes. The small English Army would be simply crushed. Is it not already clear that talk about small, but mobile, mechanized armies in major wars is a cock-and-bull story? Only frivolous people can take them seriously.*[104]

Thus, Tukhachevskii's military theory, building upon the work of the Tsarist general staff and the combat experience of four industrial wars (Russo-Turkish, Russo-Japanese, World War I, and the Civil War), focused on the mechanization of the mass army as the means to conduct decisive operations in a total war. The *Vremennyi polevoi ustav RKKA 1936* with its

emphasis upon the "decisive offensive on the main axis, completed by relentless pursuit" as the only means to bring about the total destruction of the enemy's men and equipment, underscored Tukhachevskii's twin themes of combined-arms and mechanized forces. Tanks were to be used in mass, and mechanized formations, composed of tank, motorized infantry, and self-propelled guns were expected to strike deep into the enemy's rear, using their mobility to outflank and encircle enemy forces. Aviation formations, apart from independent air operations, were expected to act in close operational-tactical cooperation with combined-arms formations. At the same time, airborne units were to be used to disorganize enemy command and control and rear services.[105]

In one of his last publications Tukhachevskii warned that the Red Army should not confuse mastery of theory with command of practice. Discussing the basic questions of combat covered in the new Field Regulations, he warned against the tendency to transform a healthy doctrine into a sterile dogma and noted that technological changes were qualitatively reshaping the combined-arms concept. The new content of mechanized combined-arms operations set the 1936 regulations apart from those of 1929. The employment of mechanized forces, constructed around "long-range tanks, mounted infantry, artillery, aviation and airborne forces" made it possible to win the "battle for the flanks" through the application of maneuver. Rapid mobility was the only means to exploit the temporary appearance of an open flank in the enemy's battle order. "Therefore the struggle for the flanks demands rapid actions, surprise, lightning blows."[106]

Tukhachevskii appreciated the threat which the *Wehrmacht* posed to the Soviet Union and warned of the dangers of *Blitzkrieg* and surprise attack by its Panzers and the *Luftwaffe*.[107] The purge of the military and the experience of combat in the Spanish Civil War called the theory of deep, successive operations into question on both political-ideological and military-operational grounds. The organic development of operational art stopped for almost three years. One might well wonder how much that hiatus affected the covering force engagements at the start of Operation Barbarossa in the Belorussian and Ukrainian theaters of military operations, when the *Wehrmacht* won Tukhachevskii's "struggle for the flanks."[108]

During the succeeding operations attrition imposed major changes in both sides' force postures, especially their mechanized forces. The autumn fighting on the approaches to Moscow resembled more the conditions described in Triandafillov's "peasant rear" than they did Tukhachevskii's. Indeed, Soviet operational art during the winter counteroffensive before Moscow which relied so heavily upon infantry and cavalry, in the absence of tanks, motorized infantry, and aviation, fit Triandafillov's early model of successive operations. Later Soviet offensives did try to put into practice the principles of operational art outlined in the 1936 Field Regulations, which bore Tukhachevskii's imprint. Gradually, through a process of trial and error, Soviet commanders achieved the skills necessary to handle the massive, mechanized forces that the Marshal had championed.

None of the architects survived to witness those events. Triandafillov died in an airplane crash in 1931. Tukhachevskii, along with much of the

Soviet military elite, died at the hands of Stalin's terror, labeled a "traitor and enemy of the people." Svechin, who was hounded in the early 1930s as a class enemy, outlasted his critic by less than a year, dying in 1938. Varfolomeev was arrested by the NKVD and imprisoned; he died in 1941. What followed was a time when the Red Army had a theory, whose authors it could not acknowledge, and a mythical past which precluded the sort of criticism necessary for the perfection of theory.

The shock of real war in Manchuria, Poland, Finland, and France cracked the myth, allowing needed reforms prior to the German invasion. These measures were too little in practical accomplishments, too late in initiation, and too radical in scale either to undo the damage of the purges or to offset German advantages in command and control and operational surprise. Painfully the young commanders of the Red Army gained the talents necessary to put into practice the deep, successive operations for which their field regulations called. Gradually Soviet society forged the new weapons necessary to conduct such operations. Step by step the Red Army adjusted its force structure to provide the combined-arms armies, tank armies, air armies, and tank and mechanized corps to mount such operations. In the final phase of the war Soviet operations achieved what prewar theory had promised.[109] Only after Stalin's death could historians begin to study the roots of these successes during this dynamic and tragic period in Russian and Soviet military history and thus grasp the significance of operational art.[110]

Notes

1. Gen. A. Heroys [B. V. Gerua] and Leon Thevenin, *L'Armeé Rouge et la Guerre Sociale* (Paris, 1931), pp 13–14. Gen. Gerua went into exile after the Bolshevik Revolution and used his family's original name before his ancestors had entered Russian service.

2. A. S. Bubnov, S. S. Kamenev, M. N. Tukhachevskii, and R. I. Eideman, eds, *Grazhdanskaia voina, 1918–1921: Operativno-strategicheskii ocherk boevykh deistvii Krasnoi armii* (Moscow, 1928–30), III, p 18.

3. Jacob W. Kipp, "Lenin and Clausewitz: The Militarization of Marxism," *Military Affairs* 4 (Oct 1985), pp 184–81.

4. Jack Snyder, *The Ideology of the Offensive: Military Decision Making and the Disasters of 1914* (Ithaca, N. Y., 1985), pp 125–56, 203–5.

5. R. D. Zehnder, "Habsburg Preparations for Armageddon: Conrad von Hötzendorff and the General Staff, 1906–1914" (Ph.D. diss., Kansas State Univ., 1987).

6. L. L. Farrar, Jr., *The Short-War Illusion: German Policy Strategy and Domestic Affairs, August-December 1914* (Ithaca, N. Y., 1985), pp 3–18. On the problem of Russia's slow pace of mobilization and the necessity of conducting immediate offensive operations against two major powers on separate fronts as it was understood by the Russian General Staff and High Command, see A. S. Suvorov, "Voennaia igra starshikh voiskovykh nachal'nikov v aprele 1914 goda," *Voenno-istoricheskii sbornik* I (1919), pp 9–29.

7. Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World War," in Stephen E. Miller, ed, *Military Strategy and the Origins of the First World War* (Princeton, 1985), pp 58–107.

8. I. I. Rostunov, *Russkii front pervoi mirovoi voiny* (Moscow, 1976), pp 60–67.

9. *Sovetskaia voennaia entsiklopediia* (Moscow, 1976–80), V, pp 179–80.

10. G. Leer, *Opyt kritiko-istoricheskago izsledovaniia zakonov iskusstva vedeniia voiny (polozhitel'naia strategiia)* (St. Petersburg, 1871), pp 154–202. For an excellent critique of Leer's strategic theory and worldview see: A. Svechin. ed, *Strategiia v trudakh voennykh klassikov* (Moscow, 1926), II, pp 272–75. Svechin praised Sigismund von Schlichting's work because, as opposed to Leer, the German officer began with Moltke's practice and sought to discover what made the Prussian's applied strategy different from that of Napoleon. To borrow from the work of Thomas Kuhn on scientific revolutions, Leer belonged to an era when the dominant paradigm of military art was beyond question. When, however, military praxis began to present anomalies, with which the dominant paradigm could not deal, Leer tended to exclude the anomalies, while Schlichting sought to make them the heart of a new paradigm. For Kuhn's views see Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 2d ed (Chicago, 1970), pp 43–76.

11. William C. Fuller, Jr., *Civil-Military Conflict in Imperial Russia, 1881–1914* (Princeton, 1985), pp 3–46; and Natituahu Nayzel, "Generals and Revolutionaries: The Russian General Staff during the Revolution. A Study in the Transformation of Military Elite," in *Studien zur Militärgeschichte, Militarwissenschaft und Konfliktforschung XIX* (Osnabrück, 1979), pp 38ff.

12. I. I. Rostunov, et al, *Russko-Turetskaia voina, 1877–1878* (Moscow, 1977), pp 54–59. The best work still on Miliutin's reforms of the War Ministry remains P. A. Zaionchkovskii, *Voennye reformy 1860–1870 godov v Rossii* (Moscow, 1951).

13. P. A. Zaionchkovskii, *Samoderzhavie i russkaia armiia na rubezhe XIX-XX stoletii* (Moscow, 1973), p 322. See also: A. Gerua, *Posle voiny. O nashei armii* (St. Petersburg, 1907), pp 30–32.

14. Svechin, *Strategiia*, pp 272–73.

15. A. N. Kuropatkin, *Deistviia otriadov generala Skobeleva v russko-turetskuiu voinu 1877–1878 godov* (St. Petersburg, 1885), II, pp 674–78.

16. A. Svechin, "Strategicheskii ocherk Russko-Iaponskoi voiny ot nachala kampanii do srazheniia pod Liaoianom vkliuchitel'no," *Voennyi sbornik* 4 (Apr 1907), pp 47–69.

17. *Voennaia entsiklopediia* (St. Petersburg, 1914), XIV, pp 474ff.

18. A. Neznamov, *Sovremennaia voina: Deistviia polevoi armii*, 2d ed (Moscow, 1912), pp 13–17.

19. Ibid, p vi.

20. A. Neznamov, *Konspekt lektsii podpolkovnika Neznamova (26-go marta 1909 g.): Trebovaniia, kotoryia pred'iavliaet sovremennyi boi k podgotovke nachal'nikov i mass* (St. Petersburg, 1909), pp 21–37.

21. B. M. Shaposhnikov, *Vospominaniia Voenno-nauchnye trudy* (Moscow, 1974), p 144.

22. A. A. Svechin, "Evoliutsiia strategicheskikh teorii," in B. Gorev, ed, *Voina i voennoe iskusstvo v svete istoricheskogo materializma* (Moscow, 1927), pp 88–100.

23. P. A. Zhilin, *Problemy voennoi istorii* (Moscow, 1975), pp 135–40. Gen. Zaionchkovskii, himself an honored professor at the General Staff Academy, argued that the Young Turks within the Academy of the General Staff proved better critics than builders. See: A. M. Zaionchkovskii, *Mirovaia voina 1914–1918 gg.: Obshchii strategicheskii ocherk* (Moscow, 1924), pp 22–23.

24. B. V. Gerua, *Vospominaniia o moei zhizni* (Paris, 1969), I, pp 250–61.

25. Shaposhnikov, *Vospominaniia*, pp 164–65.

26. Zhilin, *Problemy voennoi teorii*, pp 140–41.

27. N. P. Mikhnevich, *Strategiia*, 3d ed (St. Petersburg, 1911), pp 106–7.

28. Rostunov, *Russkii front pervoi mirovoi voiny*, pp 93-95; A. M. Zaionchkovskii, *Mirovaia voina 1914–1918 gg.*, pp 50–53; and A. M. Zaionchkovskii, *Podgotovka Rossii k mirovoi voine* (Moscow, 1926), pp 141–54. On the attitude of Russian military reformers toward initial offensive operations see: A. Svechin, "Bol'shaia voennaia programma," *Russkaia mysl'*, god 34, kn. 8 (Aug 1913), pp 19–29. Svechin argued that the implications of the Russian rearmament program were connected with France's increasing vulnerability. Thus, while Svechin noted the need for Russia to mount and conclude decisive operations within two months of the outbreak of hostilities, he linked this to a shift by the French from an immediate offensive to the strategic defense. His rationale was that "the Russian front had for Germany become the most important theater of operations. And first-class theater of operations refers to the Russian preparations for war which are on a completely unique scale" (p 23).

29. A. M. Zaionchkovskii, *Mirovaia voina 1914–1918 gg.*, pp 51–52.

30. V. A. Sukhomlinov, *Erinnerungen* (Berlin, 1924). Sukhomlinov mentions Gen. Leer on five occasions, but most of these concern his own education. He never mentions Mikhnevich, Neznamov, Maslovskii, Baiov, or Svechin. Bonch-Bruevich, his supposed informer on Academy affairs, is mentioned once in connection with Sukhomlinov's service as Chief of Staff of the Kiev Military District.

31. Ibid, p 23.

32. L. Radus-Zenkovich, "Nekotorye vyvody iz srazheniia pri Gumbinene v avguste 1914 g. (Vstrechnyi boi)," *Voenno-istoricheskii sbornik* III (1919), pp 74–95.

33. A. A. Bogdanov, *Vseobshchaia organizatsionnaia nauk (tektologiia)* (Moscow, 1913), I, pp 185–255. Bogdanov, an early Bolshevik and renaissance man who could claim significant contributions in the fields of medicine, politics, philosophy, economics, literature, and literary criticism, quarrelled with Lenin in 1909 but kept close ties to the Bolsheviks through his marriage ties with Lunacharskii. After the revolution he was one of the founders of *Proletkul't* movement in the arts and literature and the Socialist Academy in Moscow, lecturing frequently at the Proletarian University there. One of the prerevolutionary novels, one of two science fiction works he authored, was called *Krasnaia zvezda* (Red Star). The science of control of the scientific organization of labor as it became known in the 1920s embraced control in the following terms: "To manage, that means to foresee, to organize, to command, to coordinate, to control. To foresee, means to study the future and select a program of action; to organize means to create the dual organism of the enterprise, the material and the social. To command, means to set to functioning the personnel. To coordinate, means to check that all goes according to the established rules and orders." See I. I. Gludin, "NOT: Voprosy organizatsii i upravleniia," *Revoliutsiia i voina* 23 (1923), p 20.

34. Jacob W. Kipp, "Lenin and Clausewitz," pp 184–91.

35. Gerua, *Vospominaniia*, pp 273–75.

36. S. A. Fediukin, *Sovetskaia vlast' i burzhuaznye spetsialisty* (Moscow, 1965), pp 71–72.

37. I. A. Korotkov, *Istoriia sovetskoi voennoi mysli* (Moscow, 1980), pp 27–28. Izmest'ev's study, "Znachenie rascheta pri razrabotke i vedenii voennykh operatsii," was serialized in *Voennyi sbornik* from March 1915 to June 1916. Basing his study upon an historical analysis of military operations and the writings of Clausewitz, Schlichting and Jomini, Izmest'ev concluded his study with a plea for the need to see the working out and conduct of military

operations as one of the most complex and demanding of human activities. Modern war would not tolerate an "eyeball estimate" (*glazomer*) of the situation. Only the mind (*um*) could deal with the complexity of modern operations. In a critique of Europe's war planners before 1914, Izmest'ev noted the tendency to suppose that the war plan and the plan of initial operations were the end of the estimate process. This estimate process began with the war plan, moved to the campaign plan, which he defined as the preparation and execution of the plan of war in a given theater of military action but also included the plans of individual operations which could not be worked out in advance in such detail. Izmest'ev firmly believed that the estimates upon which the war plan was based should, for the most part, be "a mathematically, absolutely exact estimate." Such calculations should carry over to the first operations of the initial phase of the war. After that the commander and his staff would have to engage in their calculations based upon their assessment of the mission, theater, enemy, one's own forces, and time. He wrote: "Only an amateur (*profan*) can think that the entire campaign will unfold according to the prearranged plan without a deviation and that the original plan could be maintained up to the end in all its features. Of course, the military commander never lets his main objective pass from view and is not distracted by accidents or changes in events; and he can predetermine beforehand with confidence the path by which to achieve this goal." *Voennyi sbornik* 4 (Apr 1916), pp 29–30.

38. A. A. Brusilov, *Moi vospominaniia* (Moscow, 1983), pp 122ff.

39. Ibid, pp 174–217; and A. Bazarskii, *Nastupatel'naia operatsiia 9-i russkoi armii v iiune 1916 goda* (Moscow, 1939), pp 9ff.

40. Fediukhin, *Sovetskaia vlast'*, p 77.

41. L. D. Trotskii, *Sochineniia* (Moscow, 1925), XVII, pt 1, p 316.

42. V. G. Kulikov, ed, *Akademiia general'nogo shtaba: Istoriia voennoi ordenov Lenina i Suvorova i stepeni Akademii General'nogo Shtaba Vooruzhennykh Sil SSSR imeni K. E. Voroshilova* (Moscow, 1976), pp 6–21; Korotkov, *Istoriia sovetskoi voennoi mysli*, pp 28–31; and S. A. Tiushkevich, et al, *Sovetskie vooruzhennye sily: Istoriia stroitel'stva* (Moscow, 1978), pp 38–39.

43. S. I. Gusev, *Grazhdanskaia voina i Krasnaia armiia* (Moscow, 1952), pp 55–56.

44. M. N. Tukhachevskii, *Izbrannye proizvedeniia* (Moscow, 1964), I, pp 27–29.

45. V. Triandafillov, "Vzaimodeistvie mezhdu zapadnym i iugo-zapadnym frontami vo vremia letnego nastupleniia Krasnoi armii na Vislu v 1920 g.," *Voina i revoliutsiia* 2 (1925), pp 23–24.

46. Gusev, *Grazhdanskaia voina*, p 113.

47. M. I. Vladimirov, et al, *M. V. Frunze: Voennaia i politicheskaia deiatel'nost'* (Moscow, 1984), pp 58–60.

48. A. Neznamov, "Prepodavanie taktiki," *Voennoe znanie* 15, pp 4–5.

49. A. Verkhovskii, "Evoliutsiia prepodavaniia taktiki v 1918–1920 gg.," *Voina i revoliutsiia* 11 (1928), pp 52–56.

50. A. Neznamov, "Prepodavanie taktiki," *Voennoe znanie* 15 (1921), pp 4–5.

51. M. Frunze, "Edinaia voennaia doktrina i Krasnaia armiia," *Voennaia nauka i revoliutsiia* 2 (1921), pp 33–39.

52. L. Trotskii, "Voennaia doktrina ili mnimo-voennoe doktrinerstvo," *Voennaia nauka i revoliutsiia* 2 (1921), pp 204–213. Later in 1921, when speaking before Military-Scientific Society of the Military Academy, Trotsky tried to occupy a middle ground between the *voenspetsy* and the young Red Commanders associated with Frunze, Gusev, and Tukhachevskii. He warned that a unified military doctrine carried the seeds of mysticism and metaphysics. See L. Trotskii, *Kak vooruzhalas' revoliutsiia (na voennom dele)* (Moscow, 1925), III, kn. 2, pp 201–209.

53. A. S. Bubnov, *O Krasnoi armii* (Moscow, 1968), p 216.

54. D. A. Kovalenko, *Oboronnaia promyshlennost' Sovetskoi Rossii v 1918–1920 gg.* (Moscow, 1970).

55. M. Tukhachevskii, "Pokhod za Vislu," *Izbrannye proizvedeniia*, I, pp 126–27.

56. R. Tsiffer, "Zametki o voine v malokul'turnykh teatrakh i metode ee izucheniia," *Voina i revoliutsiia* 11 (1928), pp 132–40.

57. Lev Nikulin, *Tukhachevskii: Biograficheskii ocherk* (Moscow, 1963), p 161.

58. Tukhachevskii, "Pokhod za Vislu," pp 142–43.

59. M. Tukhachevskii, "Revoliutsiia izvne," *Revoliutsiia i voina* 3 (1920), pp 45–54.

60. "Konnitsa v grazhdanskoi voine," *Revoliutsiia i voina* 6–7 (1921), p 36.

61. A. I. Soshnikov, et al, *Sovetskaia kavaleriia: Voenno-istoricheskii ocherk* (Moscow, 1984), pp 3–24.

62. M. Ryshman, *Reid Mamontova, avgusta-sentiabria 1919 g.* (Moscow, 1926), pp 16–29.

63. Ibid, pp 30–43.

64. K. Monigetti, *Sovmestnye deistviia konnitsy i vozdushnogo flota* (Moscow, 1928), pp 92–93.

65. Soshnikov, *Sovetskaia kavaleriia*, pp 62–63.

66. G. D. Gai, "Nedostatki v organizatsii krasnoi konnitsy," *Revoliutsiia i voina* 6–7 (1921), pp 49–68.

67. Isaac Babel, *Konarmiia* in *Izbrannye proizvedeniia* (Moscow, 1966), pp 27–58.

68. Zotov, "Boi 1-oi konnoi armii v raione Rovno v iiune 1920 g.," *Voina i revoliutsiia* 2 (1929), pp 102–3; and U.S. Army, Attache Reports (Poland), No. 1095, "Operations of Budenny's Cavalry," (Dec 9, 1920), pp 1–4.

69. Zotov, "Boi 1-oi konnoi armii," pp 104–118. Other operations by strategic cavalry might also be cited regarding their role in Soviet offensive operations. In the final campaign against Baron Wrangel, Frunze used the 2d Cavalry Army to blunt a raid by White cavalry across the Dnieper, then employed the newly arrived 1st Cavalry Army to try and encircle Wrangel's force north of Crimea, and when that failed assigned the 2d Cavalry Army to carry out the pursuit of Wrangel's forces after the breakthrough to the Crimea during the Perekop-Chongarskaia operation. In this breakthrough operation Frunze employed an echeloned attack by his 6th Army against the Litovskii Peninsula, ordered partisans to strike at the enemy's rear to disrupt his communications, and employed F. K. Mironov's 2d Cavalry Army in a meeting engagement to counter Wrangel's last reserves, elements of Gen. Barbovich's corps. When Barbovich's troops saw the mass of horses drawn up to their north, the White general sent his own cavalry to meet the threat. However, as the two sides closed to within 900 yards of each other, Mironov's cavalry broke ranks to the right and left to reveal 250 *tachanki*, mounting machineguns. Before the White cavalry could break off its charge a rain of lead cut into its ranks. The utter disorder in the enemy force allowed elements of the 2d Cavalry Army and the 51st Division to mount a sustained attack which broke Barbovich's corps and sealed the fate of Wrangel's army. See M. I. Vladimirov, et al, *M. V. Frunze: Voennaia i politicheskaia deiatel'nost'* (Moscow, 1984), pp 137–47; and V. V. Dushen'kin, *Vtoraia konnaia: Voenno-istoricheskii ocherk* (Moscow, 1968), pp 189–206.

70. Josef Pilsudski, *Year 1920* (London, 1972), p 83.

71. Nikulin, *Tukhachevskii*, pp 119–22.

72. Tukhachevskii, "Pokhod za Vislu," pp 134–52; and Pilsudski, *Year 1920*, pp 85–150.

73. Pilsudski, *Year 1920*, pp 151–208.

74. V. Triandafillov, "Vziamodeistvie mezhdu zapadnym i iugozapadnym frontami vo vremia letnego nastupleniia Krasnoi armii na Vislu v 1920 g.," *Voina i revoliutsiia* 2 (1925), pp 26–27.

75. The extent of Soviet military studies on the Vistula Operation of 1920 becomes clear when we examine a bibliography on the Soviet-Polish War prepared by the Military Section of the Communist Academy in 1930 to note the tenth anniversary of the campaign. That bibliography listed 257 titles, most of them Soviet books and articles on the Vistula Operation. See "Bibliograficheskii ukazatel' literatury po sovetsko-pol'skoi voine 1920 g.," in *Zapiski.* Kommunisticheskaia akademiia. Sektsiia po izucheniiu problem voiny. (1930), pp 219–31. The Stalinist version of events is summed up in I. Apanasenko's essay on the *Konarmiia*, written to mark the twentieth anniversary of its founding. Here the Red Cavalry, led by Budennyi and Voroshilov, "fulfilled the strategic plan of the Great Stalin." The seizure of Lvov "would have been the single and best possible way to help Western *Front.*" But Trotsky, "the enemy of the people," changed the axis of advance on August 1 and betrayed the cause to Poland and the entente. See: I. Apanasenko, "Pervaia konnaia," *Voenno-istoricheskii zhurnal* 4 (Nov 1939), pp 35–42.

76. Pilsudski, *Year 1920*, pp 85–86.

77. Neznamov, *Trebovaniia*, p 27.

78. Verkhovskii, "Evoliutsiia prepodavaniia taktiki v 1918–1928 gg.," *Voina i revoliutsiia* 11 (1928), pp 56–64.

79. M. Frunze, "Edinaia voennaia doktrina i Krasnaia armiia," *Voennaia nauka i revoliutsiia* 2 (1921), p 39.

80. N. Varfolomeev, "Strategiia v akademicheskoi postanovke," *Voina i revoliutsiia* 11

(1928), pp 83–84.

81. A. Svechin, *Strategiia*, 2d ed (Moscow, 1927), pp 14ff.

82. N. Varfolomeev, "Strategiia v akademicheskoi postanovke," *Voina i revoliutsiia* 11 (1928), p 84.

83. Svechin, *Strategiia*, pp 6–26.

84. A. Svechin, "Gosudarstvennyi i frontovoi tyl," *Voina i revoliutsiia* 11 (1930), pp 94–108.

85. B. M. Shaposhnikov, *Mozg armii* (Moscow, 1927–1929), I, pp 112ff.

86. N. Varfolomeev, "Manevry na zapfronte," *Revoliutsiia i voina* 19 (1923), pp 5–26, and 20 (1923), pp 77–104. On the influence of Frunze and Tukhachevskii upon the Academy see A. I. Radzievskii, ed, *Akademiia imeni M. V. Frunze: Istoriia voennoi ordena Lenina Krasnoznamennoi ordena Suvorova akademii* (Moscow, 1972), pp 71–77.

87. N. Varfolomeev, "Dvizhenie presleduiushchei armii k poliu reshitel'nogo srazheniia," *Revoliutsiia i voina* 13 (1921), pp 69–96.

88. N. Varfolomeev, "Strategiia v akademicheskoi postanovke," *Voina i revoliutsiia* 11 (1928), pp 87–88.

89. N. Varfolomeev, "Strategicheskoi narastanie i istoshchenie v grazhdanskoi voine," in A. S. Bubnov, et al, eds, *Grazhdanskaia voina 1918–1921: Voennoe iskusstvo Krasnoi armii* (Moscow, 1928), pp 260–81. What Varfolomeev called "strategic intensification," Tukhachevskii had termed "intensification of the revolution" (narostanie [sic] revoliutsii). See Tukhachevskii, "Revoliutsiia izvne," pp 47–54.

90. N. E. Varfolomeev, *Udarnaia armiia* (Moscow, 1933), pp 169–89; and *Nastupatel'naia operatsiia (po opytu Am'enskogo srazheniia 8 avgusta 1918 g.)* (Moscow, 1937), pp 169–76.

91. V. K. Triandafillov, "Vozmozhnaia chislennost' budushchikh armii," *Voina i revoliutsiia* 3 (1927), pp 14–43. Triandafillov's assumptions about the prospect of war were those of the Party's right, the advocates of the continuation of the NEP. He even cited Bukharin on the stabilization of the world capitalist economy (p 17).

92. V. Triandafillov, *Kharakter operatsii sovremennykh armii*, 3d ed (Moscow, 1936), pp 7–9, 255. Triandafillov's study of the Perekop Operation was later reworked and published as part of the three-volume history of the Civil War. This essay is noteworthy for its attention to the problem of combined-arms, especially the coordination of infantry and artillery in the attack, and the analysis of the role of the higher density of machineguns in this breakthrough operation. See N. Triandafillov, "Perekopskaia operatsiia Krasnoi armii (takticheskii etiud)," in Bubnov, et al, *Grazhdanskaia voina 1918–1921: Boevaia zhizn' Krasnoi armii*, I, pp 339–57.

93. V. Triandafillov, *Kharakter operatsii sovremennykh armii*, 1st ed (Moscow, 1929), pp 1ff.

94. *Field Regulations of the Red Army 1929* (Washington, 1985), pp 63–93. The tie between future war (*budushchaia voina*) and operational art (*operativnoe iskusstvo*) was made by I. Ivanov in a bibliography he published in 1934. There the posthumous second (1933) edition of Triandafillov's book was listed as the basic work in four out of twelve major categories, i.e., contemporary operational means, the conduct of operations, meeting operations, and offensive operations. Under the subtopics listed for conduct of operations, *Kharakter operatsii sovremennykh armii* was listed as the basic work for studying general questions, control of operations, and transport and rear. See I. Ivanov, "Voennotekhnicheskaia literatura po voprosam kharaktera budushchei voiny i operativnogo iskusstva," *Voina i revoliutsiia* 2 (Mar-Apr 1934), pp 13–30.

95. V. Triandafillov, *Kharakter operatsii sovremennykh armii*, 3d ed (Moscow, 1937), pp 235–54.

96. M. N. Tukhachevskii, "K voprosu o sovremennoi strategii," in *Voina i voennoe isskustvo v svete istoricheskogo materializma* (Moscow, 1927), pp 127–33.

97. G. Isserson, "Zapiski sovremennika o M. N. Tukhachevskom," *Voenno-istoricheskii zhurnal* 4 (Apr 1964), pp 65–67.

98. "Motorizatsiia i mekhanizatsiia inostrannykh armii (k nachalu 1929 g.)," *Informatsionnyi sbornik* 12 (Dec 1928), pp 145–57.

99. M. V. Tukhachevskii, "Na baze dostignutogo—k novym zadacham," *Izbrannye proizvedeniia* II, pp 67–68; and D. N. Nikishev, "Chelovek dela," in N. I. Koritskii, et al, eds, *Marshal Tukhachevskii: Vospominaniia druzei i soratnikov* (Moscow, 1965), pp 199–202.

100. *Sovetskaia voennaia entsiklopediia* (Moscow, 1933), II, cols. 842–43.

101. Tukhachevskii, "Predislovie k knige G. Del'briuka *Istoriia voennogo iskusstva v ramkakh politicheskoi istorii*," in *Izbrannye proizvedeniia*, II, pp 116–46.

102. M. N. Tukhachevskii, "O kharaktere sovremennykh voin v svete reshenii VI kongressa Kominterna," in *Zapiski*. (Moscow, 1930), pp 21–29.

103. *Voina i revoliutsiia 3* (1930), pp 140–47.

104. Tukhachevskii, "Predislovie k knige Dzh. Fullera *Reformatsiia voiny*," in *Izbrannye proizvedeniia*, II, p 152.

105. USSR, Narodnyi Komissariat Oborony, *Vremennyi polevoi ustav RKKA 1936 (PU 36)* (Moscow, 1937), pp 9–16.

106. Tukhachevskii, "O novom polevom ustave RKKA," in *Izbrannye proizvedeniia*, II, pp 253–55.

107. Tukhachevskii, "Voennye plany nyneshnei Germanii," in *Izbrannye proizvedeniia*, II, pp 233–39.

108. G. I. Isserson, *Novye formy bor'by* (Moscow, 1940). Isserson, Tukhachevskii's colleague, warned that Spain had been an atypical war and that the German use of mechanized mobile groups and tactical aviation against the Poles was the real threat to be met. How Isserson survived the purges, kept his position at the Military Academy, and was able to secure the publication of *New Forms of Struggle* remains unclear.

109. P. A. Kurochkin, *Obshchevoiskovaia armiia v nastuplenii (po opytu Velikoi otechestvennoi voiny 1941–1945 gg.)* (Moscow, 1966), pp 19–25.

110. The situation is exemplified by V. A. Semenov's study of the development of Soviet operational art, published in 1960. This work cited Triandafillov's *Nature of the Operations of Modern Armies* but provided no intellectual context and ignored the contributions of Svechin, Varfolomeev, Tukhachevskii, and others. See V. A. Semenov, *Kratkii ocherk razvitiia sovetskogo operativnogo iskusstva* (Moscow, 1960), pp 103–2

The Function of Military History in the Soviet Union

Peter H. Vigor

No serious discussion of Soviet military history and its relationship to the Soviet armed forces is at all possible unless all those participating in it are thoroughly aware of what the Russians mean by the expression "military history," of what functions the Communist Party expects it to fulfill, and of the constraints under which it labors. I have therefore felt that I ought to begin my paper with a brief exposition of these matters.

An authoritative definition of Soviet military history can be found in the article entitled "*istoriia voennaia*" in the third volume of the *Soviet Military Encyclopedia*.[1] The article was written by Lt. Gen. P. A. Zhilin, Head of the Institute of Military History of the Soviet Ministry of Defense, whose views on the subject therefore may fairly be regarded as definitive.*

Military history, he says, has two meanings. The first is the development of military affairs (*voennoe delo*) from the earliest times till now; and where he says "now," he means it. A British officer, studying the Falklands War or the United States air strike on Libya, would not consider that he was studying military history; his Soviet counterpart would. The second of military history's meanings, according to General Zhilin, is that branch of knowledge which studies the wars and armed forces of the past in relation to the technical, socio-economic, and political conditions in the life of a society and which also studies the military operations of the masses, of the classes and of the parties.

General Zhilin goes on to say that military history is made up of the following components: (a) the history of wars, (b) the history of the art of war, (c) the history of the organization (*stroitel'stvo*) of armed forces, (d) the history of military technology, and (e) the history of military thought. In addition, says General Zhilin, military history comprises special branches, such as military historiography, military archaeology, military archaeography, and military statistics. All the above, in the General's view, are closely

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*General Zhilin died February 6, 1987. See the obituary in *Voprosy istorii* 7 (1987), p. 189. Ed.

interconnected; but the history of wars and that of the art of war are the most important, in his opinion.

We can now turn from the composition of military history, as understood in the Soviet Union, to that of the function which the party expects it to serve. As we all know, everything in the Soviet Union is expected to serve a purpose. By Marxist-Leninist reckoning, there is no such thing as pure thought or pure art or science. All thought, all art and science (and everything else, for that matter) is in some way politically loaded. Either it works to further the cause of the proletariat, in which case it is good; or else its effect is to retard that cause, in which case it is damnable. General Zhilin expressed the matter thus (he is writing, not directly about military history, but about a society's heritage from the past and therefore about traditions):

> *However, it is well known that not all traditions can play a useful role in social progress, in the enlightenment and nurturing of the popular masses . . . there are progressive traditions, but there are also traditions which are reactionary. There are traditions which belong to the progressive, revolutionary classes, and which help the development of society in a progressive direction; and there are those which belong to the exploiting, reactionary classes, and which hinder the development of society in a progressive direction, and slow down its advance to a new, higher level!*[2]

If this is the Soviet view of a country's traditions (and there can be no doubt but that it is), it is also its view of such a comparable inheritance from the past as military history. Accordingly the Communist Party has laid down in some detail the tasks which military history is expected to perform in the USSR, in order that it shall contribute its allotted portion to the well-being of the Communist regime. What follows is taken from the party's instructions.

One of those party instructions insists that Soviet military history is expected to contribute to the success of what the Russians call "military-patriotic education" (*voenno-patrioticheskoe vospitanie*). This is the process of imbuing the Soviet population, and in particular the Soviet workers and the Soviet youth, with a love of, and pride in, their country. Of course, this process can be, and is, undertaken in a number of ways; but the way in which "military-patriotic education" undertakes it is that of propagandizing and emphasizing the glorious past of the Soviet armed forces and of certain periods in the history of the armed forces of the Tsars. The present state of readiness of the Soviet armed forces and their unquestioned ability to defeat the Imperialists, if ever the latter should be fools enough to start a war against the USSR, is also proudly emphasized. The Soviet Union not only possesses a proud and glorious past, but it also possesses an equally glorious present and an illustrious future; and every Soviet man and woman should rejoice to be a citizen of it. This, at least, is the party's view of the matter.

But the order to contribute to "military-patriotic education" is what one might term a *very general* party instruction. There have, however, been very many which have been a great deal more particularized. In August 1939, for

instance, the first issue of a journal on military history appeared in the Soviet Union. It had been set up by a decision of the Central Committee of the Bolshevik Party which was implemented by Marshal Voroshilov, who was then the People's Commissar for Defense. The journal formed part of the apparatus of the Soviet General Staff, and was entitled *Voenno-istoricheskii zhurnal*, a phrase which is sometimes translated into English as *The Journal of Military History*, sometimes as *The Military History Journal*, and sometimes as *The Military Historical Journal*. In addition, East and West have both developed a tendency to refer to it as VIZh, which is its Russian acronym. It enjoys a great prestige among the Soviet military, and by Soviet standards is scholarly. When judged by Western standards, it hardly merits that rating; but this is a matter which we shall be examining a little later in this paper.

It will be remembered that 1939, which was the date of the journal's first appearance, was also the heyday of Stalinism. Stalin's purge of the Soviet officer corps had taken place only a short time before, and many of the most senior members of it (Marshal Tukhachevskii, for instance) had been arrested and shot. It can therefore scarcely be reckoned a coincidence that the preface to the journal's opening number strongly recommended its readers to study J. V. Stalin's notorious *Short Course* of the history of the Communist Party, a work which raised to a new level the art of distorting history. The preface did not describe the book in that fashion, of course. Those pejorative epithets are the contribution of the writer of this paper. The preface went on to say that Soviet history "is cleansing itself from the Trotskyist-Bukharinist-Fascist falsifiers of history and from the enemies of the people," a remark which would have made its readers aware that those of them who approved of Bukharin or Trotsky would be well advised not to voice their opinion publicly, or else they would share these two men's fate, one of whom had been executed on Stalin's orders in 1938 after a show trial, while the other, Trotsky, having been exiled from the Soviet Union, was to be assassinated in Mexico, again on Stalin's orders, exactly a year after the first number of *The Military History Journal* had seen the light of day.

The journal's preface recommended its readers to study the Russian Civil War of 1918–20 above all other wars. While doing so, they were to concentrate their attention on the way in which the war had been conducted by Lenin and by Stalin. Once again, the latter's *Short Course* was brought to their attention: its treatment of military matters was, the preface assured them, of quite exceptional quality. In other words, the Soviet officer corps was being made aware that they would do well to concur with the view that it was Stalin's, not Trotsky's, military genius which had won the Civil War for the Bolsheviks, together, of course, with a certain amount of help from Lenin in organizing the rear. Future issues of the journal, said the preface, would support this proposition (and as a matter of fact they did so). While as for the military academies and the like, new textbooks were to be issued, as the preface tells us; and these too would praise Stalin and laud his brilliant victories. Taken all in all, notice was being served by the journal on its readers that impeccable scholarship and a devotion to historical accuracy were not what were going to be required of the Soviet military.

Hitler's invasion of the USSR put an end to the journal's publication. It was not resumed until 1959, by which time Khrushchev, not Stalin, was the "boss" of the Soviet Union. Khrushchev, although he was to denounce Stalin, had no more use than the latter had for fine scholarship and historical accuracy. It was not for the purpose of encouraging these that he ordered the recommencement of the journal, but for that of cutting Stalin down to size in his capacity as Supreme Commander in the Great Patriotic War, and also for that of denigrating the services of Marshal Zhukov in the same conflict.

Khrushchev, of course, had himself seen a lot of action in the Great Patriotic War, having been a member of the Military Council of the Kiev Special Military District and also of those of the Stalingrad, the Southern, and the First Ukrainian *Fronts*. He had played a prominent part in the defense of Stalingrad, and in preparing the subsequent destruction of the Nazi forces in and around that city. For his wartime services he was awarded three Orders of Lenin, the Suvorov Order (both first and second class), and the Order of Kutuzov (first class), as well as a number of others. Justifiably or not, he tended to think highly of his services to his country during the Great Patriotic War; and he did not brook rivals lightly. He was therefore almost bound to cross swords with Zhukov, the darling of the Soviet armed forces and the man who was, for most Russians, the real architect of victory in the Great Patriotic War.

But these examples of Communist Party instructions to Soviet military historians are examples from the past. What we need now are more recent examples. Luckily we have one. In February of 1986, the Soviet Communist Party held its Twenty-Seventh Congress; and at that Congress calls were made by the party's leader, Mr. Gorbachev, for all activities in the USSR to be conducted more efficiently. Although he did not specifically mention history, let alone military history, that part of the Communist Party machine which is concerned with supervising the activities of military historians got a leading article inserted in the May 1986 issue of the *The Military History Journal.*

Significantly, the article is entitled "Twenty-Seventh Congress of the Communist Party of the Soviet Union and the Tasks of Military History." Right from the very beginning, therefore, there could be no doubt that tasks had been allotted to military historians, who would duly be required to fulfill them. But what exactly *are* the tasks which have been set them?

One of the most important, according to the article, is to study the work of the party in the building up of the Soviet armed forces and in organizing the defense of the Motherland. My readers will note that it is not the building up of the armed forces itself which is to be the subject of the historians' study, but the role of the party in accomplishing it. The same thing goes for the organization of the defense of the Soviet Motherland.

Another important task for military historians is to study "wars of the contemporary epoch, especially those which have been waged in defense of the Socialist Fatherland." In this connection, Soviet military historians are especially enjoined "to discover the causes and origins of the wars unleashed *by Imperialism*, to see what lessons can be learned from them, and also to demonstrate the historic significance of the struggle of the

progressive forces against those of reaction and aggression. . . ." (Emphasis added.)

The article goes on to stress that military historians, working in close cooperation with researchers in the "military-political and military-theoretical fields," must also contribute to the study of the various aspects of the ways in which Imperialism is preparing to launch a new World War, and also the ways in which it prepares to launch aggressive local wars (*lokal'nye voiny*).

Another very important task for Soviet military historians, according to the article, is to "unmask the bourgeois' and revisionists' falsifications of military history [especially that] of the Second World War and the Great Patriotic War." This work is to be undertaken in a more offensive, more operational spirit (*bolee nastupatel'no, operativno*) and to be conducted from "firm class positions" (*s chetkikh klassovykh pozitsii*). If a Western observer may be allowed a comment, it does not help us bourgeois to write accurate histories of the Great Patriotic War when the Soviet government refuses to give any Westerners access to any of its military archives, even those which are unclassified.

Nor can the West be expected to produce accurate accounts of the Great Patriotic War from the books and articles which the Soviet Union has published about it. To take the matter of casualties, for instance, almost never do Soviet authors give the Soviet casualties, and equally seldom do they provide us with figures of Soviet losses of equipment. We get plenty of figures about Nazi losses which may or may not be accurate (it is often impossible to verify them); but about those of the Soviet armed forces we get virtually nothing at all.[3] This is a subject to which I shall be returning at a later stage in this paper. I mention it here merely to demonstrate that any Western author's inaccuracies in his accounts of operations in which the Russians have been engaged cannot all be ascribed to the bourgeois' ill-will and their desire to falsify history. A lot of the blame (and indeed, in my opinion, by far the greater part of the blame) is to be laid at the door of the Soviet authorities themselves.

But I am afraid that I have been guilty of a digression. To return to the party's demands upon military historians, that leading article which we were just discussing does list a few which Western military historians would find acceptable. Thus, they are told to produce "a series of works revealing the development of Soviet military art in the light of the biggest operations and battles of the Great Patriotic War." The purpose of this series would be "to do the utmost to broaden the operational-tactical outlook of the regular officers and warrant officers (*voennykh kadrov*), to help them to understand better the laws governing the development of the theory and practice of the armed struggle, and to teach them to take a creative approach to the solving of problems of strategy, operational art and tactics, taking into consideration the demands of the present day." The article also says that there is a requirement for a series of books, brochures, textbooks, and articles on the methods of work of commanders and staffs in controlling formations, units, and subunits when preparing and carrying out military operations.

Finally, we have the business of inspiring the Soviet people, and especially the young and the workers, with a profound respect for the Soviet armed

forces and with a deep love of their country. Consequently, we find the article saying that it is the duty of Soviet military historians to dwell on the heroism and steadfastness of the Soviet people. These will inspire the present generation and, in the name of the defense of their Socialist Fatherland, summon them to do deeds of heroism.

Such works as the memoirs of military commanders, of junior and middle-rank officers, and even of private soldiers who have actually experienced war are all, says the article, valuable for revealing the all-national character (*vsenarodnyi kharakter*) of the wars which have been fought in defense of the Socialist Fatherland: "A true account, heavily imbued with emotion, of what a soldier saw, of how he fought the enemy, is always interesting and instructive."

But what the historian must not do is to write purely factual and descriptive works. "Unfortunately . . . in some works of military history the factual (*faktologicheskaia*) side prevails over the theoretical. Attempts to steer clear of certain critical problems of military history do not correspond to, and cannot correspond to, the spirit of party loyalty (*partiinost'*) and scientific objectivity."

The article which we have just been discussing is so up-to-date, so authoritative, and covers so wide an area of the field of military history in the USSR that I feel fully justified in having spent so much time in discussing it. Many of those attending this symposium and many of those who will, I hope, decide to read this paper are likely to lack much knowledge of the realities of life in the USSR in general, and in particular to know little of the conditions of work for historians in that country. Not that historians, nor especially military historians, are singled out for the kind of treatment which I have been describing above. In the Soviet Union *all* writers, including writers of fiction, are subject to the party's constraints; though the nature of the constraints will vary a little as between one type of writer and another. Similar, though not identical, constraints operate on all other professions and occupations in the USSR; so writers have not been singled out for oppressive treatment, either.

I hope, therefore, that I shall be believed when I say that the leading article which we have just been discussing is in no way exceptional in the way in which it lays down the guidelines, and sets the tasks, for Soviet military history. I could easily find a score of others with identical tone and purpose. It is not the editorial board of *The Military History Journal* which is addressing us, but the Communist Party of the Soviet Union; and the party speaks, regularly and authoritatively, to military historians, to ballet dancers, to foundrymen, to transport workers, and to every other sector of that vast assembly of people which is the population of the USSR.

It is the party which sets the guidelines and dictates the overall policy. The day-to-day administration and lesser policy decisions are, in the field of military history, the responsibility of the Institute of Military History. This is part of the Ministry of Defense, and was until recently headed by a lieutenant general, P. A. Zhilin, who indeed was appointed as its first Head when the Institute was founded in 1966. Although it comes under the Ministry of Defense administratively, academically it is subordinated to the Faculty of History of the USSR Academy of Sciences.[4]

Its basic tasks are to work out questions of the Marxist-Leninist methodology of military history; to investigate problems of the military history of the Great Patriotic War and the Second World War; to study the history of the military organizations of the Russian proletariat and its experience of armed struggle; to analyze the military aspects of revolutionary wars and uprisings of the oppressed classes, of national-liberation wars and of the partisan movement; to research into the prerevolutionary military past of the Russian people and of the other peoples of the USSR; to research into current problems of foreign military history; to work out the basic problems of the history of military art; to coordinate research into military history; to participate actively in the military-patriotic upbringing of the workers, and especially the young; and to struggle against the bourgeois falsifiers of the Soviet military-historical past.[5]

The Institute has published a large number of books on military history, of which the most important is probably the twelve-volume *Istoriia Vtoroi mirovoi voiny* (*The History of the Second World War*) which appeared between the years 1973 and 1982. Much of the Institute's product is published by the Ministry of Defense's own publishing house, *Voenizdat*; but others are brought out by other publishing houses, such as *Nauka* and *Mysl'*. However, since all the Soviet Union's publishing houses are state-controlled, and their books and pamphlets censored by the party before they can be printed, no significant gain in intellectual freedom arises from having one's book brought out by *Nauka* instead of by *Voenizdat*.

If we turn now from the organization and administration of military history in the USSR to consider the materials available to the Soviet military historian when he comes to write his book or to compose his lecture, then in quantitative terms he is confronted with an enormous amount. This is true whether he is dealing with documents and other archival material or is restricting himself (or being restricted) solely to secondary sources. This is not the place for going into the details of the numerous archival establishments in the USSR. Suffice it to say that the *Tsentral'nyi arkhiv Ministerstva oborony SSSR* (The Central Archive of the Ministry of Defense of the USSR) has eleven million pieces of archival material (*arkhivnykh del*) relating to the Great Patriotic War alone and that, in addition, there are the holdings of the other great repositories of military archival material, such as the Central State Military Archive of the USSR, the Central State Archive of the Soviet Army, the Central State Archive of the Soviet Navy, and a number of others.[6]

But by no means does everyone have access to the archival material. Citizens of Western countries certainly do not. Admittedly, during the last forty years or so one had heard of a few of them being admitted; but the number thus favored has been miniscule. Even Soviet citizens are severely restricted. One would be rash to hazard a guess as to what proportion of those interested in military history are actually granted admission to the archives; but it is rumored that they are few. Obviously, certain categories of people (members of the Institute of Military History, for example) are virtually guaranteed access to the archival libraries; but to what extent the ordinary, genuinely interested amateur among the Soviet public can hope

to gain admittance is far from certain. One assumes that a former Great Patriotic War veteran, belonging to an appropriate ex-servicemen's organization and vouched for by the party, will have a better chance than a solitary individual, dependent on none but himself for recommendation; but then a comparable situation is not unknown in the West.

One final point on this subject. Admittance to the archives of a particular archival library does not, so far as can be determined, guarantee access to *all* the archives with which the given library is entrusted. Some time, perhaps, a Western postgraduate student will choose as the subject for his doctoral thesis an analysis of the sources quoted in the footnotes of the works of the Soviet military historians which happen to have reached the West, and in particular the references to the Soviet archives. Obviously the Central Archive of the Ministry of Defense is likely to be the one most often quoted, but what about the others? In what circumstances are *they* quoted and can we learn anything from that? It might be interesting.

Let us now turn from discussing the Soviet archives and examine some of the works which have been published on military history in the USSR, and which are therefore available to those members of the Soviet armed forces who are interested in the subject. For brevity's sake I will restrict myself to books dealing with the Soviet ground forces and to those dealing with the Great Patriotic War. The reader will lose nothing by my doing so. Those dealing with other wars and with other services (the Soviet Navy, for instance) are strictly comparable to those in the categories I have chosen in respect to their methodology and type of content. In any case, books on wars other than the Great Patriotic War are published very infrequently in the USSR today. A few books get published on the Russian Civil War of 1918–20 and a few more on Napoleon's campaign in Russia of 1812; but that is almost, though not entirely, all.

Of the vast number of books published in the Soviet Union on the subject of the Second World War, the two most important are undoubtedly the six-volume history of the Great Patriotic War under the chairmanship of P. N. Pospelov,[7] the first volume of which appeared in 1961 and the last in 1965, and the twelve-volume history of the Second World War under the chairmanship of Marshal A. A. Grechko,[8] the first volume of which appeared in 1973 and the last in 1982. To make things easier for my readers, I shall in future refer to the first as "the GPW History" and to the second as "the WW II History."

The fact that the one appeared in six, and the other in twelve volumes, is likely to prove misleading to those who have never seen them. The format of the GPW history is about twice the size of that of the WW II history, and its type is considerably smaller, so that each page contains a good many more words than does its counterpart. This fully compensates for the fact that the GPW history has a total number of pages about one-third fewer than the WW II history; and almost all of its material, of course, is devoted to the Great Patriotic War. Consequently, those who are looking for detailed information about, say, the Budapest Operation of 1944–45 are far more likely to find it in the GPW history than in that of WW II. The one devotes thirty-six pages to the operation in question; the other, a mere twenty; and

a look at the amount of space allotted to other major operations in the two publications will disclose a similar ratio.

There seem to me to have been two reasons why the Soviet authorities should have issued a second history only a few years after the final volume of the GPW history had been put on sale, though doubtless there were others. One of these reasons was that the Great Patriotic War history had been issued in an edition of only 38,000 copies, which for the USSR is peanuts, especially when one remembers how many were sold abroad. The result is that many of those in the USSR who write on military history do not necessarily have a set of that history in their libraries. The WW II history was issued a decade later, and in a printing of 331,000 copies, or ten times the number of the other. My readers will remember that it was in 1966 that the Institute of Military History was founded; and under the energetic leadership of General Zhilin, it immediately started promoting the study of military history throughout the USSR. That indeed was why the Communist Party had set up the Institute. But it is very difficult to study a subject, unless one is given access to sources of information. Naturally, it would have been possible to have granted permission to every approved student to use the archival libraries; but most of these (and all the really important ones) are either in Moscow or Leningrad, and in a country the size of the Soviet Union this alone makes visiting these institutions time consuming and expensive.

So a new history was necessary. Of course, it would have been perfectly possible to have reprinted the GPW history. Reprintings and new editions are not as common in the USSR as they are in many Western countries, but still they are not unknown. However, the decision was taken to compile a completely new history; though, since we have no evidence to guide us, we can only guess as to why that decision was taken. My own guess is that it was due to the combination of all the four following reasons, and possibly even more:

(i) One task of the GPW history had been to demonstrate the magnitude of the Soviet war effort, the brilliance of the Soviet victory over Nazi Germany, and also its crucial importance for the final defeat of Hitler. By demonstrating these things, it also served to counter the numerous books written by Western historians that enjoyed a wide circulation in Britain and America at that time and devoted almost all of their attention to the British and American Second World War operations, giving very little to those of their Russian allies, to whom, indeed, they allotted not very much of the credit for the downfall of Hitler's Reich. Of such books, *The History of the Second World War* by Basil Liddell Hart is a notorious example.

(ii) By the time that we get to the 1970s, however, the citizens of the Soviet Union had been fully persuaded of the magnitude and importance of their victory and of the glorious feats of arms performed by the Soviet armed forces. Many of them still believed, however (and especially those who remembered the Great Patriotic War), that the Western Allies had also contributed powerfully to the downfall of Hitler and had played the major part in the defeat of Japan. These were views which, in the opinion of the Soviet Communist Party, needed to be corrected; and one way of accom-

plishing this was to commission a history of World War II as a whole and not just of that part of it which was fought between the Russians and the Germans. By devoting a large proportion of their new history to the activities of the Western Allies, the Communist Party could ensure that these activities were presented as being of minor importance, indifferently executed, and in the charge of men whose competence as commanders was far inferior to that of their Soviet counterparts. Only Operation Overlord has genuine praise accorded to it, and even that praise is allotted almost exclusively to the ferrying of that stupendous quantity of men and weapons and equipment across the English Channel. The subsequent fighting in France, Belgium, and Holland is treated with scant respect (whether deservedly or not is another question).

(iii) The Institute of Military History had not been in existence when the GPW history was published. Professional pride demanded a new history, in the preparation of which the Institute in general, and its very ambitious director in particular, should play a major role. This is in fact what happened.

(iv) A decade separates the GPW history from that of World War II. During that time, military historians in the West had published a large amount of material concerning the operations of the Western Allies by land, sea, and air. Much of this was almost certainly totally new to the historians of the Soviet Union, and thus was crying out to be used by them.

The appearance of these Western publications therefore supplied a lot of facts and figures, previously unknown in the USSR, which, if carefully handled, could be used to denigrate the Western Allies' war effort. For instance, the Soviet Communist Party had always claimed that throughout the war it was Anglo-American policy at the highest level to keep the war going as long as possible in order that Russia and Germany should bleed each other white; but in the early days they had little concrete evidence with which to support this thesis, apart from the obvious and admitted delay in opening the Second Front. The new Western writings of the 1960s provided evidence of other examples of dilatoriness which, since they came from Western, not Soviet, sources, were likely to carry conviction with Soviet readers, and which could be used to "prove" that it was indeed a desire to bleed white the Soviet Union which was the cause of the slowness of the West's advance in Italy, in Normandy, and also in the Pacific. My readers may care to look at what is said about Anglo-American thinking with regard to Russia which can be found on pages 76–77 of volume 5 of the WW II history, together with the footnotes used to support the assertions. These footnotes are all drawn from works by Western writers. The "dilatoriness" of the Allies in Italy is "proved" by citations from Western sources on pages 282–83 of volume 9 of the WW II history. There are plenty of other examples covering the whole of the Second World War.

So much for the general histories! Let us now look at what should be the more detailed chronicles, those of the armies, the divisions, the rear services, individual operations and battles, and so forth and so on. I have not mentioned the histories of the *fronts* (army groups). This is because, the Soviet *fronts* being temporary, somewhat ad hoc affairs, their deeds are re-

corded, to the extent to which they are separately recorded, not in individual histories but in the memoirs of the marshals who commanded them.

Once we get to armies, corps, and divisions, we are back on familiar ground. I would be rash to say that every Soviet army which fought in the Great Patriotic War, and every corps and division, has had its history published by the Ministry of Defense Publishing House; but undoubtedly a very considerable number of them have had this honor accorded them. Of those that I have had the opportunity of examining personally, all exhibit that duality of purpose which we have already decided to be characteristic of Soviet military history, and which indeed is by no means unknown in its Western counterpart. That duality consists of its intention to act both as a source of knowledge concerning the military affairs of the past and also as a vehicle for what is called "military-patriotic education," that is to say, the inculcation (particularly in the young and the workers) of a respect for, and pride in, the Soviet armed forces and a deep love of their country.

I do not wish to spend too much time on a discussion of these histories, because they all exhibit much the same basic characteristics (this is true, at any rate, of all which I have managed to see myself). I will therefore take the history of one army, 5th Army, and that of one division, 144th Rifle Division, which throughout the war was a constituent of the 5th Army.

The army's history is contained in a total of 463 pages.[9] There are several maps, some photographs, and mercifully little reconstructed conversation. The work contains a considerable amount of useful information, including such things as the lengths of the times of the artillery bombardments prior to the attack. (Though these are not given in every instance, if only for the simple reason that there is no attempt to convey information systematically. One gets the impression that what information is given to the reader is that which lay readily to hand.) A lot of the book, on the other hand, is devoted to "military-patriotic education." As the book's flyleaf describes it, "this book . . . recounts the story (*povestvuiushchei*) of the heroic deeds of 5th Army . . ." and that is the approach to the army's history which characterizes what, from the Western viewpoint, is a regrettably large part of the book. Information is freely given on German losses, but not on Soviet losses; nor is the reader ever led to suppose that the conduct of the Soviet operations, whether by the formation commanders or by the Communist Party, was ever less than perfect. Minor setbacks occurred, of course, but not for very long. In the end, the genius of the Soviet higher command and the heroism of the Soviet soldier combined to set the 5th Army back on the road to victory.

The divisional history which I shall now examine is that of the 144th Rifle Division, which during the Great Patriotic War was awarded the Orders of the Red Banner, of Suvorov, of Kutuzov and of Alexander Nevsky.[10] The history was passed for printing by the censor on May 3, 1977, and appeared in an edition of 30,000 copies. As we are informed on the reverse of the title page, it is an outline history of the division during the Great Patriotic War and was designed for a mass readership. Indeed Col. Gen. Kazartsev in his "Foreword" says that the book "will doubtless help in the patriotic education of Soviet youth in the military traditions of the older generations."

Despite all this, however, there is much more solid information, and much less reconstructed conversation and romanticized accounts of operations, than I have found in several other divisional histories. Its 150 pages (about the norm for Soviet divisional histories) are of small format and liberally interspersed with photographs, but what text there is presents quite a lot of data which I personally have found both interesting and valuable. The footnote references are, for the most part, to the Ministry of Defense archives; and when they are not, they are to published works such as the Pospelov history of the Great Patriotic War, which we were discussing earlier in this paper. They are therefore very respectable.

However (and this is where we come to the military-patriotic educational element), a disproportionate amount of the none-too-liberal 150 pages allotted to the book is devoted to the heroic deeds performed by the junior ranks. To say this, of course, is not to disparage their heroism. If the Soviet armed forces had not fought very bravely, Hitler's Reich would surely have lasted a great deal longer than it did. On the other hand, for the military historian, details of soldiers' deeds of heroism, however heroic they may have been, are of less importance for the correct understanding of an operation than details of the intelligence reports available to the commander, of ammunition expenditures, of the supply situation in general, of casualty figures for both sides (we only get the German in Soviet histories, and they are very often suspect), and so forth and so on.

Of course, such details cannot reasonably be expected in what is self-confessedly a popular outline history: the trouble is that no other sort of Soviet divisional history has yet been published—not, at least, to my knowledge. This makes it virtually impossible for any military historian, whether Soviet or Western, to get a proper grasp of Soviet operations, except of course for those in the fortunate position of having been granted access to the Soviet archives.

In addition to the histories of the armies, corps, and divisions, each military district has published a history of what it did during the Great Patriotic War; so have the rear services, the signals, the engineers, and the railway troops; so have the Soviet Union's constituent republics; and so, for that matter, has Moscow State University. Nor is this by any means the end of the tremendous catalogue, but enough has been said to give the reader a good idea of the wealth of the material publicly available.* If only it were more informative! If only it did not pay so much attention to the military-patriotic education of the Soviet people!

The Military History Journal does quite a lot to repair these two deficiencies, although it is far from perfect. The trouble is that it publishes only twelve issues a year, and that even so it is none too blessed with space. Moreover, of what space there is, a significant proportion is taken up with

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*The bibliography of this subject is by Michael Parrish, *The U.S.S.R. in World War II: An Annotated Bibliography of Books Published in the Soviet Union, 1945–1975 with an Addenda for the Years 1975–1980*, 2 vols (New York, 1981). His addendum for the years 1981–87 remains unpublished. Ed.

party work. The editorial is generally written on a theme useful to the party, and presumably written by a party official, while there is usually a separate section specifically devoted to party-political work in the armed forces. These two sections between them take about 10 percent to 15 percent of the average issue of the journal. Then there is almost always a section entitled "Mastery and Heroism." This is written in an emotional style with a lot of reconstructed conversation, in which a great deed or feat of arms on the part of the members of the Soviet armed forces is brought to the reader's attention. It clea ly belongs to military-patriotic educational work, not to "military history" in the usual Western sense of that expression. To "Mastery and Heroism" is allocated about another 5 percent of the total number of pages of the journal.

When to the above are added such things as book reviews, brief biographies of famous Soviet commanders, and similar items, we are left with only about 50 percent of the approximately 100 pages of *The Military History Journal* available for military history; and by far the greatest part of these is devoted to the Great Patriotic War. With twelve issues a year, that gives us only 300 pages a year for military history; and in this context, it must be remembered that this is the only journal on this subject which is published in the USSR.

However, I cannot end my account of *The Military History Journal* without remarking that those articles on military history which do manage to get published are always well worth reading. Indeed, by Soviet standards they must be judged excellent. Of course, they all suffer from certain defects (no mention of Soviet casualties, scant mention of Soviet reverses, and so on); but they do provide the Western reader with a mass of detailed information concerning Soviet operations during the Great Patriotic War which he would find it very difficult to locate elsewhere.

In view of all this, it is interesting to note what Soviet officers think of *The Military History Journal*. On September 27, 1985, there was held a conference in the Northern Group of Forces on the work of *The Military History Journal*.[11] The conference was opened with an address by Lt. Gen. V. V. Dubinin, First Deputy Commander of the Troops of the Group, who said that the task of improving still further the efficiency of the Soviet armed forces could only be done by uniting military science (*voennaia nauka*) and practice. "Today not a single practical task can be satisfactorily (*kachestvenno*) solved," he said, "without a thorough preliminary study of the problem, and without getting help from the rich experience of military history, from the experience of the Great Patriotic War." This, of course, is an example, and a very important example, of what the Russians see as one of the *functions* of military history in the work of the Soviet armed forces (the other being that "military-patriotic educational work" to which reference has been made so often). This new function, clearly, is very germane to the subject of this paper, and we shall therefore have to come back to it again.

The other participants in the conference followed a fairly predictable line. The senior political officer said that the journal had done, and was doing, an invaluable service in disclosing to its readers the various aspects of Marxist-Leninist teaching on the subject of war; the senior artilleryman wanted more on the role of the artillery; the senior officer of the rear

services, more on the work of the rear; another political officer wanted more on party-political work in the Soviet armed forces; and so forth. There was, however, fairly general agreement that the major fault of *The Military History Journal* was in allotting too much space to the *describing* of operations, and not nearly enough to *analyzing* them. Similar conferences on the journal's work have been held in various places over the years, but what is reported to have occurred at them is so very similar to what has been described above that there seems no point in considering them.

It will be seen that I have omitted a very important category of the published Soviet sources of information concerning military affairs. It consists of the various reference books. This category includes such things as the *Dictionary of Basic Military Terms* (*Slovar' osnovnykh voennykh terminov*, Voenizdat, 1965), the *Naval Dictionary* (*Morskoi slovar'*, Voenizdat, 1959), and so on; but its most important representatives are undoubtedly the *Great Soviet Encyclopedia* (1st, 2d, and 3d editions),[12] the *Soviet Military Encyclopedia*,[13] and the *Military Encyclopedia Dictionary*.[14]

The *Great Soviet Encyclopedia* is roughly the equivalent of the *Encyclopaedia Britannica*, given that the content of its entries are ultimately dictated by a political party, which in the *Encyclopaedia Britannica* they are not. It may seem odd that such a publication is regarded by the Soviet military as an important means of popularizing knowledge on military matters, but so indeed it is. Naturally, the encyclopedias were intended for a wide readership, for people interested in many different branches of knowledge; and it is for this reason that those of their articles which are devoted to military matters are seldom concerned with specialized, technical details, but rather deal with the broader aspects of subjects such as strategy, military science, military history, the art of war, the development of military technology, descriptions of the major battles of the Great Patriotic War, and above all (and, from the point of view of the party, most important) Marxist-Leninist teaching on the subject of war.[15]

If we turn from the *Great Soviet Encyclopedia* to the *Soviet Military Encyclopedia* and the *Military Encyclopedia Dictionary*, we will see at once that these have been written for a much more specialized readership. The latter is a compression into a single volume of 863 pages of the contents of the eight volumes of the former work. Since each of those eight volumes has an average of some 650 pages, it is clear that the degree of compression has been considerable. Indeed, according to Gen. Kir'ian, that was the point of issuing the encyclopedic dictionary.[16] Eight volumes were too much to expect the individual officer to buy and to lug around with the rest of his kit, so the single-volume opus was produced in a large printing of 300,000. This would allow the individual officer to have one in his possession; to use it to get the essentials of whatever item of military affairs he happened to be interested in; and then, if need be, to go to the nearest garrison library and consult the *Soviet Military Encyclopedia*. The *Soviet Military Encyclopedia* therefore contains a series of excellent articles on any and every aspect of military affairs, ranging from Alexander the Great to Marshal of the Soviet Union Georgii Zhukov, and from the crossbow to the Kalashnikov to the nuclear missile.

Faced with this wealth of books, pamphlets, and articles on the military history of the USSR, one is bound to try and see whether it is possible to discover any common thread. It soon becomes apparent that one can. As regards those publications dealing with the Soviet armed forces during the Great Patriotic War, it is fair to say that all have the following in common:

(i) The Soviet defeats in 1941 are ascribed to the treachery of the Germans in launching a surprise attack upon the USSR. As the benefits they gained from securing strategic surprise over the Red Army began slowly to exhaust themselves, the Soviet forces, mostly because of their unexampled heroism and military genius, began to recover from their early failures until that recovery reached a point at the counteroffensive near Moscow in January 1942 where the tide could be seen to have turned against the Germans. No mention is ever made of the thousands of Soviet soldiers who "voted with their feet" against Stalin's Russia and allowed themselves to be taken prisoner in the early stages of Operation Barbarossa, thereby causing a great many of the Soviet defeats in that early period. To the extent that any Red soldier is ever portrayed as having done less than his duty to his country, that was because he had been seduced by Vlasov; but Vlasov was a traitor and was ultimately shot, thereby getting his just deserts; so all was well ultimately.

(ii) Analysis of the failure of Operation Barbarossa is very primitive. It consists of saying (what is undoubtedly true) that it was caused by the Germans overestimating their own military abilities, while grossly underestimating those of the Soviet people. It also consists of saying (what is also true) that Nazi production of essential war material (guns, planes, tanks, etc.) was markedly less than that of the Soviet Union from mid-1942 onwards. But Soviet historians make no attempt to discover, at any rate in their published material, what were the causes of these things. There are several factors which, taken together, account for the comparatively low output of Nazi war production; there are several factors, and not only the whims of Hitler, which caused the Nazis to underestimate so grievously the difficulties of invading and conquering the Soviet Union. Soviet analysts never so much as mention them. Nor do they mention the significant differences of opinion between Hitler and many of his senior officers nor the fact that, when other differences had arisen in 1939–40, events had shown that it was Hitler who was right, circumstances that made it much more difficult, when Operation Barbarossa was being planned and executed, for the senior officers of the *Wehrmacht* to stand up to Hitler successfully.

(iii) Almost never are figures given for Soviet losses in men or weapons or equipment, nor is mention made of Soviet officers and men being taken prisoner by the Germans. Occasionally one finds the admission that in a particular engagement the Soviet forces suffered "heavy losses," but that is the beginning and the end of the matter. Detailed figures in respect of German casualties and losses of weapons and equipment are given regularly, however.

(iv) The German troops are usually portrayed as either fleeing incontinently at the first sign of a Soviet soldier or as fighting "stubbornly" or "desperately." In the first instance, the matter, of course, is over and done

with in a couple of seconds; while in the second, the stubborn German resistance is quickly smashed by the heroism of the ordinary Soviet soldier, inspired and guided by the military skill of his officers.

If we turn now to the military operations conducted by Russia's allies during the course of the Second World War, we shall find that, at least according to Soviet military historians, their chief characteristics were as follows:

(i) The Fall of France was basically due to the evils inherent in the social structure of Britain and France of the time.

(ii) The operations in North Africa and Italy were very minor affairs and of no strategic significance. They thus contributed nothing of any consequence to the defeat of Hitler.

(iii) The Battle of the Atlantic was therefore an irrelevance, because it was concerned with sustaining land operations which were really not worth conducting.

(iv) Operation Overlord came far too late to make any substantial contribution to the defeat of Nazi Germany. The Germans were already beaten when the operation was finally launched. The Allies, when they got ashore in Normandy, spent weeks and weeks in achieving virtually nothing; while the setback in the Ardennes in December 1944 was merely a demonstration, if demonstrations were needed, of the military incompetence of the Americans. In any case, the successes achieved by the Allies in Normandy, and subsequently elsewhere in the Western Europe, were mostly due to the following two factors. First, the best of Germany's land forces and the best of the *Luftwaffe* had to be sent to the Eastern Front to fight against the Russians; so those who were left to oppose the Western Allies were second-class troops, and not very numerous either. The second reason for the Western Allies' successes was that they had total air superiority; but the cause of them having it was, as has just been mentioned, the transfer of the flower of the *Luftwaffe* from the Western Front to the east. But this, of course, was brought about as a consequence of the skill and heroism of the armed forces of the USSR; the Western Allies, in the Soviet view, can claim very little credit for it.

(v) The defeat of Japan was brought about by the Soviet Union's campaign in Manchuria in August 1945. The atom bomb had very little to do with it. As for the predominantly American operations against the Japanese in the Pacific, these were poorly planned and were dilatorily executed; while their strategic significance cannot be rated as more than very moderate. Japan's geo-strategic position meant that, once she had been driven from Manchuria and China, she could not obtain the raw materials necessary for continuing with the war. It was the USSR which drove her from those countries, and it is to the USSR therefore that credit for her defeat is due.

Things become less propagandistic, however, when we leave the heights of strategy and get down to the operational and tactical levels, and when we move from contemplating the heroism of the Soviet soldier to examining the ways in which his commanding officers contrived to win their battles. Then we are told that it was obedience to certain principles which largely ensured

success. We are also told that these principles consisted of a correct choice of direction for the main axis of advance and advancing along that axis in a comparatively narrow front; the selection for one's sector of attack of only a small proportion of one's already narrow front; and the focusing upon that tiny sector of the maximum number of men, guns, planes and tanks. (This, incidentally, frequently allowed the Russians to deploy upon that sector of attack about 250–300 guns per kilometer together with 5–8 infantry battalions and 20–25 tanks, also per kilometer of attack sector). In addition, the Soviet commander was urged to value maneuver highly, together with speed and mobility, and also to achieve surprise whenever possible.

That these are indeed the lessons which have been drawn from Soviet experience in the Great Patriotic War (and therefore from studying Soviet military history) can be easily seen merely by looking at the military history textbook which has been produced by the Soviet Ministry of Defense for the benefit of its officer cadets.[17] The one in question has obviously been designed for the ground forces, the Navy scarcely figuring in it; but not long ago the Soviet Navy produced a comparable one of its own, in which, as might be expected, the Soviet ground forces have little part to play.[18]

Since it is incontestable that the Great Patriotic War was decided on land, and that the sea had little part to play, I may be pardoned if, for reasons of space, I confine myself to a consideration of the contents of the army textbook. Such an examination is made easier for me by the fact that, in standard military fashion, each chapter ends with a little section entitled "Brief Conclusions." It is to the brief conclusions of the chapters dealing with the Great Patriotic War that I shall now turn my attention.

The first of these sections is in Chapter 8 of the textbook. Its brief conclusions tell us that the outbreak of the war in September 1939 and the Nazi successes in Poland and Western Europe were due to the defeatist attitude of the ruling classes of the defeated countries and to their desire to appease Hitler. Also important was the Nazi use of their initial successes to exploit their mobility by creating havoc in the enemy's rear. Their easy victories lulled the Germans into excessive self-confidence which marred their subsequent strategy.

The next three chapters are devoted to the Great Patriotic War, and comprise about one-third of the book. Their brief conclusions give a dispassionate, sensible analysis of the means by which the Red Army and Air Force eventually halted Operation Barbarossa and moved over to the counter-offensive; of the results of Stalingrad; of the improvements in the handling of artillery, especially in terms of massing one's fire on the critical sectors of the attack; while the eleventh chapter's brief conclusions tell us that in the war's final period the cooperation between Soviet infantry and tanks was very much improved; artillery and air bombardment of enemy positions grew heavier and even more successful, and the work of the rear services was magnificent.

The next chapter, consisting of twenty-three pages, is all that is allotted to all the operations of the Western Allies in every theater of war from 1941 to 1945, whether by air, land, or sea. The brief conclusions do not speak very highly of them; and that, I think, is all that needs to be said.

It will therefore be seen that what I have presented earlier of the USSR's view of the lessons to be learned from the experience of the Great Patriotic War exactly matches that which today is being taught to its officer cadets.

One other Soviet book must be considered before we embark upon a new stage in our inquiry. Indeed, that stage will not only be new, in the sense that it will be different from what has gone before, but it will at least deal with military history's *function* in the USSR; and the patient reader will recall that it was precisely the *function* of Soviet military history, rather than its characteristics, which the title of this paper has proclaimed to be the paper's subject. Have patience, gentle reader! We have got to get the background right before we can get down to the monkey business, as Groucho Marx one day observed to Harpo; or if he did not, it was the bishop who said it to the actress—though under exactly what circumstances he said it we would do best not to inquire!

Anyway, the book in question is called *Vtoraia mirovaia voina* (*The Second World War*), and it was published by the Ministry of Defense Publishing House in 1958 as part of its "Officer Library" series (*Biblioteka ofitsera*). Every Soviet officer was expected to buy the books in this series, or at any rate to read them; so they form a collection of works of reference which are stamped with the seal of official approval, and whose function is to bring to the attention of the Soviet officer corps the essence of the subjects they cover. The subject of the book we are about to examine is that of the Second World War—*not*, be it particularly noted, the Great Patriotic War only, but the Second World War as a whole. The book was published in 1958 and, as a note at the beginning tells us, it was intended for the use of the officers, generals, and admirals of the Soviet Army and Navy. The book is therefore much older than the work on military history for officer cadets which we have just been discussing above; furthermore it is designed for a much more mature readership. In view of the difference of date of publication and degree of sophistication of the readership, one might well expect a significant amount of difference between what is preached in the one book and what is preached in the other. Having read the two very carefully, I do not believe this to be true. On the contrary, what struck me very forcibly was how similar were the tone and content of the two publications, despite the fact that the one made its appearance only very recently (1983), while the other has been available for nearly thirty years, and despite the fact too that the one was designed for lads not yet commissioned, while the other was written to educate serving officers, many of them very senior ones.

The Second World War consists of 931 pages and 19 chapters. Of these, 12 chapters and 615 pages are devoted to the Great Patriotic War, including the campaign in Manchuria in 1945. That leaves six chapters and 316 pages, or about one-third of the total, for all the military operations of the Soviet Union's Western Allies in the many theaters of war in which they operated during the course of those cruel six years. This inevitably means that little space can be given to what we in the West would regard as important operations. Thus, Operation Overlord gets eight pages; the Battle of Britain, four; while just one page has to suffice for the descriptions of the two great naval

battles in the Pacific Ocean, the Coral Sea and Midway. Such scant treatment should be contrasted with the generous twenty-one pages allotted to the Battle of Kursk.

As for the quality of the comment contained in the chapters allotted to the Western Allies, it may fairly, I think, be characterized as follows: the unfavorable Soviet criticisms of their allies' planning and conduct of operations are usually not unjustified, and are expressed in restrained language. The trouble is that the unfavorable comment is very seldom balanced by any favorable. The "Anglo-Americans" are admitted to have been good at conducting large-scale seaborne landings; though where they succeeded, this was due to their being faced by very little effective opposition (Sicily and Normandy). This in turn was mostly because the Germans had been compelled to keep the bulk of their forces, and qualitatively the best of them, on their Eastern Front to operate against the Russians; but in the case of the fighting in France as a result of Operation Overlord, an additional factor was the activities of the French Resistance. These activities were widespread and resulted in French towns and villages, to say nothing of Paris, being liberated from their Nazi conquerors before the "Anglo-Americans" could get near them (p. 655). The result must be that the Soviet officer corps, for whom this book was intended, would be led to regard as minor the contributions of their Western Allies to the defeat of Hitler; and there can be no doubt that this was exactly the impression which the party wished to be given.

Nor am I personally of the opinion that this impression is wholly wrong. If we are speaking solely of Nazi Germany, as distinct from the Nazis' allies (Japan and Italy), it would be difficult to maintain that Hitler's defeat was *not* determined for the most part by what happened on Germany's Eastern Front, in other words, by the Russians. On the other hand, it is not obvious to everyone that it was the Soviet Union's campaign in Manchuria in 1945 which brought about single handedly the surrender of Japan; and in any case, it is not clear that the party is doing a service to the Soviet armed forces for instilling into its officers the belief that its potential enemies are militarily ineffective, except in respect of their technology.

So if the military histories designed for the use of officers are less than perfect accounts of the past, to put the matter mildly, what possible benefit can accrue to the Soviet officer from studying history from *overt* Soviet sources, and why should he be encouraged to do so? From the point of view of the party, one obvious and extremely valuable benefit is the inculcation in him of a deeper love for his country and a greater reverence for the exploits and traditions of the Soviet armed forces as a consequence of his perusal of the officially accepted versions of events. Nor need we be surprised that this is so. In the nineteenth century the standard reading for British officers consisted of books whose principal function was to implant in their readers the firm conviction that Britons were superior to any other people on the face of the globe, and that God was a firm supporter of the British Empire. Few of the nineteenth-century British accounts of Britain's military past would be regarded nowadays as trustworthy historical records; but they were a "good read" (particularly if you were a Briton) and helped to convince the British reader that the Royal Navy was invincible, the British

Army just about invincible, and that the world was a better place because this was so. I believe I am right in saying that the United States experienced a comparable phenomenon during roughly the same period.

But the USSR is at a considerable advantage in one respect over the United States and Britain. It is indisputable that the Soviet armed forces have so far won every single war in which they have been engaged, with the exception of the war in Afghanistan. Many would object that the war against Poland in 1920 contradicts that assertion; but if that war is lumped together with the Russian Civil War of 1918–20 (and Soviet writing very often does this), then the dictum is largely true, because it was undoubtedly the Bolsheviks who won the Civil War.

It is thus easy for Soviet military historians to "sell" the idea of the invincibility of their country's armed forces, and the job of "selling" it can be further facilitated by selecting suitable wars from the Tsarist past: Ivan the Terrible's conquests; Peter the Great defeating the Swedes and the Turks; and, above all, Russia's victory over Napoleon in the Campaign of 1812. This is a particularly important victory from the point of view of the Communist Party, because only a little manipulation of the facts allows that victory to be shown as being due to the endurance and military skills of the Russian people, especially the partisans. A further small manipulation of the events of the Battle of Borodino and the ascription to Kutuzov of an order, which in fact was given by the Emperor Alexander I, allowed General Zhilin to write a history of the 1812 campaign in which he depicted it as being, both strategically and politically, almost the exact counterpart of the Great Patriotic War as depicted in the Soviet history books. The deliberate plan to trade space for time, the determination to halt the foe at Moscow and then use that city as the springboard from which to launch the counteroffensive that was to doom the presumptuous invader to defeat, and the far-sighted wisdom that gave the order for the Russian armies to continue their advance westward until they got possession of their enemy's capital and in the process liberated from the tyrant's clutches suffering peoples of Europe who had been groaning under his yoke.[19] This was the pattern of events in the Great Patriotic War as the party nowadays sees it, and these are the principal elements in Napoleon's invasion of Russia in 1812 as General Zhilin presents them. What is more, he was obviously sensible to present them in this fashion. As a result of his first doing so (in his *The Counter-Offensive of the Russian Army in 1812*, published in 1951), he was awarded both a Stalin Prize and a Laureateship. He therefore very naturally wrote *1812: The Counter-Offensive of the Russian Army* and then *The Russian Army of 1812: Its Counter-Offensive*. As a result, he rapidly rose from being an obscure major to lieutenant general, to being the first Head of the Institute of Military History and therefore virtual "boss" of military history throughout the USSR. Let no one say that writing does not pay!

I must hasten to confess to my readers that I have somewhat "taken the mickey" out of General Zhilin. The title of his first book is exactly as I have given it; but those of his two others are *The Destruction of Napoleon's Army in Russia* (1974) and *Kutuzov* (1976), respectively. Their contents are,

however, as I have indicated. General Zhilin also wrote other works, proclaiming the supremacy of the Communist Party in military affairs and the necessity for possessing a good grounding in Marxist-Leninist theory in order to become a first-rate military historian. This cannot have harmed his standing with the party either, if one comes to think of it!

But most of what we have been talking about has consisted of a description of the military-historical sources available in the USSR. We need to say more about the functions which Soviet military history itself is expected to fulfill. One of those functions (and, in the eyes of the party, possibly its most important) is the "military-patriotic education" of Soviet youth. Enough, I think, has been said about that in this paper for the purposes of the symposium; we can, therefore, concentrate on the other function of Soviet military history, which is to help the Soviet armed forces to be better at their job.

For a long time after 1945, Soviet military history could scarcely be said to be capable of fulfilling this function at all. Little was published on the Great Patriotic War which was more than a propaganda piece; and indeed, while Stalin was still alive, it was not very safe to enquire too closely into exactly what had happened during the course of it. It was not until the reappearance of *The Military History Journal* in 1959 and the publication in 1961 of the first volume of Pospelov's GPW history that sufficient facts officially vouched to be accurate concerning the war in question first saw the light of day.

But although this was gratifying to those concerned with amassing knowledge for its own sake, it was of little use to Soviet officers who wished to profit from the experience gained by the Red Army during the Great Patriotic War to improve their strategic and operational thinking, and to better the training of the units or formations they commanded. This was because at that time it was generally assumed by both East and West that a war between them would either be nuclear from the outset, or else would inevitably become so. In 1962, it will be remembered, the first edition of Marshal Sokolovskii's *Military Strategy* was published, to be followed by a second and by a third edition in 1963 and 1968, respectively. Despite some tentative *caveats* uttered in the two later editions, the general picture painted by Sokolovskii was of a predominantly nuclear battlefield. It was difficult to see how anyone doomed to operate on such a battlefield would derive much benefit from having studied the operations of the Great Patriotic War. Of course, they could learn the importance of good leadership, of steadfastness in the face of the enemy, of loyalty to one's comrades, and similar basic military virtues; but the tactics used to defeat the Germans at, let us say, the Battle of Fedoseevskaia were hardly likely to be applicable in a nuclear war against NATO.

By the time that we get to the mid-1970s, however, both East and West were inclined to think it possible that, if war were to break out between them, it might be fought with conventional weapons only, at any rate during the initial period and just conceivably throughout.

Obviously, in these new circumstances the strategic, operational, and tactical experience gained in the Great Patriotic War would be of greatly

increased relevance and therefore well worth studying—and studying, moreover, with the express purpose of making practical use of the result.

Of course, some of the methods which proved extremely successful in the Great Patriotic War are likely to prove to be costly failures if used in a war today, even if fought throughout with conventional weapons. The huge densities of men, guns, planes, and tanks which were regularly massed on the narrow sectors of front intended for the breakthrough in 1944–45 would surely suffer intolerable losses if reproduced today. But such things as surprise (and especially strategic and operational surprise), maneuverability, speed of advance, and mobility are all things which during the Great Patriotic War, and especially during its third period, contributed very greatly to the success of the Russian arms and would also be likely to make a similar contribution in modern war.

It is therefore not surprising that we found General Dubinin telling his audience at that conference that it was not possible to find effective solutions to any problem without relying on the rich experience of military history and on that of the Great Patriotic War. Nor is he the only one. A recent article by Lt. Gen. V. A. Semenov, Chief of Staff of the Odessa Military District, gives many examples of the ways in which, in the military district in question, military history in general, and that of the Great Patriotic War in particular, was used to improve the quality of the training of his groups.[20]

First, it is used in lectures. A particular lecturer, a certain Col. Balakhtar, is highly praised for having chosen to illustrate a lecture on the preparation for, and the conduct of, operations in war today by repeated references to the relevant aspects of the Iassy-Kishinev Operation of 1944. Secondly, military history is used in seminars designed for the training of staffs. Thirdly, it is used to assist in the planning and conduct of large-scale exercises. In 1982, the article tells us, the director of the forthcoming large-scale exercise Dniester instructed his planners to base their work on the experience of the Korsun'-Shevchenko and Iassy-Kishinev operations. This, we are told, did a great deal to teach staffs, units, and subunits how to encircle and destroy an enemy with the minimum number of losses.

The article tells us of a number of other occasions where military history has made itself useful in an extremely practical manner. Thus, one exercise was done as a repeat of what had become standard Soviet practice in the third period of the Great Patriotic War, that of preceding an attack on a defensive position, not by a prolonged artillery and air bombardment, but by one which was very short, but at the same time exceedingly heavy. By this method, great damage was done to the enemy's defenses and severe casualties inflicted on him, while at the same time the brief duration of the bombardment meant that it was still possible to secure surprise; so the attackers had a double advantage. It proved to be a first-class method of mounting a successful attack, and those participating in that recent exercise were able to see for themselves how good it was.

We therefore need not be astonished that General Semenov has expressed himself as follows on the value of military history in the training of troops, commanders, and staff; and it is with his words that I shall bring to an end my paper:

> *We are convinced that the experience of past wars on command-and-staff and on tactical exercises is of real help in the practical work of the commanders and in developing initiative in them. It assists them to look hard for an appropriate method for organizing and training of the units and subunits subordinated to them. It allows us to get officers to draw the important conclusion that no battle is a replica of any other; that each has its own particular circumstances which introduce their own particularities into the course of the fighting, thereby demanding from the commanders a creative* (tvorcheskii) *approach to their work, coupled with a reliance on the experience of the past.*

In other words, in the USSR military history is having a real, practical value for the Soviet officer, who is given every encouragement to study it. This applies to every officer whether he be soldier, sailor, or airman. Would that such a state of affairs also applied in Britain!

Notes

1. *Sovetskaia voennaia entsiklopediia* (hereafter cited as SVE) (Moscow, 1977), s.v., pp 627–30.

2. P. A. Zhilin, *O voine i voennoi istorii* (Moscow, 1984), p 363.

3. One important exception to this rule is E. I. Smirnov's *Voina i voennaia meditsina 1939–1945* dealing with the Soviet medical services in World War II and hence with casualties. But this was published in 1979 in Moscow by *Meditsina*, not by the Ministry of Defense.

4. SVE (Moscow, 1977), s.v., "Institut voennoi istorii."

5. Postanovlenie KPSS, 27 August 1966. This was the party's order which brought the Institute into being.

6. *Voenno-istoricheskii zhurnal* (hereafter cited as VIZh) 11 (Nov 1984), pp 73–78.

7. *Istoriia Velikoi otechestvennoi voiny Sovetskogo soiuza, 1941–1945* (Moscow, 1961–65).

8. *Istoriia Vtoroi mirovoi voiny, 1939–1945* (Moscow, 1973–82). When Grechko died, Marshal Ustinov succeeded him in the chairmanship.

9. N. I. Krylov, et al, *Navstrechy pobede* (Moscow, 1970).

10. I. G. Kagan, *Vilenskaia krasnoznamennaia* (Moscow, 1977).

11. VIZh 12 (Dec 1985), pp 85–86.

12. *Bol'shaia sovetskaia entsiklopediia.* The first edition appeared in 1926; and the volumes were published regularly until the middle thirties. By then, of course, Stalin's purges and their accompanying terror made impartial scholarship dangerous; and the final volumes did not appear until after the Great Patriotic War. The second edition appeared 1949–60; the third from 1970 to 1978.

13. SVE (Moscow, 1976–80).

14. *Voennyi entsiklopedicheskii slovar'* (Moscow, 1983).

15. For a Soviet assessment of these various encyclopedias, See M. M. Kir'ian, *Problemy voennoi teorii v sovetskikh nauchno-spravochnikh izdaniiakh* (Moscow, 1985), esp pp 6–51.

16. Ibid.

17. *Voennaia istoriia: uchebnik* (Moscow, 1983). This is a revised and updated edition of one which appeared under the same title in 1971.

18. *Istoriia voenno-morskogo iskusstva* (Moscow, 1969).

19. It is because the order to advance to Paris is highly regarded by the party that Gen. Zhilin felt obliged to ascribe its authorship to Kutuzov, instead of to the Tsar. Some Tsars are quite popular with the party, but *not* Alexander I.

20. Lt. Gen. V. A. Semenov, "Iz opyta voenno-istoricheskoi raboty v Krasnoznamennom Odesskom voennom okruge," VIZh 2 (Feb 1986), pp 49–57.

Commentary

John J. Dziak

I would like to comment first on Peter Vigor's paper, give you my views on some aspects of the paper that didn't necessarily emerge in his oral presentation (I had the benefit of reading the paper beforehand), and suggest other areas of the paper where professional historians can look for a better appreciation of Soviet military history and the place it occupies in the Soviet system.

As usual, Peter has written and presented a stimulating insight into the Soviet system, not only the place and function of military history in that system. His paper demonstrates to me, at least, that from a military historian's perspective, what we are dealing with is a party-state. In fact, we may add a counterintelligence state, where facts are the property of that state, receiving a special kind of protection to ensure the party's exclusive claims to its monopoly role. Moreover, since the Soviet military represents one critical leg of the power triad in the Soviet system, namely the party, the KGB, and the Ministry of Defense, then the history of the military merits a special kind of protection accorded to other categories of state secrets. Hence, military history is also subjected to politics projected into the past, because the proper view of a military historical issue is as vital to the reigning leadership as are the correct interpretations of critical party events.

The vagaries associated with the fortunes of military history are perhaps best illustrated by the military's ambivalent feelings toward Stalin. On the one hand, he savaged not only the best military thinkers and commanders, but at least half of the officer corps as well. The rehabilitation of many of these figures since World War II certainly suggests to me that a respectable amount of military pressure on the party had indeed been a factor in those rehabilitations. On the other hand, students of Soviet military history are faced with the spectacle of a sometimes blatant, sometimes subtle re-Stalinization emanating from within the military itself.

For example, a number of years ago in the late 1970s, we had a visit by two general officers from the Soviet Union who toured several senior U.S. military schools, one of which was the Army War College. I had the good fortune of hearing one of their lectures. Similarly, we sent a group back to the Soviet Union as part of this exchange. Our people talked about amphibious operations in World War II, and the Soviet general officer

talked about the latter phases of Eastern Front operations. As part of his graphic support package, the Soviet officer had a tray of 35-mm slides with numerous maps showing the various operations in 1944 and 1945. Very interestingly, there were no graphics of any single military figure, although senior military leaders were shown together in group photographs. However, the Soviet officer did have a singular slide of Stalin, and he made very favorable reference to Stalin as the Supreme Commander in Chief.

Since he had only one graphic of Stalin, and only one graphic of each of the maps, every time he wanted to move back to another battle he had to go clicking his way through the tray of slides. Every time he came to that picture of Stalin he let it stay up there for several seconds, and I don't think I was the only one who noticed it. This was a subtle rehabilitation from the very military which experienced the loss of at least half of its officer corps during the purges. Hence, we have the phenomenon of the institution that was savaged and otherwise terrorized at a later date voluntarily singing the praises of the perpetrator because he turned out then to be a good provider. This seems to me a variant of the notorious "Stockholm Syndrome," whereby hostages develop a sympathy for and rapport with their captors.

As Peter points out, a major factor in the preparation of military history in the USSR is the business of archives. He goes through a list of several, ranging from the Central Archives of the Ministry of Defense to others such as the Central State Military Archives. He observes correctly the difficulty of accessing such materials for Soviet writers and the near impossibility of doing so for Western writers. I would add that there is still another dimension which places the writing of Soviet military history even further beyond our reach, beyond even the reach of Soviet military historical writers. This is the realm of state security, the KGB.

As students of Soviet military history, we must never forget that the "Organs," as they are called, are technically and legally part of the Soviet military as far as the party is concerned. In practice, to be sure, neither the MVD nor the KGB submit to Ministry of Defense or General Staff control, but they do have armed forces bigger than the military establishments of most sovereign countries.* They have their own combat histories, and they have special designation forces or commando forces. There were NKVD armies in World War II. The Soviet Army has been penetrated by the "Organs" from the very first days of the regime, from Dzerzhinskii up to the incumbency of the current KGB Chief, Chebrikov. It was state security which smashed the military at Stalin's bidding.

The KGB along with elite military special designation units (*spetsnaz*) spearheaded the Afghan invasion in 1979. Where are the military records? In the KGB archives? Will historians from the Ministry of Defense ever see them? I consider that highly unlikely. Would seeing them provide a different light on given issues, for instance, the Tukhachevskii affair of

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*The KGB border guards number between 300,000 and 400,000, according to John Barron's *KGB Today* (New York, 1983), p 451.

1937? If the late Alexander Orlov, who was the NKVD resident in Spain in the late 1930s, made claims that were even fractionally correct, then I would submit that a whole new chapter in Soviet military history waits to be written.

Peter correctly notes the fixation with the Great Patriotic War and the role of the Institute of Military History founded in 1966 to promote the study of military history throughout the USSR, with a focus on the Great Patriotic War. The party's intent in keeping the Great Patriotic War alive and well is because it is the great legitimatizer, which is one of the reasons, I believe, that relatively little attention is given to the Civil War. I am not saying they do not write on the Civil War, but compared to the writings on World War II, you see a major numerical difference. I would propose a close scrutiny of that event, that is, of the Civil War. In my opinion, legitimacy is the issue, and the party doesn't desire any inquiry which might raise doubts about that legitimacy. We do have evidence of published official accounts of the other security-related operations. I am thinking specifically of the Cheka's "Red Book." These official accounts of the Cheka's early activities were suppressed in the early 1920s by Dzerzhinskii at Lenin's bidding, because they probably were considered a little too dangerous and embarrassing.*

There is another opportunity for students of Soviet military history that would be lost if we focused too singularly on official Soviet accounts evolving from a growing fixation with Russian history, culture, and the Orthodox faith. A revival of that historical interest in the Soviet Union is the recent interest in Russian military history, specifically White military history and White operations in units during the Civil War. In addition to the circulation of some manuscripts favorable to the Whites, denigrating the Red Army, tapes of White regimental songs have been also making their appearance in the Soviet Union. I would submit that this phenomenon is more than mere dissidence. It represents, as I see it, an awakening to events, facts and interpretations of one crucial era of Soviet military history independent of the party-approved, "correct" versions and thus offers a unique opportunity for Western military historians.

In his review of *Vtoraia mirovaia voina* (1983) from the Officer's Library Series, Peter discusses in some detail the book's summary treatment of Allied contributions to the victory over the Axis and the book's claims to the exclusiveness of the Soviet role in the defeat of Nazi Germany. Personally, I would not be as solicitous of this claim, if for no other reason than the party very conveniently ignored some of the following: for instance, its own culpability in bringing about World War II in the first place. Let's not forget that it was the Stalin-Hitler Pact of 1939 which helped to bring on that event. Second, there was the period of the Soviet-Nazi honeymoon from 1939 to 1941, in which the Comintern and other elements of the Soviet state played no small part in fostering defeatism in the West. I am thinking here especially of France. We also know from other information that the Soviets

*For a discussion of this little-noted issue see George Leggett, "Lenin's Reported Destruction of the Cheka Archive," *Survey* 107 (Spring 1979), pp 193–99.

encouraged German actions and victory, especially in the Eastern Mediterranean, among others. Stalin's grand strategy was to keep Hitler and the West at war as long as possible to enable him to recover from the self-imposed madness of what he did to his own military in the late 1930s.

Hence, the charge against the West that Roosevelt and Churchill wanted Germany and the USSR to bleed each other not only is historical nonsense, but is an imputation to others of Moscow's own policy during 1939 to 1941. Finally, I would ask also, what about Lend-Lease and the earlier fact that Moscow's honeymoon with Hitler helped facilitate the destruction of millions of tons of Western shipping? If these had been available and not lost, how much more material at a later date would have been available for Lend-Lease to the USSR?

These are items in Soviet military-political history too often ignored in the West. Let's not let them get off so easily. As Peter observed in his paper, the spate of Western military history in the beginning of the 1960s was carefully scrutinized by the Soviets for political information useful to party historical purposes. Why don't we give them legitimate history to reflect upon and begin to fill in some of these memory holes?

On a minor note, Peter analyzes the relevance from the Soviet perspective of the Great Patriotic War to combat in the nuclear age. I would only add to his list of pertinent items (maneuverability, speed of advance, mobility), namely, *maskirovka* or deception. From the Soviet perception, without the last, the others may not follow.

In closing, Peter notes in his paper that the Soviets see military history as having practical value to Soviet officers from the combat arms. I would suggest that is an attitude we might do well to emulate.

Now, for Jacob Kipp's paper. I found his piece in some ways a pleasant exercise in *maskirovka*. His title advertises the paper from 1918 to 1936, but he offers us a concise look at Tsarist military doctrine and operational art in its various stages and the transition, with continuities and discontinuities, into the Soviet era.

Concerning continuities, we find Lt. Col. A. Neznamov redefining control and initiative so as to stress the role of the commander in imposing order from above and junior commanders confining their initiatives to subordinating their unit's roles to the commander's plan and adjusting their actions accordingly. It seems to me that the endless discussions we have in the West on the issue of initiative among Soviet commanders would profit from an infusion of Neznamov. It pays to read history.

Discontinuities are another matter. In the business of control, there is precious little in the Tsarist era to compare with the present in the role of the political officer structure or with the "OOs" (Special Departments) of the Cheka up through the KGB today.*

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*The OOs (*osobye otdely*) of the KGB infuse the Soviet armed forces to ensure reliability and loyalty and to carry out the KGB's counterintelligence mission. See John J. Dziak, *Chekisty: A History of the KGB* (Lexington, Mass., 1987).

Jake's paper offers several other intriguing surprises as well. His research shows that Col., later Gen., M. D. Bonch-Bruevich denounced the Young Turks associated with B. A. Gerua of the General Staff Academy prior to World War I. This resulted in their dismissal by Minister of War Sukhomlinov. Bonch-Bruevich has a very interesting pedigree when it comes to this type of business. In the little bit of research I have done on the subject, I tripped across his name several other times. He apparently was also central to the setting up and execution of Col. Miasoedov of the Department of Police on charges of espionage for the Germans during World War I. He did this in collaboration with one Gen. Nikolai Batiushen. General Batiushen was a counterintelligence officer who, we may recall, earlier had been the man who oversaw the recruitment and running of Col. Alfred Redl of the Austro-Hungarian Staff. The Miasoedov affair was a very shabby operation. Even some Soviet writers called it judicial murder. However, Bonch-Bruevich down to the end (in his 1957 memoirs) still called Colonel Miasoedov a spy for the Germans.

Another item on Bonch-Bruevich: his brother V. D. Bonch-Bruevich was a Bolshevik. Both men were very close throughout the years right up to the Bolshevik Revolution. I have never come across anything showing that the Tsar's high command ever seriously questioned that relationship.

Classified Russian military documents, some of which contained Gen. N. V. Ruszkii's name and Bonch-Bruevich's name, showed up in some of Lenin's holdings. (General Ruszkii was commander of the Northern *Front* in World War I, and General Bonch-Bruevich was his Chief of Staff.) This was while Lenin was still in Switzerland and has led to speculation about Bonch-Bruevich's true loyalties.* General Bonch-Bruevich also worked in military counterintelligence and virtually instantaneously transferred his loyalties to the Bolsheviks following the Bolshevik coup in October 1917. His longevity under Stalin was exceptional: he died in good graces in the mid-1950s of natural causes, and he was never touched in the purges. What this all suggests is that General Bonch-Bruevich has a dimension that wants more historical scrutiny. Was he a "liberal" publicly and something else secretly? Why the vendetta against the hapless Colonel Miasoedov? Did he have anything to do with passing Russian military documents to Lenin? To the Germans? Jake Kipp's reference to Bonch-Bruevich's denunciation of the Young Turks prior to World War I may very well be the beginning thread which could unravel the hidden fabric of this man's shabby career.

It is also mildly surprising to note that relations between the party and its revolutionary military leaders on the one hand, and the military specialists on the other, were not necessarily as testy as we are often led to believe. Jake attributes much of this apparent loyalty to the system of political commissars and the infusion of party cadre. I would agree with that, but I think we must not lose sight of the efficacy of the hostage-taking of officers' families—that kept their loyalty—and the paramount role of the Cheka

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*See Dziak, *Chekisty*, pp 10–12, 20–22, 42; George Katkov, *Russia 1917: The February Revolution* (New York, 1967), pp 119–32.

Special Departments (the OOs). I think we have to keep the role of state security constantly in the forefront when we are talking about military affairs.

As with Peter Vigor's paper, Jake's essay transcends the announced topic. For instance, the psychology of Stalinism is one of these items. Tukhachevskii's ideas on the economic requirements to undergird his military program certainly were not at variance with Stalin's objectives in collectivization and industrialization, which ultimately resulted in the heavy industrial base that Tukhachevskii so desperately needed for his modernization program. Nor did Tukhachevskii's notion of the Revolution diverge from Stalin's later practice of extending Soviet socialism on the points of Red Army bayonets. As Stalin did with the Left Opposition, so too did he do with Tukhachevskii: he took much of his program and then got rid of him. It was that straightforward!

An item that gets close to the essence of the conflict between Stalin and Trotsky is the issue of the military doctrine of the new Soviet state. Jake observes that Trotsky, like the prewar opponents of a unified military doctrine, worried about the ossification of doctrine into dogma once it was given official sanction. I strongly agree, but I would take it somewhat further. Trotsky, for all his revolutionary ardor, was somewhat ambivalent about such concentrations of political, military, and economic power. His view of Bonapartism was not necessarily the notion of a "Red Kornilov." He was worried about the militarization of the state, society and the economy, that is, the skewing and loss of revolutionary priorities; and that is exactly where Stalin's policies led.

Jake, in his concluding discussion, notes that it was only after Stalin's death that the Soviets were able to recover their military past in such personalities as Tukhachevskii and Svechin. I agree, and I applaud one of the finest examples of writing in Russian and Soviet military history that I feel this paper represents. But allow me to close this commentary with a question. Tukhachevskii comes across in Jake's paper, and I agree with his assessment, as an arrogant careerist, one who had a lot in common with Stalin in militarizing the Soviet economy and Soviet society. How then does one rehabilitate Tukhachevskii without ultimately rehabilitating Stalin?

Session III

FIGHTING THE GREAT PATRIOTIC WAR

Introductory Remarks

Brig. Gen. James L. Collins, Jr., USA, Retired

Lt. Gen. Pavel Andreevich Zhilin visited the Air Force Academy, and I would like to elaborate as to why he was here and also why I visited him several times in the Soviet Union. Actually, all these visits were brain-washing expeditions on both sides and somewhat successful.

General Zhilin, the head of the Institute of Military History, was upset and concerned that American authors did not give credit to the Soviet Union for its heroic struggle in World War II. In fact, he and his office considered most American authors as the falsifiers of history, and I, as then Chief of Military History, was the "Chief Falsifier." In turn, I wanted to explain to him that as Chief of Military History I had absolutely no authority over the civilian authors who wrote military history outside of my own office, not that I wouldn't have liked to have some, but that he, in his capacity as Chief of Military History in the Soviet Union, could decide what was written in the USSR about military history.

He invited me to the Soviet Union to visit in person some of the great battlefields and to see what had gone on in World War II in the Soviet Union, and I must admit that seeing the mass graves of 900,000 people in Leningrad, or the shrine on the Mamaia Hill at Volgograd, does give one a little grasp of the sacrifices of the Soviet people. When I brought him to this country, and we swapped visits twice, I showed him the diversity of America, the American people, and the American military and gave him a better idea of our culture, our history, and our heritage. I took him to Williamsburg, to the Alamo, as well as to all the service academies and to the Army War College. That puts a little perspective on these visits.

Today, we are going to look at different parts of World War II, and I believe this is an area that has not been dealt with in the depth that I feel it should be, that is, the struggle on the Eastern Front. Here we are going to look at some of the aspects of land and air warfare; and we should, because the greatest land and air battles in the history of the world were fought on the Eastern Front. The Battle of Kursk involved 2,500 tanks. In the latter stages of the war, air armies of 2,000 and 3,000 planes were not uncommon. So, we should know a little more about what went on on the Eastern Front. We are fortunate in that we have three papers dealing with various aspects of that experience.

Roles and Missions: Soviet Tactical Air Power in the Second Period of the Great Patriotic War

Von Hardesty

This paper examines the rebirth of Soviet tactical aviation in 1942 and 1943. These years approximate what Soviet historians call the "Second Period of the Great Patriotic War." My basic thesis is that this second or middle period of the war occupies a central place in the history of the Soviet Air Force. The war emergency compelled Soviet air planners to face simultaneously two major questions: how to reorganize to permit the participation of tactical air power in joint operations with the ground forces and how to forge the means to battle for air supremacy? These two questions are the core of my paper.[1]

The second period of the war necessitated a series of major changes in the structure and operations of the Soviet Air Force. These war-induced reforms permitted the air force to recover from the devastation of Operation Barbarossa and rapidly attain air supremacy over the *Luftwaffe* by 1943. The acquisition of air supremacy contributed in a vital way to the ultimate victory of the Soviet Union over Nazi Germany. These same wartime reforms, one might add, laid the groundwork for the development of the Soviet Air Force in the postwar years.

Soviet Historiography of the Air War

Soviet historiography divides the so-called "Great Patriotic War" into three distinct periods. This historical periodization is useful to comprehend the overarching historical evolution of the Soviet Air Force, and it enables us to appreciate as well the particular and pivotal character of the second stage of the war.

> The first period begins on June 22, 1941, with Operation Barbarossa, extends through the winter campaign around Moscow, and concludes with the German summer offensive in 1942.

> The second period of the war begins on November 19, 1942, with the Soviet counterattack at Stalingrad that led to the encirclement of the German 6th Army. During this middle phase of the war, the Soviet Air Force participated in the air blockade at Stalingrad, the air engagements over the Kuban, and the decisive air operations in cooperation with the Soviet ground forces at Kursk. The second period lasts through 1943 and coincides with the Soviet acquisition of strategic air supremacy.
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> The third, and concluding, period extends from January 1944 to May 1945. Included in this triumphal stage of the war are the massive Soviet offensives that crushed Nazi Germany and the Soviet Union's entrance into the war against Japan. Over Belorussia, Eastern Europe, the Baltic, East Prussia, and Berlin, the Soviet Air Force deployed its vast air armies to assist the Soviet ground forces in their inexorable advance to Berlin.

Considered in this broad framework, the second period of the war possesses critical importance for historians of the Soviet Air Force. As I. V. Timokhovich, a contemporary historian of Soviet air power has stated, this period brought a "fundamental break in the war, the period of the great victories of the Red Army and heavy losses suffered by German air power."[2] P. S. Kutakhov, a recent Commander of the Soviet Air Force, has portrayed this phase of the war as a time for the Soviet Air Force to achieve "qualitative and quantitative superiority over the enemy's air forces" and to begin the employment of "more aggressive forms of warfare."[3] Other Soviet historians and memoirists have interpreted this middle period as a critical stage for experimentation, rapid modernization, and tactical innovation that would set the stage for the ultimate victory of the Soviet Air Force over the *Luftwaffe*.

The Second Period of the "Great Patriotic War"

The German advance had been stopped on the approaches to Moscow in the winter of 1941–42. The winter victory, the first major reversal for the *Wehrmacht* in World War II, appeared to many at that time as merely a reprieve for the Soviets, not necessarily a strategic victory. The Soviet Air Force, except for its remarkable display of cold-weather flying at Leningrad and Moscow, had shown little combat prowess against the *Luftwaffe*. Many Westerners at the time echoed the optimism of the Germans and assumed that the *Luftwaffe* would quickly reassert command of the air during the next, and perhaps decisive, summer campaign.[4]

The war emergency of 1942, at the onset of the second period of the war, paralleled the military crisis faced by the revolutionary Bolshevik regime in 1918. During the Russian Civil War, Leon Trotsky organized the Red Army that saved the Revolution. Now Soviet air planners had to demonstrate the same "capacity for pragmatic improvisation under stress,"

as Roman Kolkowicz has described it, that Trotsky displayed in the creation of the Red Army.[5] In 1942, there was the immediate challenge to survive, the arduous task of keeping the Air Force operational against the formidable *Luftwaffe*, and then the requirement to redefine the organization and air tactics in such a fashion that the latent strength of Soviet air power could be realized.

During the years 1942–43, the Soviet Air Force displayed a "capacity for pragmatic improvisation" worthy of Leon Trotsky. One of the reasons for the remarkable turnabout of these years was the urgent nature of the military crisis which allowed for an interlude of relative professional freedom. During this period, with its relaxation of party political controls and the emphasis on military expertise, a new generation of leaders emerged. The appointment of A. A. Novikov as Soviet Air Commander in April 1942 represented a deliberate attempt to place competent military leaders in key commands. Novikov would preside over a revitalization of Soviet air power during the war years.

Another key factor behind the rebirth of the Soviet Air Force in the second or middle period was the historic decision to evacuate the aircraft industry behind the Urals. This herculean task of removing key aviation plants and workers to safe rear areas had been completed by the time of Novikov's appointment. These reconstituted facilities rapidly expanded the production of a third generation of fighter and ground-attack aircraft. The middle period of the war would see the inventory of aircraft mushroom, enabling the Soviet Union to deploy a vast tactical air force that would win air supremacy in 1943 and participate in combined-arms operations that would overwhelm the enemy. Always numerically superior after 1942, Soviet tactical aviation also possessed aircraft that were simple in design, rugged in construction, and easy to maintain in the primitive battlefield environment of the Eastern Front.

The burdens faced by Soviet air planners in 1942 were not solely the consequence of the devastation of Operation Barbarossa and the debilitating campaign of the previous winter. There were other lingering problems growing out of the prewar years that defined the character of the Soviet Air Force in 1942. The Stalinist purges of the late 1930s decimated the officer corps of the Air Force and profoundly weakened the entire Soviet military establishment. Even in the fall of 1941 Stalin ordered the execution of Gen. Ia. V. Smushkevich, the last of the talented prewar air commanders. Before him a host of air commanders had fallen victim to the purge, leaving the Air Force with few experienced officers at the time of Operation Barbarossa.

These events created a profound sense of failure and pessimism in the Soviet Air Force, a generalized attitude that was reinforced by the poor performance of Soviet aviators in the 1939–40 war with Finland. Soviet air units had displayed little combat skill against the miniscule Finnish Air Force during this embarrassing campaign. Prior to Operation Barbarossa, the Soviet Air Force had made only a partial transition to its new generation of fighter and ground-attack aircraft. Frontline air units faced the confusion of transition training and aircraft deployment even as the *Luftwaffe*

struck. There were severe teething problems with these new models, especially with the LaGG–3 and the MiG–3. Even the Il–2 *Shturmovik*, at this stage of the war a single-seat, ground-attack aircraft, had not performed effectively.

When one adds the disruption and confusion following in the wake of retreat, the lack of centralized control over surviving air units, the ineffectual fighter air tactics, and the lack of pilot experience, it is apparent that the Soviet Air Force faced in the middle period a set of challenges similar in magnitude to those faced by Trotsky and the Red Army in 1919. Unlike with Trotsky, revolutionary zeal and the ruthless mobilization of people and weapons alone could not overcome the implacable enemy. The Soviet Air Force had to match a formidable air enemy in organization, tactics, and technology.

The arena for air operations in the east was vast and demanding, with no exact parallel anywhere in World War II. The range of combat aircraft, particularly fighters, was severely limited in 1942; and against the enormous backdrop of the Russian landscape, there was no effective way to maintain a sustained and effective air presence—even in the active sectors. This fact has been obscured to a significant degree by our altered sense of time and space in the jet age. Both the Germans and the Soviets faced enormous burdens in basing and supplying their frontline air units. Roads were primitive, railroads did not always provide connections with the hinterlands or active combat sectors, and the absence of adequate air and land transport made logistics a nightmare.

The enormity of the landscape can be fully appreciated if we realize that from the fall of 1941 to the fall of 1943, the width of the Eastern Front was never less than 2,400 miles. In late 1942 the front extended for 3,000 miles.[6] The late Gen. Benjamin Kelsey, who flew into the Soviet Ukraine at the time of the Shuttle raids in the summer of 1944, made this observation:

> *While flying over the Ukraine I was struck with the fact that there was no continuous line of contact between the Soviets and the Germans. There was plenty of evidence of concentrated action in isolated areas. It appeared that by concentrating force it was hoped to seize the initiative in local areas. Since either side could use the tactic, flanking action was always possible. Apparently gaining the initiative was the goal. The defender was always at a disadvantage.*[7]

Kelsey's observation exposes a stubborn and irreversible reality faced by the *Luftwaffe* and the Soviet Air Force in World War II: air supremacy could never be co-extensive with the Eastern Front. Only local air supremacy was operationally feasible and, for both air forces, the task was never easy.

As large armies moved across the vast Russian land mass they, by necessity, drew the *Luftwaffe* and the Soviet Air Force into the ground war. Air cover was deemed a prerequisite to conduct effective operations by infantry and mechanized units. Executing breakthroughs and envelopment maneuvers placed an even higher premium on air power. For these

compelling reasons, air operations in the east became almost exclusively tactical in character. Winning local superiority meant the freedom of movement and the option of taking the offensive.

To lose control of the air over the tactical zone meant the reduced capacity to conduct effective air reconnaissance, to conduct offensive operations, or to maneuver freely. Even when Soviet aircraft production allowed the Soviet Air Force to deploy air armies of 2,000, sometimes 3,000, aircraft, the commitment to tactical air operations remained unchanged. As the size of the Eastern Front shrunk in 1944–45, the Soviets only gradually extended the scope of their tactical strikes to the enemy rear areas. This style of air operations, of course, allowed the *Luftwaffe* to maintain itself up to the very end and permitted certain kinds of obsolete aircraft, for example the Ju–87, to find extended service in the east.[8]

Another characteristic of the Eastern Front was the extraordinary attrition suffered by both air forces. Recent studies reveal that the *Luftwaffe* suffered severe losses in aircraft and air crews from the Battle of Moscow to the end of the war.[9] Operational readiness rates for German combat aircraft were consistently low, the consequence of the primitive airfields, the extremes of weather, the difficulties of maintenance, and the uncertain system of supply. During the middle period of the war—as the pace of air combat quickened in major battles at Stalingrad, in the Caucasus, and at Kursk—both air forces suffered significant combat losses.[10] For the Soviet Air Force, these heavy losses did not compromise the steady pattern of recovery. Aircraft production gained momentum throughout 1942 and 1943. For the *Luftwaffe*, moreover, there would be no significant reinforcements after 1942. However, the *Luftwaffe* would remain a formidable foe and, on occasion, demonstrate the capacity to reassert local air superiority, but its abrupt decline in numbers, so evident in the middle period, was irreversible.[11]

The Reorganization of 1942

On April 11, 1942, Gen. A. A. Novikov was appointed Commander of the Soviet Air Force and elevated to the position of Deputy Peoples Commissar of Defense. Novikov's rise to leadership signaled the beginning of a series of organizational and doctrinal changes that would profoundly alter the Soviet Air Force. With Gen. S. I. Khudiakov as Chief of Staff and Gen. G. A. Vorozheikin as Deputy Commander, Novikov presided over the reorganization of the air force's central administration, the creation of "air armies," and the formulation of the "air offensive" doctrine as the means to concentrate and coordinate the Soviet Union's growing tactical air might.[12] These fundamental reforms constituted a kind of template for a radical redesign of the air force that would provide for recovery in the short run and air supremacy by the end of 1943.

Soviet tactical aviation was removed from the general army command structure and, once regrouped into air armies, placed under the direct control of *front* commanders. This rapid change allowed the *Stavka* to deploy

its air force for the first time to meet the strategic, operational, and tactical requirements of the war. Concurrently, the Air Corps of the *Stavka* Reserve was created to permit the massing of huge air reserves in the rear areas to support offensive operations of the army.[13] Where before Soviet air power had been atomized and lacked the capacity for quick maneuver, the Soviet Air Force now could respond to the combat requirements of the war in a decisive and concentrated fashion. The techniques for effective command and control, of course, were not in place in the spring and summer of 1942, but the *Stavka* now possessed an air force with an organizational structure shrewdly adapted to the particular needs of the Eastern Front.[14]

The performance of the Soviet Air Force at the beginning of the war demonstrated in a dramatic way how a large, poorly equipped, and inadequately trained air force could be nearly destroyed in the field by means of preemptive air strikes. Contemporary Soviet historians and military writers have been quick to identify the many deficiencies at the beginning of the war.[15] The Soviet air units had been based in a fragmented way on the western periphery, close to the German border, with few, if any, steps taken to provide for the dispersal and camouflage of aircraft. Once the war began, the air force organization displayed little capacity for quick response or tactical cooperation with the ground troops.

These deficiencies were as much technological as they were operational in character. In 1941, there were few radios for use by forward air units and local commanders. The Soviet Air Force had demonstrated minimal skill in defensive operations. Air units resisted the German advance throughout the summer of 1941 in a disorderly way, often launching self-destructive counterattacks that displayed little tactical skill or coordination with the ground forces. The first year of the war had been a melancholy period with high attrition and few triumphs.[16]

The New Leadership

The story of how the Soviet Air Force recovered from the humiliating defeats at the hands of the *Luftwaffe* in the first year of the conflict begins logically with General Novikov, the new Air Commander, and the talented group of air officers who assumed command with him during the bleak spring of 1942. Novikov, a veteran of the Civil War and one-time infantry officer, joined the air force in the early 1930s, moving quickly up the ranks and avoiding the destructive sweep of the purges at the end of the decade. He served as the Air Force Chief of Staff for the Leningrad Military District during the Winter War and then as Air Commander after the conclusion of that conflict.

When the Germans invaded he was appointed Deputy Commander of the Soviet Air Force and displayed bold leadership in the Leningrad area where he mobilized a rump air force to resist the advancing enemy. The *Stavka* then assigned him to the Volkhov *Front* in March 1942 where he skillfully led a series of massed air strikes against the Germans on the Volkhov and Leningrad *Fronts*.[17] Novikov demonstrated an ability to

coordinate his air units with the ground forces. He demonstrated to the *Stavka* his aggressiveness and talent as an air commander at a perilous moment during the war. This battle experience led to his elevation as Air Commander of the Soviet Air Force, a post he would hold for the remainder of the war.

Looking back on World War II, Novikov ranks as one of the more important Allied air commanders. Yet, he occupies a place of relative obscurity. His career is curious and elusive in many respects. Novikov earned two gold stars as a "Hero of the Soviet Union" and was appointed Marshal of Aviation in 1943 and then Chief Marshal the following year. Along with his friends and commander, Marshal Zhukov, he enjoyed uninterrupted service during the war, only to find himself abruptly removed from his leadership position in 1946. He did not suffer the fate of Ia. I. Alksnis (1897–1938) or Ia. V. Smushkevich (1902–41), two previous air commanders put to death, but Novikov spent time in prison as a consequence of the postwar purge of the military. From 1946–53 Novikov disappeared from view.[18] Following his release from prison, he served in a number of posts, including a short tour of duty in 1957 as the Commandant of the Higher Aviation School of the Civil Air Fleet. Novikov died in 1976.

Unfortunately, Novikov did not leave detailed memoirs or an extensive corpus of writings. Except for his autobiographical *V nebe Leningrada*,[19] which deals with his experiences at the beginning of the war, there is little public documentation of this pivotal wartime military figure. In *V nebe Leningrada*, however, we catch glimpses of his personality and outlook. He describes the formative period in some detail, along with some passing references to his family, in particular his father. Novikov's historical writing also reveals that he consulted archival materials to construct his history .ather than trust his unaided memory. Yet, his account of these early days of the war frequently lacks candor and necessary detail.[20]

Gen. John R. Deane, along with other American military officers who were stationed in Soviet Russia during the war, gave high marks to Marshal Novikov as an effective air commander. During the 1944 shuttle raids, at a time when Soviet-American relations were highly strained, General Deane described Novikov and his air staff as sympathetic and helpful, even to the point of blunting apparent moves by other high ranking Soviet military and party figures to "sabotage" the joint effort.[21] Nikita Khrushchev also spoke in his memoirs about Novikov as a talented military commander.[22]

Novikov was crucial to the recovery of the Soviet Air Force in the second period of the war. His pragmatism, energy, and forceful leadership did much to rebuild confidence in this demoralized branch of the Soviet armed forces. His new command required an organizational structure that could simultaneously meet the needs of strategic defense in the face of the German summer offensive toward Stalingrad in 1942 and the strategic requirements for offensive operations in the future. Novikov performed these tasks with considerable skill. His long tenure as Air Commander would give continuity to the Soviet Air Force during the war.

Creation of the Air Armies

The 1st Air Army was formed on May 5, 1942. By the end of the year a total of seventeen air armies had been organized. This new organization assigned Soviet *front* aviation into large mobile units, designed to permit massed air strikes. These same air armies represented a belated move by the Soviet high command to reorganize its air power into operational formations that would provide more centralized control. The new air armies were designed to overcome the older pattern where air units had been deployed in a decentralized and cumbersome fashion, with no real means for massed coordinated strikes against the enemy.[23]

Air armies were assigned to a *front* for defined missions in defensive or offensive operations. Being highly mobile and subordinated to a *front* commander for a specific assignment, the air armies could be reassigned quickly to another sector or withdrawn, depending on the larger strategic intent of the *Stavka*. For the vast scope of the 2,000- to 3,000-mile Russian front, the air armies enabled the Soviet Union to apply its limited air power in an optimum fashion. This new vehicle for centralized control and coordination paved the way for the skillful application of air power to be deployed on the cutting edge of Soviet ground offensives in the third period of the war.[24]

The average size of an air army in the second period of the war numbered anywhere from 200 to 1,000 aircraft. Once Lend-Lease aid arrived and Soviet aircraft production acquired momentum in 1943, the size of air armies mushroomed, reaching 1,500 to 2,000 aircraft. In the final stages of the war some air armies possessed an inventory of 3,000 combat aircraft in certain operations.[25] The 1st Air Army, organized on May 5, 1942, is representative of this structure in its formative stages. It consisted of two fighter air divisions, each equipped with four air regiments; two mixed air divisions, each containing one bomber, two fighter, and two ground-attack regiments; a training air regiment; a reconnaissance squadron; a liaison squadron; and one night air regiment equipped with prewar PO–2 biplanes.[26] Such an air army, however, was rather small. When assigned to the Western *Front* in 1942, the 1st Air Army possessed a little over 200 aircraft. Even the more active 4th Air Army was comparable in size when it was assigned to the Southern *Front* in 1942. By the end of the middle period, however, this new organizational structure was in place with thirteen air armies deployed along the Eastern Front. The four remaining air armies were assigned to the Far East.

The tactical employment of air armies affirmed in practice the long-standing Soviet predilection to use air power primarily in support of the ground forces. Typically, each air army was assigned to an army group commander. To achieve proper air-ground coordination during a combat operation, the *Stavka* worked out specific responsibilities for both the air and ground commanders. The army group commander defined the overall plan, the number and sequence of missions to be flown, the required air units to be used, and the sectors to be covered by aerial reconnaissance. Upon receipt of the field order, the air army commander determined the

specific assignments for participating air units and all the associated planning to assure proper coordination with infantry, artillery, and mechanized units.

No small amount of work went into perfecting procedures for the deployment of aircraft, navigation, ground control, and target designation. Similar planning and coordination were required for defensive operations. The close support provided by each air army then was governed by the particular requirements of a field order worked out in advance by the army group staff. Embodied in each field order were precise instructions for coordination, frontline crossing points, target selection, and signals. To provide optimum flexibility and responsiveness, each detailed field order was prepared for the first day only. Subsequent orders were issued in a more fragmentary fashion, to allow the army group command to meet fully the combat requirements of the offensive operation.

Air armies provided the best means to forge joint operations where air power could make a real and substantial contribution to the war effort. A considerable amount of energy was exerted in the middle period to establish these techniques for command and control of aviation in *front* operations. It soon became feasible for the Soviet Air Force with its centralized control and maneuverability in the field to make massed air strikes, to provide sustained close air support and air cover for the army, to regroup if necessary, and to reinforce critical sectors.[27] At the same time, control mechanisms for air corps, air divisions, and air regiments were perfected through elaborate networks of command posts, the increased use of radios, and improved signal and guidance procedures.[28]

The organization of the Air Corps of the *Stavka* Reserve ran parallel to the Novikov reforms. The formation of powerful air reserves under the control of the *Stavka* enhanced the ability of the Soviets to concentrate air power for maximum effect. The first reserve units were organized in August 1942. By the end of the war, the *Stavka* had organized thirty air corps and twenty-seven separate air divisions. Typically an air corps consisted of two homogeneous and one mixed air divisions. Reserve air corps provided a ready means as well for training and reinforcement of units rotated out of active combat sectors. These air reserves played a critical role in the war and became an effective tool to apply numerical superiority in major and minor offensive operations. The building of these reserves progressed at a rapid pace with nineteen reserve air corps completed in April 1943.

The full impact of air reserves became apparent in the Belorussian offensive of 1944 when eleven air corps, totaling more than 3,000 aircraft, were thrown into the combat. Soviet historians of air power have given particular attention to the operational history of the Air Corps of the *Stavka* Reserve. The enormity of the Eastern Front during the first three years of the war required the rapid deployment and reinforcement of air armies across vast distances and over difficult terrain. Air reserve units had to arrive at their newly assigned sectors in a timely fashion, undetected, and accompanied by their support personnel and equipment. These redeployment maneuvers were often completed at night, in small groups,

with aircraft flying in radio silence at tree-top level to the front. Once reserve air units landed, they were again deployed to prearranged frontline airfields, moved into shelters if available, and camouflaged.

The execution of these maneuvers placed enormous strains on the air force leadership. Sometimes the time allotted for redeployment prior to active combat was short. During the middle period of the war only ten to thirty days were allowed. In later stages of the war, when the numbers of combat aircraft had increased dramatically, the time for redeployment for certain operations was sixty days. For participating airmen and technical personnel these flights to the front could be uncomfortable. On an Il–2 *Shturmovik* it was not unusual for a pilot to carry two to four ground crewmen on board.[29]

As the war progressed the capability for redeployment was expanded and refined. The acquisition of Lend-Lease aid in the form of C–47s, trucks, and other types of motor transport enabled the Soviets to quicken the pace of air redeployment. Transport aircraft could make second and third runs in a relatively short period of time and move significant quantities of equipment across great distances.[30] No small amount of coordination was necessary to move reinforcements in coordination with *front* air armies and the rear logistics network. Effective organization and practical experience enabled the Air Corps of the *Stavka* Reserve to reinforce frontline air armies with ever-increasing effectiveness.

Doctrine of the Air Offensive

The primary doctrinal innovation of the second period of the war was the "Air Offensive." This concept required time and experimentation to perfect, but its strategic consequences were considerable. The concept of the air offensive had been anticipated by prewar Soviet air theorists, in particular by A. N. Lapchinskii (1882–1938), but the real impetus to develop the idea came from the actual combat environment of the Eastern Front. The air offensive, by definition, called for the operational employment of massed air power in continuous support of the army in offensives. At first, air offensives were limited in scope, but with the increased capacities of Soviet *front* aviation after 1942, they soon acquired a magnitude that overwhelmed the enemy's capacity to resist. The ultimate success of this kind of air warfare fully justified the work of Novikov and his staff in 1942 to forge the means for active participation by the air force in joint operations.[31]

Novikov and his staff viewed the perfection of the air offensive as a logical extension of the organizational work that had created the air armies. The first air offensive was planned and executed at Stalingrad. But the air offensive only acquired maturity at the Battle of Kursk. The script for an air offensive, including the preparatory and support phases, called for the application of massed air power at critical points of the front, the acquisition of local air superiority, the suppression of enemy defensive positions, and close support of advancing infantry and tank armies as they encircled and destroyed enemy groupings.[32] The air offen-

sive, therefore, found its first complete application at Kursk in 1943, when several large armies provided continuous air support in depth along the main lines of the Soviet advance. Here the two basic phases of the air offensive were apparent—the preparatory phase of air assaults on fixed enemy positions followed by massive air strikes in coordination with artillery, tanks, and infantry.[33] At Kursk, the Soviet Air Force concentrated around 75 percent of its air armies in the attack corridors.[34]

As this technique improved, Soviet air attacks extended fully into the tactical defensive zone of the enemy, hitting command posts, communication facilities, and troop assembly areas. The trend was to move from occasional attacks in small groups against isolated targets to continuous massive assaults ahead of attacking Soviet troops. By the time of the large offensives in 1945—in Belorussia, across the Vistula, and against Berlin—the air offensive had acquired enormous striking power with air armies of 2,000 to 3,000 aircraft moving across the breakthrough zones and into the enemy rear.[35]

Soviet air planners in the second period endeavored to modernize the radio equipment and techniques for more effective command and control in the tactical operations. When the 16th Air Army, for example, was attached to the Central *Front* during the Battle of Kursk it deployed at times nearly 300 combat aircraft in echeloned waves to make concentrated attacks on enemy positions. To enhance control of such large numbers of aircraft, the Soviet Air Force began to make extensive use of radios and ground navigation equipment. The new equipment was tied to a matrix of command posts that assured close coordination with the ground forces and more effective control of tactical missions. For fighter and ground-attack missions command posts would be as close as 2 to 3 kilometers to the frontlines. For day and night operations there were homing beacons and searchlights. Aerial reconnaissance, always a key element in Soviet Air Force operations, also developed in the middle period with equal speed, moving from mostly visual observation techniques to aerial photography.[36]

This process of modernization made a dramatic impact for an air force that operated largely without radio communications before 1942. During the first year of war the Soviets had employed a primitive system of communications and guidance—signal panels, smoke chargers, rockets, and tracer bullets. Refinements in communication equipment brought Soviet air power to the forward edge of battle where, for the first time, there was the means for the coordinated use of the aircraft with tanks and artillery.

The Struggle for Air Supremacy

The reorganization of 1942 set the stage for the Soviet Air Force to challenge the *Luftwaffe* for air supremacy on the strategic, operational, and tactical levels. The quest for air supremacy was a prerequisite for the army to conduct offensive operations to achieve ultimate victory. Effec-

tive air supremacy for the Soviets did not mean the actual destruction of the *Luftwaffe* or the complete suppression of German air operations along the entire breadth of the Eastern Front. A practical definition of air supremacy meant control of the air space along a designated front or in a tactical zone. Air supremacy for the Soviets meant operational freedom for the army in coordination with supporting air units to perform their tasks freely and without any significant interference from the *Luftwaffe*.[37]

The Soviet Air Force employed two basic methods to win air supremacy: the destruction of enemy aircraft in aerial combat or large air engagements and air attacks on enemy airfields. Even in the second period air battles of considerable magnitude became commonplace in the tactical zones, especially over the Kuban and at Kursk, where the struggle for air supremacy was fought with hundreds of aircraft committed at one time. As Soviet historians point out, the Soviet Air Force increasingly advanced the scope of its air operations beyond the tactical zones as the war progressed, but the main arena for air action remained over the battlefield where air cover and air support were deemed critical. In the Soviet Air Force, domination of the air space became vital to support advancing infantry, tanks, and artillery, to neutralize enemy defenses, to check counterthrusts, and to exploit breakthroughs.

The Soviet Air Force possessed a limited capacity to launch bombing raids deep into the enemy territory. This could be considered a third method of achieving air supremacy. But the bombing of enemy industrial zones, training centers, storage depots, and communications never assumed a significant role in wartime Soviet air operations. While the Soviets made effective use of partisans to disrupt the German logistical system and communications, no concerted effort—except for isolated raids—was made to weaken the warmaking power of the enemy. The Soviet Air Force, in fact, lacked the technical means to strike German industrial centers. With only a handful of four-engined Pe–8s and no prospects of obtaining long-range bombers from the West, the Soviets wisely committed its bomber force, in reality medium bombers, to tactical air operations.[38]

Enemy airfields in the tactical zones or in support of active operations were always vulnerable to Soviet attack. On January 9, 1943, the Soviets made a highly successful raid on Sal'sk, a German airstrip supporting the Stalingrad airlift. Flying at extremely low altitudes, seven Yak–9s and seven Il–2s hit the snow-covered field at Sal'sk with great effectiveness at a time when the Stalingrad airlift by the *Luftwaffe* was in a critical phase. The attacking Soviet fighter bombers and *Shturmoviki* destroyed 72 German aircraft. In May 1943 on the eve of the Battle of Kursk the Soviets made a massive air raid along a 1,200-mile sector of the Eastern Front, attacking German forward airfields. The results were mixed, but the raids demonstrated a new capacity to strike the *Luftwaffe* in its rear areas. Soviet interest in preemptive air strikes could end in utter disaster. The abortive raid in the Belgorod-Khar'kov area on the first day of the Battle of Kursk is perhaps the best example of how the hardpressed *Luftwaffe* could blunt a massive Soviet air strike.[39]

Operation Barbarossa cast a long shadow over the development of Soviet air tactics in the second period. Air strikes by the *Luftwaffe* in 1941 had nearly destroyed the Soviet Air Force in place. As long as the Germans possessed command of the air in the initial stages of the war, they continued to launch strikes against Soviet airfields. The elaborate steps taken by the Soviets to provide for combat readiness, to disperse frontline aircraft, to develop techniques for concealment and camouflage, even to organize an elaborate network of dummy airfields mirrored a lingering fear of preemptive air raids.[40] By 1943, the aerial surveillance, early warning, and communications systems (VNOS) had reduced dramatically the vulnerability of Soviet aviation to surprise attack.[41]

The struggle for air supremacy came at a high cost. Attrition in Soviet aircraft and flying personnel, if never recorded precisely in Soviet historical literature, was no doubt extraordinarily high in the second period. After 1943 the Soviet Air Force possessed greater numbers of modern combat aircraft and more experienced pilots and crews, so the attrition rate dropped. It was during the second period, however, that the Soviet Air Force faced a still formidable and undefeated *Luftwaffe*. Each Soviet triumph—at Stalingrad, over the Kuban, in the huge air engagements at Kursk—exacted a heavy toll. Soviet historical literature consistently makes the wildly improbable claim that the Germans for the entire war lost 57,000 aircraft in the east, with 44,000 of this tally downed in aerial combat.[42]

Modernization of Soviet Aircraft Technology

The rapid modernization of Soviet tactical aircraft stands out as one of the unique wartime achievements of the second period. Operation Barbarossa had destroyed most of the prewar frontline aircraft—the I–15, I–16 and I–153 types. At the time of the German invasion these aircraft were obsolescent and markedly inferior to the operational German frontline fighters. Just prior to Operation Barbarossa, the Soviet Air Force had introduced a third generation of tactical aircraft, consisting of the Yak–1, LaGG–3, MiG–3, and Il–2 *Shturmovik*. These new aircraft, designed in 1939 and 1940, reflected a new emphasis on fighters and ground-attack aircraft.[43]

The war emergency had interrupted aircraft production, and it would not be until the fall of 1942 that the new designs began to arrive at the front in large numbers. Soviet mass production of the Yak–1, LaGG–3, and Il–2 proceeded forward with the aim of establishing numerical parity with the *Luftwaffe*. Stalin wisely prohibited any radical new designs, but ordered refinements and field modifications be made on the existing third-generation types. At first, in view of the emergency, quantity had to be emphasized over quality. Qualitative improvements, as it turned out, were possible because some of the newer fighters and the Il–2 *Shturmovik* could be radically improved with better materials, engines, and armament. By the end of the middle period, the Soviets had quickly narrowed the technical gap with the Germans.

The development of Yak series of fighters is representative of this rapid modernization. The production of Yak fighters began in earnest in September 1941 after A. S. Yakovlev's design bureau and factory was removed from Moscow to Kamensk in the Urals. Production of the Yak–1 and the several variants that followed mirrored the severe problems facing the Soviet aircraft industry at the start of the war. There were acute shortages in dural and other alloys. To overcome these problems fighter aircraft were constructed with wood and composites.

The Yak–1 evolved along several lines, giving way to the highly maneuverable Yak–1M and Yak–9. The designs that stemmed from the Yak–1M became lighter, faster and more maneuverable culminating in the Yak–3 which saw service in 1944 and 1945. The more rugged Yak–7s were redesigned in the summer of 1942 with new alloys to replace wooden wing spars, which allowed large fuel tanks. At Stalingrad, the Soviets introduced a Yak–9 fitted with more powerful armament. The new Yak–9 was 10 to 30 kilometers per hour (kph) faster than the Bf–109G in level flight at 4,000 meters. Moreover, the new Yak variant was lighter and could outclimb its German adversary.[44]

The Yak–9 was armed with two machineguns. Subsequent variants saw the introduction of 20-mm cannon; and one antitank version, the Yak–9K, was equipped with 45-mm cannon. The Yak–9 was rugged, versatile both as a fighter and as a fighter-bomber, highly maneuverable at lower altitudes, and capable of withstanding considerable enemy fire. Total wartime production of the Yak–9 surpassed 16,000 aircraft.[45]

The Yak–3 represented the ultimate perfection of the Yak fighter series. It would not reach the frontline air units until 1944, but its development reflected the momentum and design priorities of the second period. The Yak–3 was smaller and lighter than the Yak–9, weighing only 2,500 kilograms (around 5,500 pounds). One Yak–3 was captured by the Germans and tested in January 1945. Hans-Werner Lerche, the test pilot, suggests in his memoirs that the Yak–3, which he called a "fast little devil," met the highest standards for a fighter aircraft. He noted its climbing speed and turning radius were superior to the Yak–9. Its plywood finish was excellent and offered "the advantage of easy repair even on frontline airfields with makeshift facilities."[46] The Yak–3 appears in the Lerche account as an extremely lightweight fighter with superior aerodynamic qualities and a powerful engine, giving it excellent performance in dogfighting at lower altitudes. The Yak–3 showcased the skills of the Soviets in fashioning a modern piston-engined fighter to meet the peculiar needs of the Eastern Front.

The LaGG–3 is not a story of a solid aircraft design undergoing numerous refinements to fully realize its potential. The LaGG–3, a product of S. A. Lavochkin's (with M. I. Gudkov and V. P. Gorbunov) design bureau, had been a profound disappointment in the first year of the war despite its modern silhouette and rated performance. While sturdy, the LaGG–3 possessed a fatal blend of sluggishness, poor maneuverability, and unpredictable handling. In air battles with the *Luftwaffe* this fighter proved to be inferior in performance, with little improvement over the prewar I–16.

Production ceased on the LaGG–3 at the end of 1942. Over 6,000 had been built, but the combat experience had revealed inferior performance in many critical categories. Having evaluated the aircraft carefully, it was decided to take the LaGG–3's sound airframe and wed it to a lighter radial engine. After several test versions, the La–5F emerged at the end of 1942 as the Soviet Air Force's new radial engine fighter. A subsequent variant, the La–5FN, with its largely metal construction and powerful Ash–82FN engine, could climb to 5,000 meters in 4.7 minutes, making it superior in performance to the Yak–9 and both of Germany's frontline fighters, the Bf–109G and the FW–190A.

The La–5F was 44 kph faster at 6,000 meters than the radial-engined FW–190A–4. Typically, the La–5FN, as a tactical Soviet fighter, lacked range. It was also lightly armed when compared to the FW–190. The introduction of the La–5 at the Battle of Kursk coincided roughly with the advent of the FW–190 on the Eastern Front. The essential parity of these two fighter aircraft demonstrated in a dramatic way the rapid pace of aircraft modernization during the second period of the war. Further refinements in Soviet fighters followed in the third period of the war in both the Yak and Lavochkin series.

German attitudes toward Soviet aircraft began to change as early as 1942. Toward the Soviet Air Force's third generation of fighters, there was growing respect, particularly for the Yak series. One German observer stated that the Yak–7b and Yak–9 and the La–5 were the most advanced types, seeing them as equals to the Messerschmitt Bf–109Fs and Bf–109Gs in speed and armament.[47] German pilots expressed similar enthusiasm for the Pe–2, the fast Soviet air reconnaissance aircraft, and the Il–2 *Shturmovik*, the unique formidable ground-attack weapon of the Soviet Air Force.

American military intelligence experts monitored the rapid modernization of Soviet aircraft during the war and, in the immediate aftermath of the Allied victory over Nazi Germany, began a systematic evaluation of Soviet aircraft technology and weapons. In one detailed report, prepared by Dr. W. B. Shockley in January 1946, the relative strengths of various Soviet and American weapons were analyzed with attention to how far the Soviet Union then lagged behind the United States.[48] The report noted that below 15,000 feet Lavochkin and Yak fighters were comparable to P–47 Thunderbolts and P–51Bs. While the Soviet fighters lacked the range of American fighters, the gap had narrowed sharply in the period 1942–1943. The speed of fighter aircraft also developed at a steady pace, being six months to a year behind advanced American fighters. The range of fighters remained far behind American fighters. The reason for this lag, of course, stemmed from the combat requirements of the Eastern Front. Close support operations precluded the need for any increased range by Soviet fighters.[49]

In the same report, Soviet bombers were described as comparable in performance to American medium bombers in speed, but were clearly outclassed in range and bomb-load capacity. Interestingly, the report indicated that the Soviets had upgraded aircraft engines from 1,500 to 2,200 horsepower in two years as opposed to four and one-half years by

the United States. The general conclusion by the Shockley report stated that the Soviet rate of development in aircraft technology was "approximately equal" to American types and, depending on type of aircraft, ranged from one to three years behind the United States.

The Reform of Fighter Tactics

It became apparent in 1942 that Soviet air tactics were outmoded. The reform of fighter combat tactics was essential as a first step to challenge the *Luftwaffe* for air supremacy. Soviet fighter pilots, although never lacking in personal courage, had performed ineffectually against the seasoned and aggressive German fighter units. Attrition in Soviet aircraft remained high in the middle period, even with the advent of more modern fighters such as the Yak–1 and the arrival of Lend-Lease aircraft.

The many war memoirs by prominent Soviet fighter pilots provided insights into the difficult transition made by Soviet fighter aviation in 1942. A. I. Pokryshkin, who earned three gold stars as a Hero of the Soviet Union during the war, has left a candid account of this period of adjustment. In his autobiography, Pokryshkin wrote bitterly about the outmoded air tactics he learned in flight school and the general condition of unpreparedness that characterized all fighter air units in 1941. Soviet fighter pilots normally flew in tight formations of three aircraft, or flights (*zveno*). Against the more flexible two and four aircraft formations of the *Luftwaffe*, the Soviet tactical formation proved ineffectual, if not suicidal.[50] Pokryshkin believed firmly that fighter air tactics should fit the actual combat reality. As with Royal Air Force pilots in the West, he quickly grasped the fact that the *Luftwaffe* fighter tactics were clearly superior and should be copied. The second period with its relative professional freedom allowed Pokryshkin and other fighter pilots to argue for new fighter tactics. Pokryshkin became the most prominent advocate of vertical maneuver and championed a whole series of tactical innovations for fighter aviation. As early as the summer of 1942, at Khar'kov, he persuaded his regimental commander to allow him to experiment with the "stepladder" (*etazherka*) which stacked two aircraft elements in altitude and in depth.[51]

There appeared to be a universal interest in the reform of fighter tactics in 1942. Sergei Luganskii, for example, describes in his memoirs how fighter pilots fiercely debated air tactics among themselves during the Battle of Stalingrad. Like Pokryshkin, Luganskii was a firm advocate of vertical maneuver.[52] The battlefield pressures compelled Soviet airmen to argue for the rapid reform of Soviet air tactics. At the top, Air Commander Novikov—always a pragmatist—encouraged the active emulation of the enemy's methods if they were deemed superior. This same attitude was reflected in air army commanders such as K. A. Vershinin who gave considerable freedom for copying German air tactics.[53]

By 1943, Soviet fighter formations consisted of the basic tactical unit of the *para*, or element of two fighter aircraft. Other tactical formations

consisted of the *zveno*, a flight of two pairs, and the *gruppa*, the largest formation involving six or eight aircraft. On the eve of the third period of the war Soviet pilots had learned how to space these formations horizontally and vertically. During air offensives fighter air units were assigned sectors varying in width from six to eighteen miles. Typically, fighter aircraft flew below 13,000 feet for patrolling and air cover missions. When escorting ground-attack aircraft, Soviet fighters descended to altitudes between 1,500 to 3,000 feet to provide general cover. Increasingly, it became characteristic for fighters to drop down to between 300 and 1,500 feet to attack enemy positions, especially antiaircraft batteries. Soviet fighter tactics brought innovations such as the "free hunt," where skilled pilots operating in small groups attacked German aircraft.[54]

Ground-Attack Aviation

The primary mission of supporting the Soviet Army in its various defensive and offensive operations gave impetus in the second period to creation of a strong ground-attack air arm. The building of a powerful ground-attack air arm constitutes one of the singular achievements of the middle period. The Soviet emphasis on ground-attack influenced the design and use of fighter aircraft, including the American-made P–39 Airacobra which was adapted successfully for fighter-bomber missions on the Eastern Front.

Ground-attack air units were required to assist artillery in the preparatory phases of an offensive, to support ground forces during breakthrough phases, and to cover army formations during defensive maneuvers. As the scope of ground-attack aviation broadened, there was a growing interest in using ground-attack units for systematic raids on enemy airfields, lines of communication, troop concentrations and supply depots.

The Il–2 *Shturmovik* provided an effective tool to implement the Soviet priority on ground-attack operations. The ubiquitous Il–2 fitted the profile of Soviet ground-attack aviation on the Eastern Front: the *Shturmovik* was not unlike a flying tank, sturdy in construction, and always difficult for German fighters and antiaircraft batteries to down; it was an all-weather aircraft; it was well armed with forward cannon, bombs, and rockets; and most important, it was fully maneuverable at low altitudes.

The techniques employed by Soviet ground-attack air units evolved quickly in the second period. The aim was to find the tactical principles that allowed for maximum firepower. Typically, the Soviets used four to eight aircraft, flying right or left echelons, or in unbalanced "V" formations. In massed attacks four to eight aircraft in waves, flying in echelon formation, attacked enemy targets. Such a column provided concentration at the expense of maneuverability during the actual attack phase.

Depending on the target, *Shturmoviki* would attack in line-abreast formation or the so-called "battle circle." The number of aircraft deployed varied with the target and type of mission. During a major assault by

Soviet ground forces on the enemy's defensive line it was not unusual for three or four formations, each with as many as thirty-six aircraft, to make simultaneous attacks. Similar waves followed at intervals of thirty minutes to two hours. For ground-attack missions to support breakthroughs *Shturmoviki* would be deployed in greater numbers, perhaps as many as six formations, arriving over the forward edge of the Soviet assault at five- to fifteen-minute intervals.

Coordination for such missions was difficult and only with time, battlefield experience, and the gradual introduction of radio communications were the Soviets able to make air power an integral part of combined-arms warfare. There was considerable effort extended to perfect techniques for coordinated work with artillery and tanks. For safety and maximum impact, all ground-attack missions embraced the idea of low-level flying. To enhance the combat efficiency of ground-attack air units, Soviet regimental and divisional air commanders increasingly stressed air reconnaissance, precise timing for arrival over the target area, and the use of special formations to silence enemy antiaircraft batteries.

The Soviet Air Force in 1943

The second period of the war provided a fiery context for the Soviet Air Force to make an accelerated passage to modernity. For the first time air force doctrine, organization, and technology were integrated purposefully, first to meet the war emergency and second to achieve a standard of military professionalism. The process of modernization had been achieved in its essentials by 1943. These pivotal changes permitted the Soviet Air Force to forge the techniques to conduct joint operations with the ground forces and to achieve air supremacy. The third period of the war, one might argue, differs from the second only in degree of magnitude, a time for the massive application of techniques forged in combat at Stalingrad, over the Kuban, and at Kursk.

The achievements of the Soviet Air Force in the second period are numerous and significant. New forms of air warfare such as the air offensive allowed considerable freedom to experiment, first at the tactical scale and then on the operational level. The Soviets learned how to control air power on the battlefield. Through a matrix of command posts and careful liaison work with *front* commanders, the Soviet Air Force commanders perfected the means to coordinate air support for infantry, tanks, and artillery. Radio communications, the expanded use of radar, and aerial photography dramatically improved air force efficiency.

The Soviets embraced the concept of overwhelming numbers to assure victory. They preferred, as the late General Kelsey remarked, "ten gnats rather than one wasp." Much of the success of the second period stemmed from the strides made in the rear areas to fuel the Soviet juggernaut. Aircraft production allowed the Air Corps of the *Stavka* Reserve to mushroom in size. There were also rapid improvements in equipment, particularly fighter and ground-attack aircraft, aero engines, and

armament. The Soviet supply and maintenance services developed improved skill during these same years as a conduit for the Soviet Union's latent productive capacity to reach the front.

The exact size of the Soviet Air Force in 1945 is a matter of historical conjecture. Soviet sources suggest that in January 1945 Soviet air power deployed for the final drive to defeat Nazi Germany numbered 11,530 operational aircraft.[55] The 16th Air Army, for example, had numbered a mere 249 aircraft at Stalingrad in 1942, but at the beginning of 1945 it had reached the level of 2,140 aircraft. For the Berlin campaign the 16th Air Army would mushroom to 2,738 aircraft.[56] A high ranking Soviet Air Force officer, who defected to the West in 1945, prepared a detailed summary on the organization and force levels of Soviet air power for American intelligence. He gave a figure of 19,500 Soviet aircraft on the "Western" front as of April 1945 with another 4,000 aircraft stationed in the Far East.[57] This overwhelming concentration of combat aircraft demonstrated the perfection of techniques first defined in the second period of the war.

Certain deficiencies and lingering problems were evident in 1943. The war emergency had compelled the Soviet air planners to pursue limited goals; and the process of modernization, if impressive in its pace and results, failed to provide for all strategic requirements. During the war there had been a policy of standardization, and the production of a few proven types of aircraft in numbers. This had allowed qualitative improvements over time and had created enormous striking power on the tactical scale. The stress on fighters and ground-attack aviation, however, meant neglect of heavy bombers. For this reason Soviet long-range aviation (after 1944 the 18th Air Army) remained largely inactive during the war. Soviet medium bombers and Lend-Lease medium bombers were thrown into tactical missions. There was a similar neglect of jet aircraft development.

The Soviets faced a curious paradox in the postwar years: they had defeated the *Luftwaffe* and had built the largest tactical air force in the world only to find themselves faced with another technological gap in long-range bombers and jets. While this issue is not within the scope of my paper, it is important to note that the postwar problems faced by the Soviet Air Force were in part related to the necessary and fateful decisions made in the second period of the war. Certain strengths of the war years became burdensome legacies in the nuclear age.

Conclusion

The opening of World War II for the Soviet Air Force brought a series of disasters. The Soviet Air Force had been the first victim of Operation Barbarossa, with the preemptive air strikes of the *Luftwaffe* leaving it in near collapse in the opening weeks of the war. The rebirth of Soviet air power in large measure unfolded in the critical years of 1942 and 1943, in what Soviet historians call the second period of the Great

Force—organization, operations and aircraft design—took shape during this period. Looking back one can detect as well certain enduring features of Soviet air power that find expression in this second period during the epic war with Nazi Germany. No historical analysis of the Soviet Air Force can ignore these crucial years.

Our historical sources for the second period are varied and of uneven quality. Many postwar German accounts confirm the overall Soviet assessment of these years, seeing the rapid recovery of the Soviet Air Force as a consequence of reorganization, new operational and tactical concepts, improved technology, and an overall aggressiveness by Soviet pilots. The German military on the Eastern Front viewed with surprise and alarm the rapid switch of the Soviet Air Force from the defensive to the offensive by 1943.

In contrast to the heroic prose of Soviet war memoirs and histories, many of the postwar German accounts are more measured in tone, where Soviet achievements are grudgingly acknowledged but accompanied with a certain disdain for all things Soviet. Often this valuable source of information shapes our perception of Soviet strengths: we view simple designs as primitive, forgetting to ask if they function well; we interpret the Soviet emphasis on the concentration of air power as a brutish application of superior numbers to overwhelm a more sophisticated enemy, failing to realize the organizational work behind the doctrine of an air offensive or to appreciate the compatibility of Soviet air doctrine with the geography of the Eastern Front; we see the acquisition of air supremacy by the Soviet Air Force in 1943 as a result of German weakness, not to any significant degree as an expression of the latent potential of Soviet air power.

Soviet historiography suggests a continuity between prewar concepts of air power and the wartime air operations of the Soviet Air Force. While it is true that many of the operational and tactical innovations, including the idea of air armies, may be found in the prewar writings of Soviet theorists, it is false to assume that the process of reorganizing the air force in 1942 consisted of a careful rereading of Lapchinskii as a prelude to recovery. The actual process of change, however, reflected trial and error, the timely emulation of enemy tactics, and the exacting requirements of air power being mobilized to serve the ground forces. There were fortuitous events, errors in judgment by the enemy, and more than one alternative posed to Soviet air planners.

Marxism-Leninism is often portrayed in Soviet military literature as the overarching ideology that shaped Soviet military art. In retrospect, one is more impressed with the Communist Party as a tool of discipline and mobilization than with Marxism-Leninism as some ever present and creative force shaping Soviet military operations. The party is worthy of consideration as an actor in this historic drama, not just as a foe of military professionalism. Perhaps the greatest contribution of the party was in providing an impetus for organization and discipline. The role of the party in the evolution of Soviet air power deserves further study and elaboration.

Any examination of the history of the Soviet Air Force exposes a number of contradictions. In the air war in the east, you find a confusing mixture of the most advanced and the most backward. Whatever you say about the Soviet Air Force, depending on time, place, and circumstance, may be true: Soviet pilots could be aggressive or cowardly; their tactics could be innovative or primitive; their aircraft could perform well or appear outmatched by the enemy. I cannot resolve this contradiction entirely because the Soviet Air Force during the war embodied a curious mixture of skill and competence, aggressiveness and lethargy, technical achievement and backwardness.

All these apparent contradictions surfaced in the second period of the war. It is easier to describe the broad outlines of the rebirth of the Soviet Air Force than to define with certainty the actual dynamic behind it. Here we find the fascination and frustration of Soviet military history. While the Soviet air recovery is elusive in many respects, the trend toward improved aircraft, tactics, weapons, supply, and training is evident. As with Trotsky in the Russian Civil War, ultimate survival rested on "a capacity for pragmatic improvisation under stress."

Notes

1. See V. D. Sokolovskii, *Soviet Military Strategy*, Harriet Fast Scott, ed (New York, 1975), p 158. Sokolovskii referred to the Soviet Air Force as the "second most important service" and viewed the resolution of these problems as the major wartime achievements of Soviet air power.

2. I. V. Timokhovich, *Operativnoe iskusstvo VVS v Velikoi otechestvennoi voine* (Moscow, 1976), p 321.

3. See P. S. Kutakhov, "Opyt bor'by za strategicheskoe gospodstvo v vozdukhe v gody Vtoroi mirovoi voine i ego znachenie v sovremennykh usloviiakh," *Voenno-istoricheskii zhurnal* (hereafter cited as VIZh) 12 (Dec 1984), pp 19–29.

4. Western evaluations of Soviet air power were not uniformly bleak in 1942. In a report received by the United States Army Air Forces Headquarters, based on a summary of comments "by an officer of the United Nations," the Soviet Air Force was described as possessing a "superior organization and tactical doctrine" with greater adaptability to the difficult terrain of the Russian front. The report warns, "Germany may not have given proper weight to the special conditions of the Russian climate and geographical peculiarities." The unnamed source concludes that Germany's air superiority on the Eastern Front may be illusory. The report points to a number of factors suggesting a latent Soviet air might—cold weather flying experience, modern aircraft coming on line, and the fighting qualities of the Russian pilot. "Comments on German and Soviet Air Forces," *Informational Intelligence Summary No. 13*, Apr 16, 1942, Headquarters, U.S. Army Air Forces.

5. Roman Kolkowicz, *The Soviet Military and the Communist Party* (Princeton, 1967), pp 42, 65–70. The ebb and flow of party control of the military reflects the ambivalent attitude of Stalin toward the armed forces. During the interwar years the air force had been lionized as "Stalin's Falcons," receiving considerable public fame and propaganda exploitation. The purges eventually decimated the ranks of the air force leadership. A relaxation of party controls was followed by a suppression of military authority in the wake of Operation Barbarossa. In October 1942, Stalin once again withdrew the control of political commissars. This set the stage for the enhanced authority of military commanders in the second period of the war. It is interesting to note that the relative freedom of Novikov and other air force officers to experiment was evident as early as the spring of 1942. Kolkowicz, pp 65–70, provides a general overview of party-military relations during World War II.

6. E. F. Ziemke, *Stalingrad to Berlin: The German Defeat in the East* (Washington, 1968), p 500.

7. Letter of Benjamin Kelsey to author, Oct 15, 1981.

8. Interview with Karl-Heinz Stein in February 1981. Stein was a ground-attack pilot who flew against the Soviets in the Belorussian campaign. He suggested that the Soviets would alternate intense air action during offensive operations with periods of relative inactivity. An interview in January 1986 with Guenther Rall, the noted German ace who flew against aggressive Soviet fighter squadrons in the southern sectors of the Russian front in 1942 and 1943, confirmed this practice of episodic air operations.

9. Williamson Murray, *Luftwaffe* (Baltimore, 1985), pp 293–94. By the end of 1942 and the first half of 1943, the *Luftwaffe*'s attrition rate reached 20 percent per month. Losses in German aircraft and flying personnel remained high from the winter of 1941–42 to the end of the war.

10. Timokhovich, *Operativnoe iskusstvo*, pp 56–69. Most Soviet histories, even those based on archival sources, provide only incomplete numbers on Soviet aircraft losses during the war. Timokhovich, for example, acknowledges the loss of 691 aircraft on airfields due to enemy attacks from January 1942 through May 1945. Also, he notes that the Soviet Air Force was losing one aircraft for every 32 missions flown in 1941; by 1943 it was one for every 72 missions; and 1944 it was one for every 105 missions. These random figures suggest an attrition rate that diminished with time. No authoritative and

complete figures have been published.

11. Ibid. Total German losses claimed by the Soviets amount to the improbable figure of 77,000 aircraft destroyed by all branches of the air forces of the Soviet Union, including 44,000 destroyed by the Soviet Air Force alone in aerial combat.

12. A number of wartime Soviet Air Force leaders played prominent roles in the post-1945 period, including K. A. Vershinin, S. A. Krasovskii, N. S. Skripko, V. A. Sudets, and S. I. Rudenko.

13. See M. Kozhevnikov, "Koordinatsiia deistvii VVS predstaviteliami Stavki VGK po aviatsii," VIZh 2 (Feb 1974), pp 31–38. A. Pervov has written two articles on the role of air reserves during the war: "O faktorakh vliiaiushchikh na manevr aviasoedineniiami RVGK," VIZh 9 (Sep 1979), pp 39–44, and "Podgotovka i vospolnenie poter' aviatsionnykh korpusov RVGK," VIZh 2 (Feb 1980), pp 10–15.

14. For coverage of the other air forces of the Soviet Union (naval, air defense, and long-range bombing) see Von Hardesty, *Red Phoenix: The Rise of Soviet Air Power, 1941–1945* (Washington, 1982).

15. Most standard Soviet histories, including Timokhovich's study of Soviet Air Force air operations, give space to certain deficiencies in Soviet organization and practice. See also M. Kozhevnikov, *Komandovaniia i shtab VVS Sovetskoi armii v Velikoi otechestvennoi voine, 1941–1945 gg.* (Moscow, 1977). The famous indictment of Soviet unpreparedness in 1941 was written by the Soviet historian A. M. Nekrich. His work, "1941, 22 Iiunia," is included in Vladimir Petrov's *"June 22, 1941," Soviet Historians and the German Invasion* (Columbia, S. C., 1968).

16. See V. Gorbachev, "Premenenie Sovetskikh VVS v nachal'nom Velikoi otechestvennoi voine," VIZh 11 (Nov 1983), pp 25–33.

17. See Hardesty, *Red Phoenix*, pp 11–34.

18. Most Soviet accounts omit information on Novikov's postwar years of imprisonment and eventual rehabilitation. Timokhovich gives Novikov frequent and favorable coverage, and touches on his administrative abilities, but fails to give much detail on his personality or career; see Timokhovich, *Operativnoe iskusstvo*, p 268. See also W. S. Mersalov, ed, *Biographical Dictionary of the USSR* (New York, 1958), which provides information on his entire career.

19. *V nebe Leningrada* (Moscow, 1970) covers the early war years.

20. Michael Parrish, "Command and Leadership in the Soviet Air Force During the Great Patriotic War," *Aerospace Historian* 3 (Sep 1979), pp 94–96, provides a broad perspective on Novikov and other prominent air force figures.

21. John R. Deane quoted in Kemp Tolley, *Caviar and Commissars: The Experiences of a U.S Naval Officer in Stalin's Russia* (Annapolis, Md., 1983), pp 223–24. See also John R. Deane, *The Strange Alliance* (New York, 1947).

22. N. S. Khrushchev, *Khrushchev Remembers* (Boston, 1970), p 253. Khrushchev records that Novikov was arrested during the Leningrad affair along with A. I. Shakurin, the Peoples Commissar of the Aviation Industry, and charged with accepting defective aircraft. Khrushchev states that he knew Novikov well, and that "He commanded the Red Army Air Force through most of the war and had visited our command during the battle of Stalingrad. He had his faults. He drank more than was good for him, but he was a devoted, honest, and honorable man."

23. See M. Kozhevnikov, "Birth of the Air Armies," *Aerospace Historian* 2 (Jun 1975), p 73. This article, which first appeared in VIZh (Sep 1972) was translated by James L. Waddell. Kozhevnikov candidly outlines the numerous shortcomings of Soviet *front* aviation during the first six months of the war.

24. Timokhovich, *Operativnoe iskusstvo*, p 327.

25. See John T. Greenwood and Von Hardesty, "Soviet Air Forces in World War II," in *Soviet Air Forces*, ed Paul J. Murphy (Jefferson, N. C., 1984). This article contains data on the growth of the air armies between 1942–45.

26. Kozhevnikov, *Komandovanie i shtab V /S*, p 111.

27. Timokhovich, *Operativnoe iskusstvo*, pp 274–77.

28. Ibid, pp 284–85.

29. Pervov, VIZh 9 (Sep 1979), pp 39–44.

30. *Lend-Lease Shipments World War II*, War Department, Office of the Chief of Finance, War Department, Dec 31, 1946, p 7. According to this postwar history of

"Quantities of Lend-Lease Shipments" the Soviet Union received 708 C–47 transports, along with 541 engines and 289 propellers. A total of 2,960 C–47s were shipped to the Allies. Only the British Empire with 2,035 transports received more than the Soviet Union. See also Richard C. Lukas, *Eagles East: The Army Air Forces and the Soviet Union, 1941–1945* (Tallahassee, Fla., 1970).

31. *Sovetskaia voennaia entsiklopediia* (Moscow, 1976), s. v., "Aviatsionnoe nastuplenie." Y. Veraksa, "Air Offensive," *Soviet Military Review* 4 (Apr 1973), pp 38–41; P. S. Kutakhov, "Provedenie vozdushnykh operatsii," VIZh 6 (Jun 1972), pp 20–28. For specialized uses of Soviet air power, see M. Sidorov, "Ognevoe porazhenie pri proryve oborony protivnika po opytu Velikoi otechestvennoi voine," VIZh 8 (Aug 1984), pp 18–23.

32. For A. N. Lapchinskii, see Harriet Fast Scott and William F. Scott, eds, *The Soviet Art of War: Doctrine, Strategy and Tactics* (Boulder, Colo., 1982), pp 60–63. See also Timokhovich, *Operativnoe iskusstvo*, pp 106, 190–94. The air doctrine appeared formally for the first time in the Field Manual of the Infantry of the Red Army in 1942.

33. Timokhovich, *Operativnoe iskusstvo*, pp 108–9.

34. M. Sidorov, VIZh 8 (Aug 1984), pp 18–23. In the third period of the war this percentage would increase to 90–95 percent.

35. See S. Golubev, "Sovetskie VVS v Belorusskoi operatsii," VIZh 8 (Aug 1984), pp 32–38. See also VIZh 6 (Jun 1984). For a broad overview of Soviet offensives see *Istoriia Vtoroi mirovoi voiny, 1939–1945* (Moscow, 1978), Vol 9 and *Sovetskie Voenno-vozdushnye sily v Velikoi otechestvennoi voine, 1941–1945 gg.* (Moscow, 1968).

36. Aerial reconnaissance improved dramatically during the war as the Soviets turned increasingly to aerial photography to replace visual observation as the chief means to observe enemy movements.

37. Kutakhov, VIZh 12 (Dec 1984), pp 19–29.

38. Novikov in *V nebe Leningrada* recounts how the Soviet Air Force was anxious to obtain heavy bombers from the United States, but was refused.

39. At the start of the German offensive at Kursk the Soviet Air Force launched a massive preemptive raid against German airfields in the Belgorod and Khar'kov area. The raid ended in disaster for the Soviets.

40. The Soviets put a great emphasis on camouflage and deception. See *Sovetskaia voennaia entsiklopediia* (Moscow, 1978), s. v., "Maskirovka."

41. VNOS (*Vozdushnoe nabliudenie opoveshchenie i sviaz'*) was a system for air observation, warning, and communication. In the very early days of the war the Soviets were still using sound detectors and visual observers. See "Employment of Combat Support Aviation," translation from VIZh 2 (Feb 1981), pp 28–35.

42. Most Soviet sources repeat this figure.

43. See Vaclav Nemecek, *The History of Soviet Aircraft From 1918* (London, 1986), p 57. Bill Gunston, *Aircraft of the Soviet Union: Encyclopedia of Soviet Aircraft Since 1917* (London, 1983) provides an overview of Soviet aircraft development. The standard Russian language source is B. V. Shavrov, *Istoriia konstruktsii samoletov v CCCP*, 2 vols, 3d ed (Moscow, 1985). I. F. Obraztsov, *Razvitie aviatsionnoi nauki i tekhniki v SSSR: Istoriko-tekhnicheskiye ocherki* (Moscow, 1980). See Hardesty, *Red Phoenix*, pp 260–87, for a complete bibliography.

44. Nemecek, p 57.

45. See Timokhovich, *Operativnoe iskusstvo*, pp 45ff.

46. Hans-Werner Lerche, *Luftwaffe Test Pilot* (New York, 1980), pp 125–27.

47. Walter Schwabedissen, *The Russian Air Force in the Eyes of German Commanders*, USAF Historical Division, Air University, USAF Historical Studies: No. 175 (New York, 1960), p 210.

48. W. B. Shockley, "Relative Technological Achievements in Weapon Characteristics in USSR and USA," Advanced Summary for Technical Intelligence Reports Analysis Division, TSNTS–2, file no. KO–39854, Jan 1946, p 33.

49. Ibid, p 6.

50. See A. I. Pokryshkin, *Nebo voiny*, 6th ed (Moscow, 1980). Pokryshkin wrote *Kryl'ia istrebitelia*, 2d rev ed (Moscow, 1948). His autobiography *Nebo voiny* was serialized in *Aviatsiia i kosmonavtika* 2, 3, 4, and 7 (1964). Another important source of information of Pokryshkin and the history of Soviet fighter tactics is O. Frantsev, "Vstrecha s proslavlennym letchikom trizhdy geroem Sovetskogo Soiuza Marshalom Aviatsii A. I.

Pokryshkinym," VIZh 3 (Mar 1983), pp 61–67. Pokryshkin died in 1985.

51. Frantsev, p 63. See G. V. Zimin, *Taktika v boevykh primerakh: Istrebitel'naia aviatsionnaia diviziia* (Moscow, 1982), for detailed coverage of fighter aviation tactics from the perspective of combat pilots. For ground-attack aviation, see N. M. Skomorokhov and V. N. Chemetskii, *Taktika v boievykh primerakh· aviatsionnyi polk* (Moscow, 1984).

52. See S. D. Luganskii, *Na glubokikh virazhakh Zapiski, voennogo letchika* (Alma-Ata, 1970).

53. See K. A. Vershinin, *Chetvertaia vozdushnaia* (Moscow, 1975).

54. See Timokhovich, p 85, for discussion of the "Free Hunt" tactic. During the air encirclement at Stalingrad the Soviet Air Force used this tactic with great effectiveness against German transports and bombers flying the airlift.

55. E. Simakov, VIZh 7 (Jul 1975), p 77.

56. G. K. Prussakov, *Voenno-istoricheskii ocherk o boievom puti 16-i vozdushnoi armii, 1942–1945* (Moscow, 1973), pp 44, 90, 153, 246, 322.

57. "Composition of the Soviet Air Force," Intelligence document CG 61b, made available by Albert Graham, Library of Congress, Washington, D.C. This handwritten document by an unnamed former Soviet Air Force officer, was solicited by American intelligence in 1945. The document contains five sections: Chapter 4, Organization; Chapter 5, Strength and Losses; Chapter 6, Efficiency; Chapter 7, Strategic Air Force; and Chapter 8, Naval Air Force. Soviet aircraft production did not gain momentum until the fall of 1942. By the middle of 1943, the Soviets claimed the Soviet Air Force possessed around 10,200 operational aircraft, equalling the pre-Operation Barbarossa level. See S. A. Tyushkevich, *Sovetskie vooruzhennye sily. Istoriia stroitel'stva* (Moscow, 1978), translated and published under the auspices of the U.S. Air force as *The Soviet Armed Forces: A History of the Organizational Development A Soviet View* (Washington, 1984), p 313.

Toward Deep Battle: The Soviet Conduct of Operational Maneuver

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***Operational maneuver** is undertaken to achieve success in an operation in keeping with the concept and under the guidance of the commander of an operational unit. Its scope, as regards forces involved, and particularly area and time (except for maneuver with nuclear power) transcends the bounds of the battlefield. Operational maneuver is aimed at changing the situation in the course of an operation to facilitate the fulfillment of intermediate assignments or even bring the operation to a successful conclusion. It may take the form of maneuver with nuclear strikes delivered by operational or tactical missiles, or the army air force, [or] **a maneuver by operational groups** from one sector to another to exploit success or outflank an enemy group on the defensive, etc.*

Y. Novikov, F. Sverdlov
Maneuver in Modern Land Warfare (1967)

Introduction

The Soviets long have believed that the effective conduct of operational maneuver is essential for a military force to achieve success at the operational level of war. In the 1930s, the Soviets combined the fruits of modern technology (the tank and the airplane) with theoretical concepts derived from their Civil War experience and that of the First World War to formulate first the concept of deep battle and later that of deep operations. These concepts envisioned the use of mechanized forces to produce both rapid tactical penetrations and deep operational exploitation. These concepts and the forces necessary to carry them out suffered under the crushing blow of Stalin's military purges of the late 1930s. Subsequent Soviet military embarrassments in the Finnish War (1939–40) and during the first six months of the Russian-

German War demonstrated the harm done by the purges and underscored the major problems Soviet military leaders were to face in reconstructing their mobile forces and reviving concepts for their use.

Reconstruction of mobile forces and revival of offensive concepts occurred during the heat of war with a high cost in lives. Nevertheless, by 1943, Soviet mobile concepts and forces had emerged in complete form, thus realizing the hitherto unfulfilled promises of 1936. Soviet operational maneuver matured from 1943 to 1945, leaving a residue of theory and experience for generations of postwar military leaders.

Deep battle theories and experiences have dominated Soviet military thought and practice in the postwar years despite a brief hiatus during the 1960s when Soviet theorists deemphasized operational maneuver in the belief that nuclear weapons had significantly altered the nature of war. Current Soviet military theorists and practitioners have returned with a vengeance to the long Soviet tradition of emphasizing the role and importance of operational maneuver. When they contemplate the planning and conduct of operational maneuver today, they do so with a basic faith in the utility of those earlier experiences when balanced against the realities of modern technology.

This essay addresses Soviet experiences with operational maneuver and weighs carefully how those experiences have affected current Soviet operational techniques. I have written it on the assumption that we also must understand what the contemporary Soviet officer has learned and applied from his army's past.

The topic of operational maneuver has received a tremendous amount of attention in recent years, but many questions are still being asked. Thus, I will concentrate on concrete experiences the Soviets have had with operational maneuver, for the Soviets are drawing upon those experiences extensively as they contemplate conducting operational maneuver today.

First, let me recount the events of a single day in the summer of 1943 that took place in a forty-kilometer sector of the Eastern Front located northwest of the Russian city of Belgorod and defended by the German LII Army Corps.[1] It contained the frontline positions of three German infantry divisions, the 255th, 332d, and 167th. To their rear were defensive positions of the 19th and 6th German Panzer Divisions.

At 0500 hours, August 3, the Soviets passed the codeword "*Urugan*" (Hurricane) to their forces assembled in attack opposite German defenses north and northwest of the city of Belgorod. Instantly, over 4,000 guns opened fire on forward German defensive positions pulverizing the lightly defended strongpoints.

At 0505 hours the firing abruptly stopped, and German infantry filtered forward to reoccupy the forward defenses and meet the expected Soviet infantry assault. Thirty minutes later, at 0535 hours, the thunderous bombardment resumed, raining fire on the surprised German defenders. Simultaneously, waves of Soviet aircraft pounded German defensive positions deeper in the rear area. After two hours and ten minutes of fire, concentrated volleys of *Katiusha* rocket fire ripped German positions for five minutes and completed the devastation of German defenses.

At 0755 hours, as the sounds of the last exploding rocket faded, the Soviet fire shifted into the depths of the German defenses. Simultaneously, Soviet assault parties supported by battalion and regimental guns and infantry support tanks advanced through the smoke and dust, into and through the remnants of the first German defensive line.

At 1140 hours, as Soviet infantry of 5th Guards Army cleared German defenders from their second defensive lines six kilometers deep in the main German defensive belt, the 5th Guards Army Commander Gen. A. S. Zhadov informed his *front* commander Gen. N. F. Vatutin of his army's progress. General Vatutin immediately signaled his two tank armies to begin their advance.

At 1150 hours at a depth of six kilometers into the German defenses, the forward detachments of Gen. M. E. Katukov's 1st Tank Army and Gen. P. A. Rotmistrov's 5th Guards Tank Army, arrayed in battalion and company column, lunged forward along replanned routes through the advancing Soviet infantry. The momentum of the assault carried the four tank brigades that made up the forward detachments through the third and last German defensive positions and operationally into the open. Behind the four brigades marched their parent corps, advancing in brigade column along a front of six kilometers.

By 1500 hours, the armored units of four Soviet tank corps were in motion through the German defenses and were marching southwestward into the German rear area. Behind them the mechanized corps of the two armies followed, each of which completed its passage of lines by 2100 hours.

By 2200 hours, August 3, the bulk of two Soviet tank armies, over 1,000 tanks strong, had broken cleanly through the German tactical defenses leaving three destroyed German divisions in their wake and had begun an operational exploitation. The first modern Soviet offensive operation had begun, an operation during which for the first time Soviet *front* and army commanders had at their disposal forces capable of performing successful, sustained operational maneuver—moreover, maneuver forces whose sole operational mission was to perform that task. From where did this capability come; and, more important, where would it go in the future?

The Eve of Mechanization

Military theorists, planners, and commanders in the twentieth century have faced many dilemmas produced by the growing complexity of war. The emergence of mass armies, the rapid development of technology, and the application of that technology to virtually every aspect of war have posed problems and have provided new opportunities to those who have planned and conducted war. In search of victory, these planners and operators have sought to solve those problems and exploit those opportunities. Historical experiences have provided evidence of their mixed success.

Among the foremost problems facing military men of the twentieth century was the problem of mastering technology sufficiently to maintain the capability of maneuvering on the expanded battlefield. Most military men

realized that maneuver was the key to victory and a means for avoiding the catastrophic losses that direct confrontation with modern weaponry would produce. The experiences of the Russians and Japanese in 1904–5, and the major powers from 1914–18, demonstrated that armies mastered the technology of firepower more quickly than they mastered the technology of movement. The resulting dysfunction produced the staggering losses that made the waging of war suicidal for the political leadership of many nations, to say nothing of the disruptive effects of these wars on economies and societies.

In the years after the First World War, it was natural for nations to look for opportunities to harness the new technology to the maintenance of their national interests. These interests, in part, conditioned nations' responses to all technological innovations. Simplistic explanations have credited the Soviets and Germans with undertaking imaginative responses to the technological challenges while criticizing the seemingly passive response of Western nations to the same stimuli. In reality, all nations appreciated the impact of technology. However, their responses were different. Nations whose interests were in maintaining peace and the status quo, such as France, Great Britain and the United States, saw exploitation of technology as a means for creating defensive concepts, which by virtue of their strength made prospective offensive action folly. This approach, best symbolized by France's Maginot scheme, had its political corollaries as well.

Other nations, restless within the status quo, viewed technological innovations from another perspective. To those nations, most notably Germany and the Soviet Union, the full exploitation of technology was a potential means for escaping the shackles of the crushing weight of firepower, for producing new offensive opportunities on the battlefield, and for realizing potential changes in the political status quo. The early cooperation between Germany and the Soviet Union in the 1920s, in areas such as tank and aircraft development, were indicative of this trend.

Those who sought an escape from the stalemate of positional warfare and crushing firepower did so by focusing on the subject of maneuver. Specifically, they sought to use firepower in concert with new concepts of mobility which had also resulted from technological changes. They believed that mobility technology might become the companion of firepower technology and that a blend of the two might again make maneuver possible on the battlefield.

The Soviet Union, victimized by both the First World War and the Civil War and energized by a new ideology, was particularly receptive to the idea of experimentation in the realm of maneuver warfare. Moreover, her weak technological base and Civil War experiences further conditioned that experimentation. Lacking a strong economy, the Soviets realized that rapid economic progress was essential for the nation to compete with the West and perhaps also to survive ideologically. Thus, much of the Soviet industrial development program from the outset was focused on developing the capability for conducting successful maneuver war. In addition, during the Civil War relatively small forces had waged war over vast areas, permitting the conduct of maneuver and producing a generation of officers intellectually attuned to the conduct of maneuver warfare.

In the 1920s, the Soviet officer corps defined the problem and began articulating solutions in concert with evolving technology. Simply stated, these theorists concluded that strategic success in war required more than just an accumulation of tactical successes. They concluded that operational success was a prerequisite for strategic success, and they simultaneously defined the parameters of the operational level of war.

In time, the definitions which emerged for the strategic, operational and tactical levels of war became more precise; and those definitions, when fully refined, clearly highlighted the problems of First World War operations and the conditions necessary to escape those problems in the future. A. A. Svechin wrote:

> *We call the operation that act of war during which struggling forces without interruption are directed into a distinct region of the theater of military operations to achieve distinct intermediate aims. The operation represents an aggregate of very diverse actions: the compilation of operational plans; material preparations; concentration of forces in jumping-off positions; the erection of defensive structures; completion of marches; the conduct of battle by either immediate envelopment or by a preliminary penetration to encircle and destroy enemy units, to force back other forces, and to gain or hold for us designated boundaries or geographical regions.*[2]

If strategy dictated the aims of operational art, then operational art similarly affected tactics. Svechin further declared that:

> *The material of operational art is tactics and administration: success in the development of an operation depends both on the successful resolution by forces of distinct tactical questions and on the provision to those forces of material supplies. . . . Operational art, arising from the aim of the operation, generates a series of tactical missions and establishes a series of tasks for the activity of rear area organs.*[3]

In this emerging Soviet view all branches of military art were interrelated. In Svechin's words, "tactics make the steps from which operational leaps are assembled; strategy points out the path." Svechin's work and the theoretical work of others in the 1920s created the realm of operational art as a new category of military theory. Along with this redefinition of the traditional realm of war grew a realization that successful maneuver at the tactical and operational level could liberate warfare from the fetters experienced in the First World War and produce strategic success.

Soviet Mechanization

The generation of Marshal M. N. Tukhachevskii further developed these new definitions. In the 1930s Soviet theorists first formulated the concept of deep battle (*glubokii boi*) and later that of deep operations (*glubokaia*

operatsiia). They derived these concepts in large part from their Civil War experiences against the backdrop of the First World War and, in part, from an active interchange of ideas with foreign military theorists.[4]

In the mid-1930s, the Soviets created an improved military force designed to conduct mobile war and refined their military doctrine to emphasize extensive maneuver by mechanized forces at the tactical and operational level.* To support deep ground maneuver the Soviets also built an airborne force. Hence, by 1936 the Soviets possessed four large mechanized corps of about 600 tanks each; an array of mechanized and tank brigades, regiments, and battalions designed for employment at the tactical and operational level; and a field regulation (1936) which provided a blueprint for the integration of mechanized forces into operations at every level of combat.[5]

In the later 1930s, however, Soviet mobile concepts suffered severe setbacks. The purge of Tukhachevskii and most of his compatriots inevitably brought his concepts into disrepute. Simultaneously, the negative Soviet experiences with large tank forces in Spain (1937–38) and in eastern Poland (September 1939), and mixed reaction to Zhukov's victory over the Japanese in August 1939 at Khalkhin-Gol led the Soviets by November 1939 to abolish the large mechanized corps and replace them with tank brigades—also large tank units but lacking infantry—and smaller motorized divisions.[6] In fact this reduction of Soviet armored forces was prompted in part by a realization that technological realities would have made it difficult for even Tukhachevskii to control so large and complex a force.

Less than one year after the Soviet decision to truncate severely her mechanized forces, German armies spearheaded by panzer corps and divisions swept into France. As France fell victim to *Blitzkrieg* the Soviets suddenly realized that Germany had stolen the march on the Soviets regarding mechanization.[7] The Soviets responded with a crash program to reconstruct a mechanized force, although the catchword "deep operations" remained buried with its purged creators.

In late 1940 the Soviets ordered creation of the first nine of twenty-nine large mechanized corps consisting of tank and mechanized divisions. Shortly thereafter this force was supplemented by new large airborne corps and antitank brigades. These new mobile units, whose formation was to be complete by 1942, were to add significantly to the already large Soviet rifle, artillery, and air forces. Hence, the Soviet army force structure of 1941 was an imposing one, at least on paper, and was a force the Soviets believed was capable of conducting operational maneuver. But it was also a force plagued by poor leadership and major equipment problems.

The Soviet force structure of June 1941, while very large and elaborate, was also very cumbersome (Figure 1).[8] The Soviet Army consisted of twenty rifle armies (joined into *fronts* in wartime), each of which theoretically

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*Doctrine is used here, and subsequently, in the Western sense of the word. In reality, doctrine to the Soviets includes much broader political and economic consideration.. essentially all those aspects which con.. tion how a nation wages war.

contained more than 100,000 men. The armies were subdivided into three or four large rifle corps; and the corps, in their turn, consisted of rifle divisions, each with over 14,000 men. The heart of the Soviet mobile force structure in June 1941 was the twenty-nine mechanized corps, only about half of which had their full complement of tanks. Unfortunately, most of these tanks were older models rather than the newer T–34 medium and KV (Klementi Voroshilov) heavy tanks. The mechanized corps were further subdivided into two tank divisions and one mechanized division. The Soviet force structure also contained four cavalry corps, each consisting of two or three cavalry divisions, and five airborne corps, each composed of three airborne brigades. This was the large Soviet force structure against which the Germans launched their lightning campaign of June 1941 into the western Soviet Union.

Figure 1. Soviet Army Force Structure, June 1941

Rifle Armies
  Rifle Corps
  Rifle Divisions (14,500/16)

Mechanized Corps (36,000/1,031)
  Tank Divisions (11,000/375)
  Mechanized Divisions (11,600/275)

Cavalry Corps
  Cavalry Divisions (9,000/64)

Airborne Corps (10,400/50)
  Airborne Brigades (3,000)

Note: The first number in parentheses denotes unit personnel while the second number represents armored strength.
Sources: Charts through 1945 are compiled from over thirty Soviet sources and verified by intelligence materials amassed by German Foreign Armies East (*Fremde Herre Ost*). Complete data are in D. M. Glantz, *Soviet Force Structure, 1918–1986* (draft manuscript, Soviet Army Studies Office, Ft. Leavenworth, Kans., 1987).

The Initial Shock of War

The German invasion of June 1941, a surprise although it should not have been, caught the Soviet armored forces maldeployed, poorly led, poorly equipped, and only partially trained. The German *Blitzkrieg*, spearheaded by four panzer groups advancing along three separate axes, seized the initiative and denied Soviet forces the opportunity to conduct effective counterstrokes.

Let us now turn to how that Soviet force performed in war as viewed through the prism of selected operations. Since this essay focuses on the Soviet capability to conduct operational maneuver, the maps show only how the Soviets organized their forces for combat, the forces they used to conduct operational maneuver, and the degree of success those forces achieved.

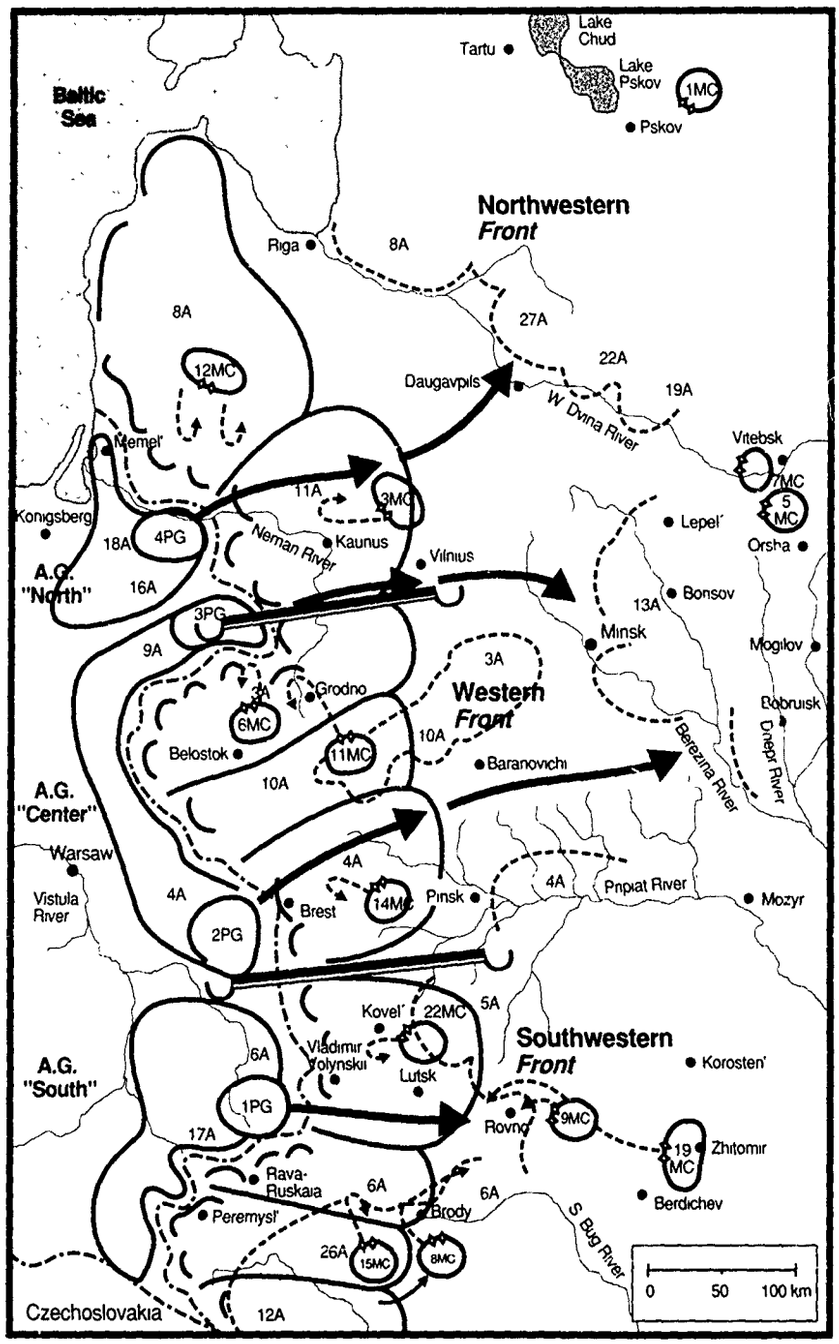
After the surprise offensive on June 22, the four German panzer groups quickly cut through Soviet border defenses and penetrated deep into the western Soviet Union. The Soviets attempted to counterattack with their large but scattered mechanized forces; however, these counterattacks were poorly coordinated and generally led to further operational disasters (Map 1). Only in the extreme south, in the Kiev Military District, did the partially coordinated Soviet counterattacks by four better deployed mechanized corps affect the progress of the German advance.[9] Throughout the summer of 1941 the momentum of the German advance kept Soviet forces off balance. Thus, the Soviets attempted few counteroffensive operations. The only major Soviet counteroffensive occurred during July in the Smolensk region, when the Soviets attempted to employ four armies of their Reserve *Front* in order to halt the German forward progress and relieve Soviet forces already encircled in the vicinity of Smolensk (Map 2).

The Smolensk Operation clearly demonstrated the problems facing Soviet commanders in the summer of 1941 as they attempted to conduct offensive operations. At Smolensk the Soviets lacked sufficient armor, air, and artillery support. The four army shock groups used in the counterattack role, each named for its commander, lacked large armored formations. Most armor contained in each of the shock groups simply performed the function of infantry support and coordination between armor and infantry was poor.[10] Thus, the Smolensk counterattacks failed; and the Germans continued their offensive, first toward Kiev in the south, and later, in the autumn, toward Moscow.

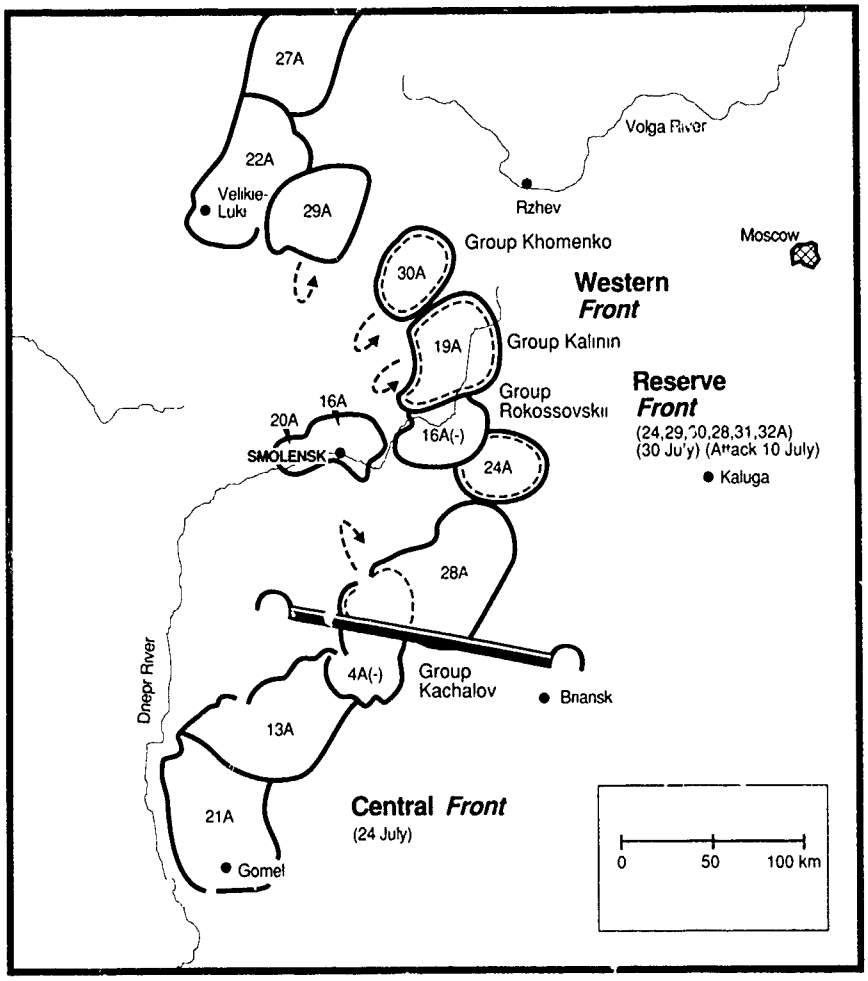
The German offensive progressed throughout July and August and, in the process, destroyed much of the Soviet prewar force structure. As a direct result of their unsuccessful combat operations, the Soviets determined that their units were in fact too large and complicated for their commanders to command and to control effectively. Soviet commanders proved inept at coordinating the diverse forces and weapons under their command. Consequently, in August and September the Soviets began to truncate the size of their units to a point where their commanders could more effectively control and employ them. By December 1941 this truncation process was complete (Figure 2). In essence, the Soviets had lightened their force structure at all levels of command.[11] In doing so, they abolished the rifle corps headquarters in their rifle armies and decreased the size of their rifle armies to well under 100,000 men. The new rifle armies were composed of rifle divisions and rifle brigades and had fewer supporting units. The rifle divisions themselves were considerably reduced in size and the rifle brigades were nothing more than light divisions of about 4,500 men consisting of rifle and artillery battalions.

The Soviets disbanded the part of their mechanized corps structure that the Germans had not already weakened or destroyed in combat. By December

Map 1. The Border Battles, 22–29 June 1941



Map 2. Smolensk Operation, July 1941



1941, the largest armored formation existing in the Soviet army force structure was the separate tank brigade shrunken to only forty-six tanks. Most of these tank brigades had, in fact, between twenty and thirty tanks. The Soviets formed seventy-nine of these brigades by the end of December 1941.[12] Even the cavalry corps were subject to the truncation process. The Soviets formed over eighty light cavalry divisions by December 1941, each numbering roughly half of the strength of the older cavalry division.

Thus, the Soviets in a period of six months significantly lightened their force structure. They stripped from that force structure much of its armor and artillery support and began concentrating those armor and artillery assets in new units under control of the High Command (*Stavka*). Later the *Stavka* would parcel those forces out to operating *fronts* and armies as necessitated by specific operational conditions. The truncation of the Soviet force structure severely impeded the Soviet capability to carry out large-scale, sustained offensive operations and to conduct operational maneuver. A

Figure 2. Comparison of Soviet Army Force Structure, June and December 1941

June 1941	December 1941
Rifle Armies	Rifle Armies
Rifle Corps (11,600)	Rifle Divisions (11,600)
Rifle Divisions (14,500/16)	Rifle Brigades (4,400)
Mechanized Corps (36,000/1,031)	Tank Brigades (1,470/46)
Tank Divisions (11,000/375)	
Mechanized Division (11,600/275)	
Cavalry Corps	Cavalry Corps
Cavalry Divisions (9,000/64)	Cavalry Divisions (6,000)
	Light Cavalry Divisions (3,400)
Airborne Corps (10,400/50)	Airborne Corps (12,000)
Airborne Brigades (3,000)	Airborne Brigades (3,300)

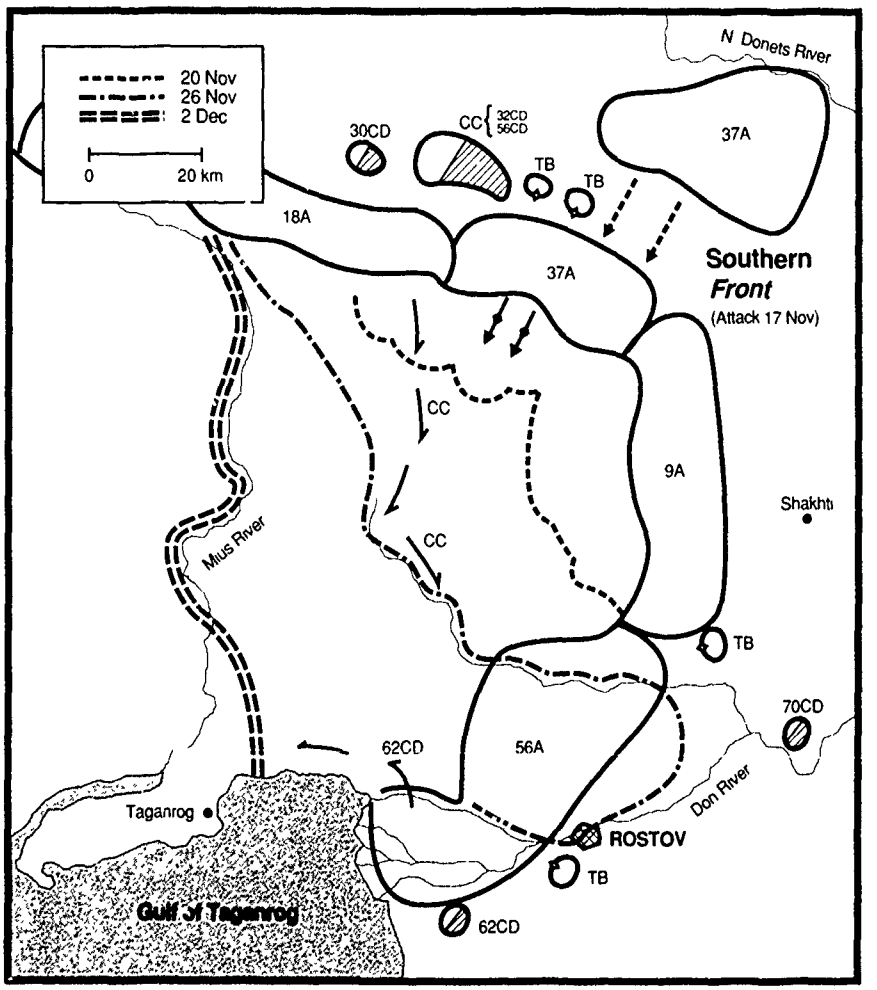
Note: The first number in parentheses denotes unit personnel while the second number represents armored strength.
Sources: See Figure 1.

review of two Soviet offensive operations that took place in November and December of 1941 clearly demonstrated the scale of that problem.

The first operation took place near Rostov in southern Russia (Map 3). During the Rostov offensive operation, which occurred in late November and early December 1941, the Soviets struck at overextended German forces which were attempting to seize Rostov.[13] The Soviets conducted the offensive by inserting into the first echelon of the attacking *front* a main attack force of a rifle army, supported by two tank brigades, a cavalry corps and a separate cavalry division. This force penetrated German defenses but thereafter proved too weak to sustain deep operations. In this operation the Germans, because of their own overextension, were forced to withdraw to more defensible positions along the Mius River.

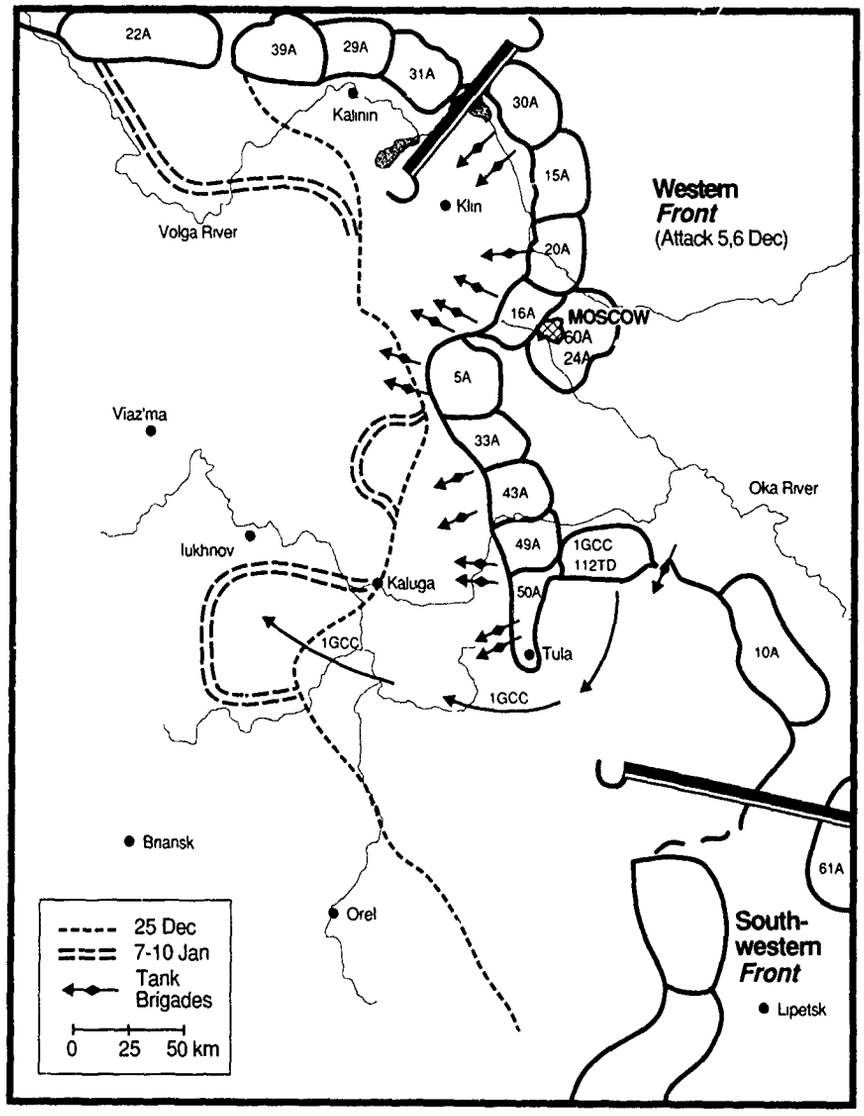
The Moscow Operation of December 1941 and January 1942 also provided clear indicators of Soviet operational deficiencies during that period of the war.[14] The Moscow counteroffensive began in December 1941 and ultimately encompassed several offensive impulses that lasted well into February 1942

Map 3. Rostov Operation, November–December 1941



(Map 4). In these operations, conducted by the armies of the Kalinin and Western *Fronts* against overextended German forces around Moscow, the only units capable of conducting operational maneuvers were three cavalry corps (the 11th, 1st Guards, and 2d Guards). These cavalry corps consisted

Map 4. Moscow Operation, December 1941–January 1942



of regular horse-cavalry divisions, light cavalry divisions; a few tank brigades; and, in some cases, rifle divisions as well. The mixed composition and limited firepower of these units made them exceedingly difficult to control and coordinate in deep operations. Moreover, only a limited number of tank brigades were available to support army commanders at the outset of the Moscow Operation. Generally, from one to three tank brigades provided

armored support for the advancing infantry of each rifle army, and this was not enough armor to generate the sort of offensive momentum necessary to conduct sustained deep operations.

In the latter stages of the Moscow Operation, in January and February 1942, the Soviets conducted the Rzhev-Viaz'ma Operation (Map 5). The offensive demonstrated that Soviet forces could penetrate German defenses. However, once cavalry, ski, and airborne forces had advanced far into the German rear, they could not sustain their advance and fulfill their operational missions because of their light weaponry. Ultimately, by April 1942, the front west of Moscow was a patchwork quilt of overlapping Soviet and German units. The Soviets controlled the countryside, and German forces controlled many of the villages and roads.

Rebuilding the Soviet Mechanized Force

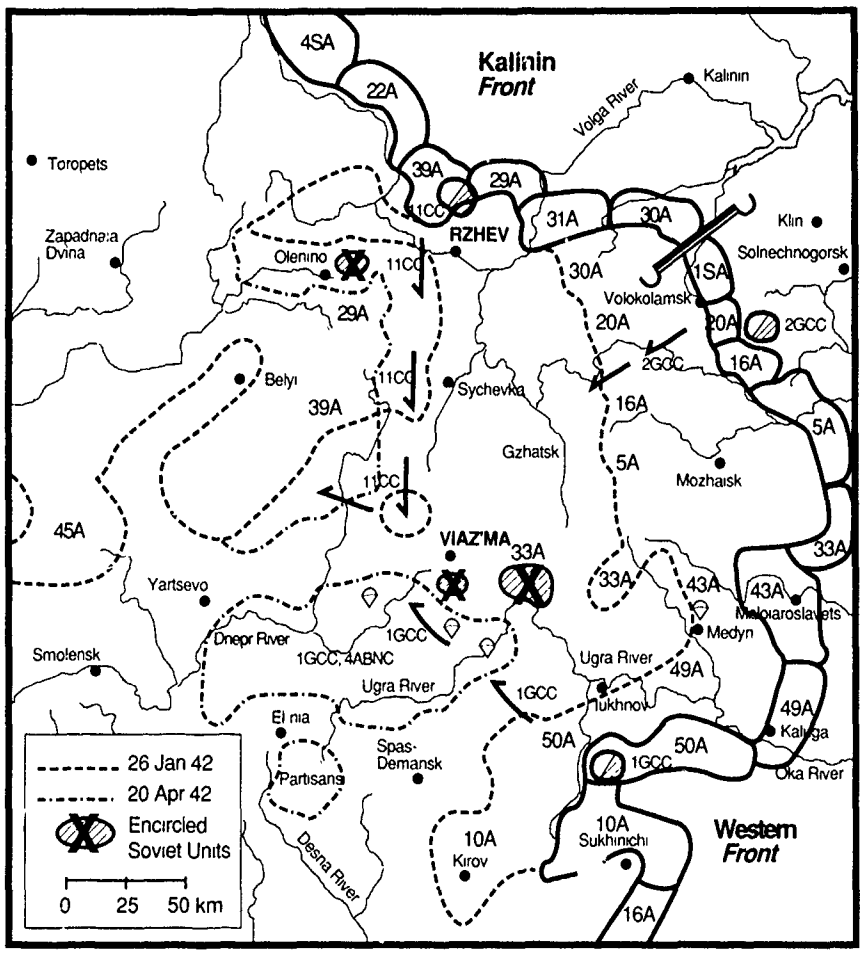
The Soviet High Command carefully examined their experiences in the summer and fall of 1941, and concluded that their major problem in the conduct of offensive operations was the absence of large, mechanized, armored forces. After December 1941, the Soviets began the arduous process of rebuilding their mobile forces during wartime, and testing and refining them in combat. It was a process which inexorably transformed the Soviet Army from a foot-and-hoof army of infantry and cavalry into a potent force dominated by its significant mobile armored formations. That often costly, but ultimately fruitful education, culminated organizationally and doctrinally in 1944 and 1945. Soviet progress throughout the war in rebuilding a force capable of conducting operational maneuver, equipped to fulfill that task, and led by commanders suited to perform such a function can best be gauged by a close look at specific selective Soviet operational experiences.

During the spring of 1942 the Soviets began developing the larger armored formations essential for them to conduct more successful offensive operations. In March 1942 the Soviets created the first of these units, the new tank corps. Initially, these corps consisted of 100 tanks, but this rose to 168 tanks by the summer and ultimately, by the end of the year, to over 200 tanks each. The Soviets created 28 tank corps in 1942.[15]

In May 1942 the Soviets planned and conducted at Khar'kov their first offensive operation using these new tank corps (Map 6). The Khar'kov Operation was designed to preempt German summer offensive action and restore the initiative to the Soviets. The Soviet High Command planned to attack north and south of Khar'kov and ultimately envelop and destroy German forces defending that important city.[16] In the spearhead of the two enveloping forces were experienced cavalry corps and several new tank corps, two of which were designated to exploit the attack south of Khar'kov.

During this operation the Soviets, for the first time, confronted some of the basic problems of orchestrating the use of deep exploiting forces, specifically such problems as when should those forces be committed to combat, how should they conduct the exploitation, and where should link-up be effected to produce the envelopment? In the operation the Soviets hesitated

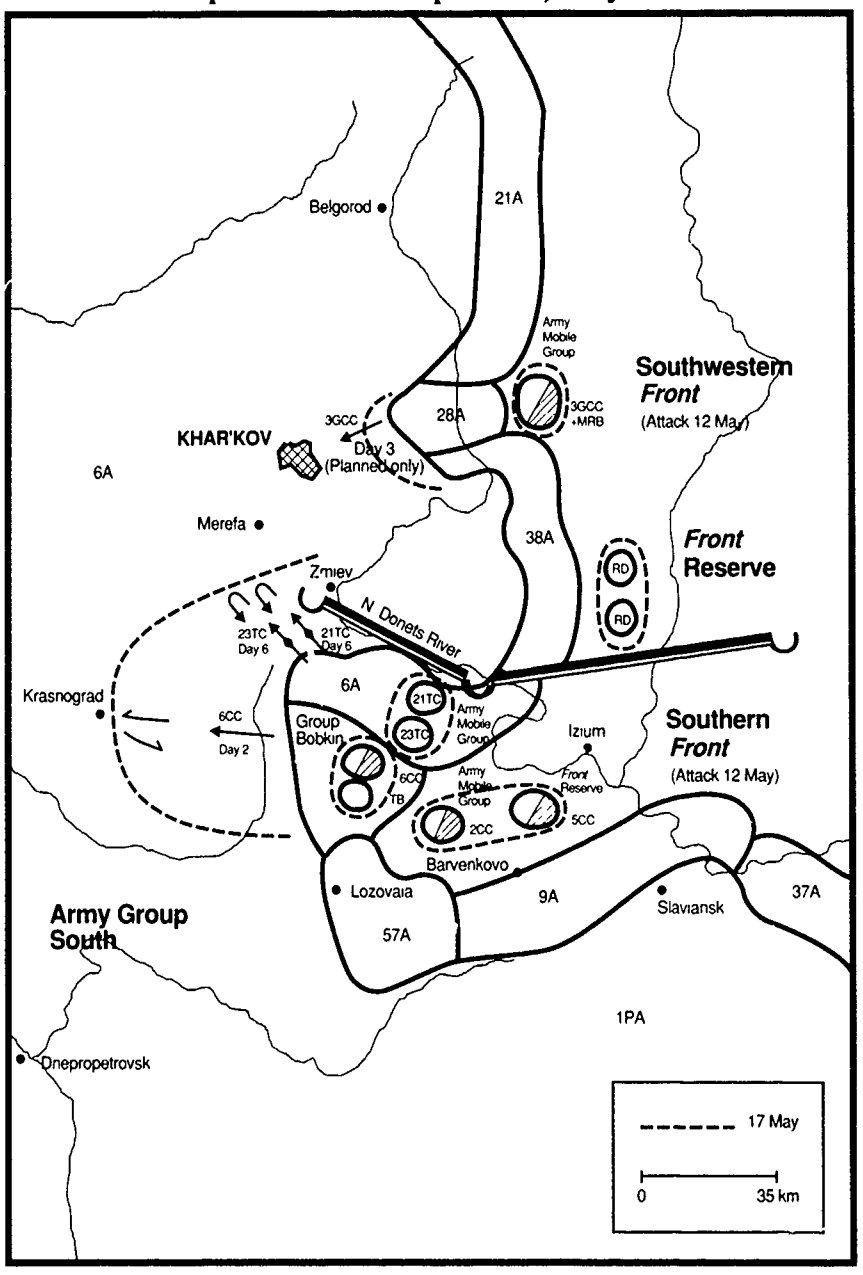
Map 5. Rzhev-Viaz'ma Operation, 8 January–20 April 1942



to commit their two tank corps, and ultimately did not commit them to combat until the sixth day of battle. Because of the delay, the two tank corps went into action at the same time that the Germans began a major counterstroke from the south. The counterstroke caught the Soviets by surprise, caused them to hastily recall the tank corps to deal with the new threat and ultimately produced the encirclement and destruction of the entire Soviet attacking force south of Khar'kov. The Soviet failure at Khar'kov paved the way for the great German offensive which began in late spring and early summer and eventually culminated in the Battle of Stalingrad.

Despite their defeat at Khar'kov, the Soviets continued to improve their mechanized force structure throughout the summer of 1942. They used their remaining new tank corps to try to parry the German advance in June and July 1942; and in July 1942 the Soviets created a new force entity, the tank army of mixed composition. The new Soviet tank army, six of which were created, consisted of a mixture of tank corps, rifle divisions, cavalry corps, and separate tank brigades.[17] The major problem confronting the commanders

Map 6. Khar'kov Operation, May 1942



of these new tank armies was that of holding such a motley, diverse group together and coordinating the actions of such a force in offensive operations. In July the Soviets used these new tank armies against the advancing Germans in the Voronezh area and again against the Germans on the distant and close approaches to Stalingrad. In virtually every case, when employed, the tank armies proved to be less than fully effective against the better organized, better controlled, and better equipped German armored units.

In addition to creating tank armies, in September 1942 the Soviets created new mechanized corps consisting of three mechanized brigades and one tank brigade or two separate tank regiments. The new mechanized corps differed from the tank corps in that the former possessed a much heavier contingent of motorized infantry. However, because of a shortage of motor vehicles and trucks the Soviets created only a limited number of these corps.[18] The new mechanized corps, like the tank corps, lacked real armored infantrymen since the Soviets lacked a true armored personnel carrier, and instead had to use truck and tank-mounted infantry. This remained a constant German advantage throughout the war.

By late 1942, a new larger and heavier Soviet force structure was emerging, demonstrating a renewed Soviet faith in the ability of their commanders to control larger forces (Figure 3). The Soviets expanded the size of rifle armies and again began adding the rifle corps level of command to the army structure. Some of the new, expanded rifle armies consisted of new rifle corps which contained the older rifle divisions and rifle brigades. In addition

Figure 3. Soviet Army Force Structure, January 1943

Rifle Armies
- Rifle Corps (a few)
- Rifle Divisions (9,400)
- Rifle Brigades (6,000)

Tank Armies (Mixed Composition)

Tank Corps (7,800/168)

Mechanized Corps (13,600/175)

Cavalry Corps
- Cavalry Divisions (4,700)

Airborne Brigades (3,300)

Note: The first number in parentheses denotes unit personnel while the second number represents armored strength.
Sources: See Figure 1.

the Soviet force structure by the end of 1942 included two full tank armies of mixed composition as well as twenty-four tank and eight mechanized corps.[19] *Front* commanders controlled the tank armies while the tank and mechanized corps were normally put at the disposal of army commanders.

Rebirth of Operational Maneuver

The first major successful Soviet offensive operation using this more mature force structure occurred in November 1942, in an operation the Soviets named Operation Uranus, the Stalingrad counteroffensive. In this operation the Soviets used reserve armies, raised and held in the rear by Stalin throughout the summer and fall of 1942, in order to launch a major counterattack against German, Rumanian, and Italian forces in the Stalingrad area. The Soviet High Command used one tank army and several of the new mechanized and tank corps to spearhead that offensive effort.

The Soviets deployed their armored forces to conduct an envelopment operation of German forces at Stalingrad (Map 7).[20] The Soviets used three tank corps (two operating as a part of 5th Tank Army) in an attack from the north and a tank and mechanized corps operating as a part of the 51st and 57th Armies in an attack from south of Stalingrad. They sought to penetrate the German and Rumanian defenses in both the north and the south, to insert the concentrated tank and mechanized corps into combat, and to link them up in the German rear somewhere west of Stalingrad to encircle the German 6th Army and the 4th Panzer Army.

The Stalingrad Operation was a major success. The Soviets achieved multiple penetrations, committed and linked up their exploiting mobile corps, and encircled German forces within the city of Stalingrad. In doing so, however, the Soviets learned that an envelopment operation was a far more complicated operation than first met the eye. In fact, the conduct of the Stalingrad Operation posed to Soviet planners and operators a whole new series of problems, the solutions to which would occupy those planners and operators for the remainder of the Second World War.

The Soviets learned that there were five basic steps necessary to conduct a successful encirclement operation (Figure 4). These were steps which the Germans themselves had experienced in the summers of 1941 and 1942 with considerable but not total success. It was clear that to effect an encirclement one first had to penetrate the enemy's defense, a rather easy problem to solve. Subsequently, mobile forces had to exploit the penetration and linkup, also not a particularly difficult stage of the operation. Once deep operating mobile forces had achieved linkup, an inner encirclement line had to be created around encircled forces to ensure they remained entrapped. By the end of 1942, both the German Army and the Soviet Army had conducted these three steps successfully. However, the subsequent steps posed greater difficulties. For in order to conduct a successful encirclement one also had to erect an outer encirclement line to defend against relief of the encircled force. Ideally, forces which formed the outer encirclement line also had to be able to continue the offensive operation while the encircled enemy force

Map 7. Stalingrad Operation, November 1942

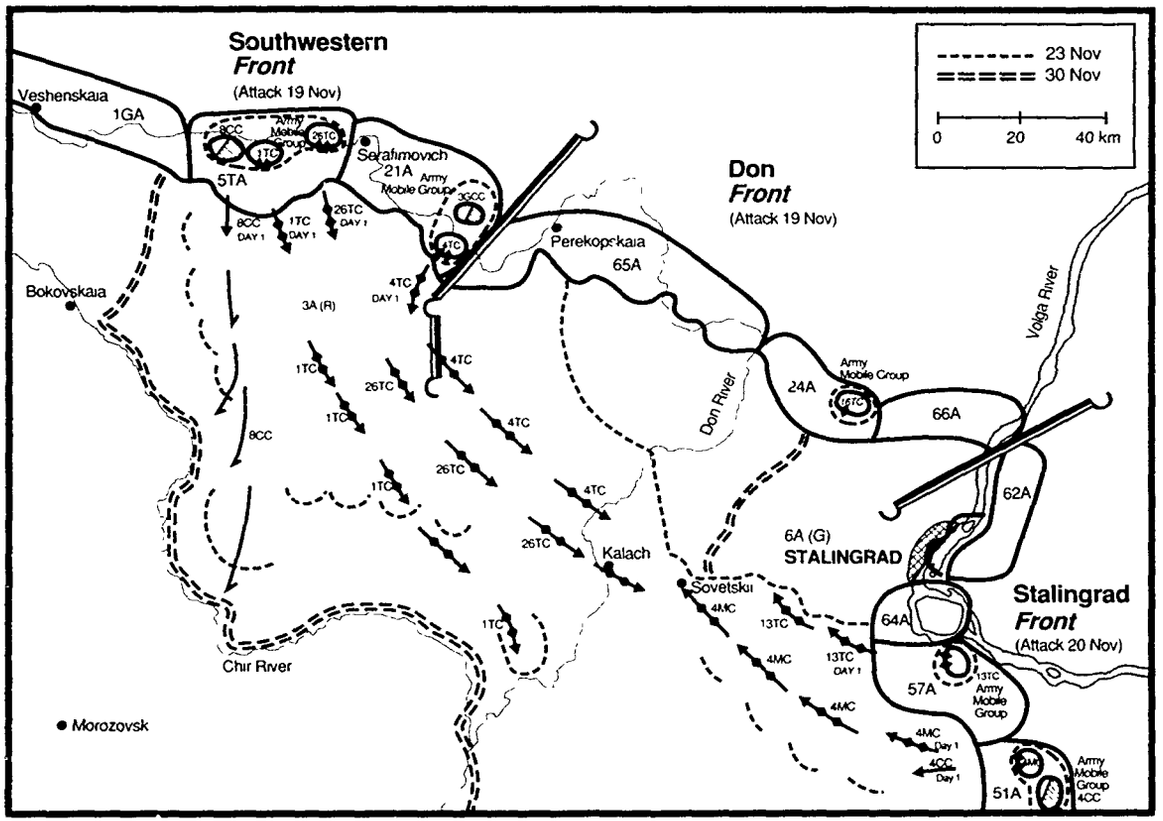
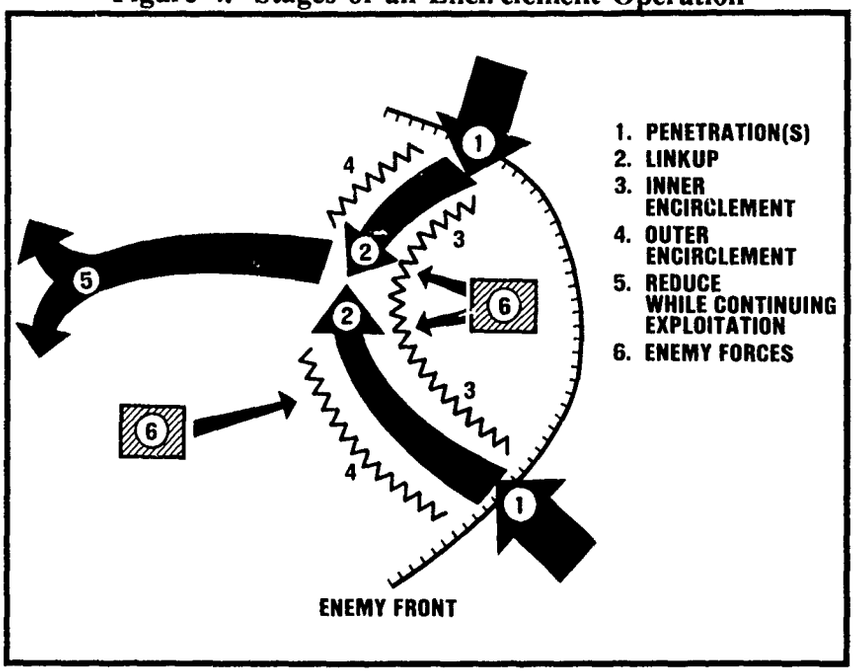


Figure 4. Stages of an Encirclement Operation

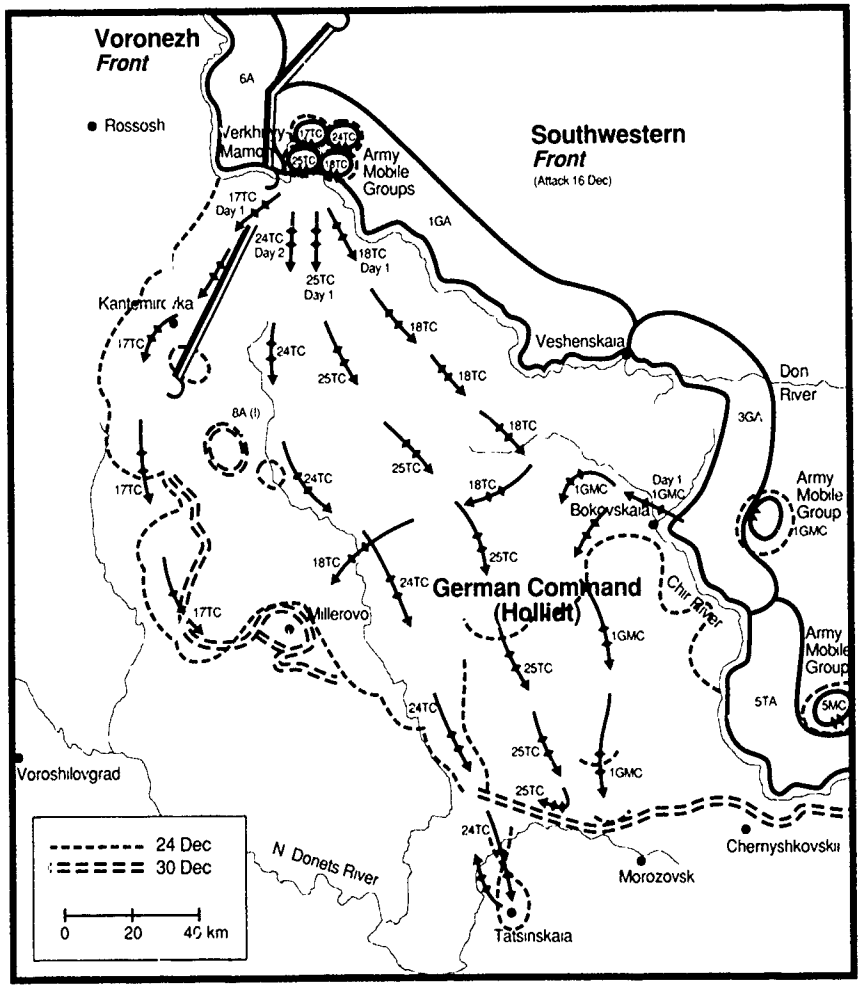


was being reduced. These last two steps had caused the Germans difficulty in 1941 and 1942, and beginning with the Stalingrad Operation in the winter of 1942 and 1943 they posed considerable difficulty to the Soviets. No sooner had German forces been encircled in Stalingrad than the Germans began assembling forces to relieve the encircled units. Without any operational pause, the Soviets responded by mounting new offensive operations designed to halt German relief attempts, to push German forces back, and, if possible, to produce an overall collapse of German forces in the southern region of the Eastern Front.

In December 1942 the Soviets launched the Middle Don Operation, the first of these new offensives (Map 8) and one which incorporated several new operational features.[21] First, the Soviets improved their concept for massing armored forces. In the Middle Don Operation the Soviets employed four tank corps, all operating out of the same small bridgehead on the south bank of the Don River. They used those concentrated corps to conduct a concerted advance deep into the German rear area. The Soviets, however, neglected several critical measures in this operation. They failed to establish a common command and control organization to control the four deep operating tank corps. In fact, each tank corps commander was responsible to both the army commander in whose sector he operated and to the *front* commander as well. Moreover, while pursuing their deep objectives these armored forces became overextended and separated from advancing Soviet rifle forces, and in many cases they operated outside of the range of Soviet air forces.

The Middle Don Operation was an operational success for the Soviets, but by the end of the operation most of the tank corps retained only a

Map 8. Middle Don Operation, December 1942



fraction of their starting strength. (Most corps began with around 200 tanks and by the end of the operation were down to roughly twenty-five tanks each). Because of the lack of centralized command and control, once the Soviets became overextended, German forces were able to engage each corps separately (for example, 24th Tank Corps at Tatsinskaia). Moreover, the corps themselves were out of mutually supporting range, hence each was defeated in its own right without receiving support from the others. The Soviets learned quickly from their experiences along the Middle Don and they hastened to apply those lessons in subsequent operations.

After completion of the Middle Don Operation the Soviets conducted a series of *front* offensive operations ranging across southern Russia. The Voronezh, Ostrogozhsk-Rossosh', and Rostov operations, extending from the upper Don River to south of Rostov, began a series of Soviet attempts to force an ultimate collapse of German forces in the south. Perhaps the most interesting in this new series of operations was the Donbas Operation

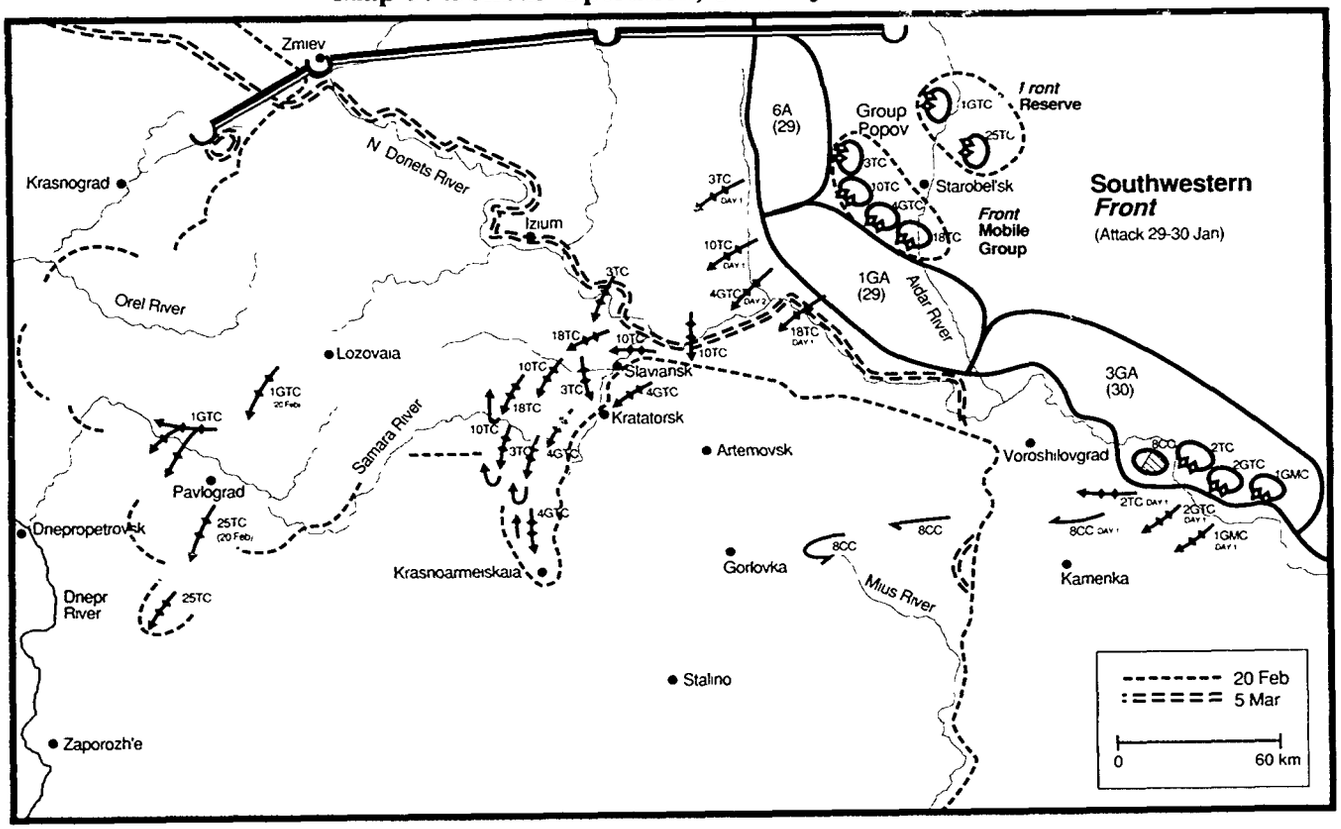
conducted by the Southwestern *Front* during January and February of 1943 (Map 9). By late January the Southwestern *Front* had advanced steadily westward from the Stalingrad region, had created a large gap in German defenses, and had advanced into the rear of Germany Army Group Don. The Southwestern *Front* commander, Gen. Vatutin, planned to use his large armored force to spearhead a Soviet advance well into the German rear, if possible all the way to the Dnepr River. His ultimate intent was to encircle completely all German forces operating in southern Russia.

The Soviet Southwestern *Front* had at its disposal for this operation six tank corps, although four of the six tank corps were well below full operating strength.[22] To make operations by those tank forces more effective, Vatutin placed four of the corps under a single operational headquarters, in this case an operational group called Mobile Group Popov. The group commander, Gen. M. M. Popov, was to coordinate closely the operations of the four tank corps and keep the corps, if possible, within supporting distance throughout the duration of the offensive. To better improve the sustainability of those tank corps in their deep operations, Vatutin assigned a specific rifle division to cooperate with each of the tank corps and mandated that each of those rifle divisions be provided with a maximum number of vehicles to permit them to keep up with the accompanying armored units. In essence, Group Popov was to function as a mobile (operational maneuver) group of the Southwestern *Front*.

However, theory and practice proved to be very different matters. Once Vatutin's offensive began on January 29, 1943, almost inevitably the corps began operating in separate directions against separate objectives. Moreover, a new problem arose: the armored units tended to become involved with reducing individual German strong points, particularly on the flanks of the main advance. That tendency disrupted the overall flow and development of the offensive plan. As the offensive developed, the individual corps operated in staggered sequence and usually out of mutually supporting distance. Only at the very end of the operation, when all four tank corps had been reduced in strength to between ten and forty tanks each, did they finally come together in the same general area. Unfortunately for the Soviets, this occurred at the precise time when the Germans launched a series of successful and devastating counterattacks.

Another problem the Soviets experienced during the Donbas Operation was that the Southwestern *Front* commander held his two strongest tank corps (the 1st Guards Tank Corps and 25th Tank Corps) in *front* reserve, and when he committed them to combat he did so in an entirely different operational sector than the one in which Group Popov had originally begun its operations. Thus, Soviet mobile forces in the Donbas Operation coordinated among themselves very poorly, tended to become overextended in their operations and, as a result, became the victims of effective German counterattack. The German counterattack orchestrated by Field Marshal E. von Manstein, ultimately forced the Soviets to withdraw to the Northern Donets River after suffering significant losses. The Donbas Operation ended the winter campaign of 1942 and 1943 on a sour note for the Soviets.

Map 9. Donbas Operation, January–March 1943



The events that occurred during the winter of 1942 and 1943 did have a significant impact on Soviet doctrine and Soviet force structure, for during the operational pause that followed the operations of February and March 1943, the Soviets digested the lessons they had learned during those frenetic operations across southern Russia. They also instituted a significant reorganization of their force structure to permit it to better carry out deep offensive operations in the future. The Soviet force structure which emerged in the summer of 1943 was a force structure that, in reality, would persist throughout 1944 and 1945 with minor refinements (Figure 5).

Major changes in Soviet force structure actually began in January 1943, when the Soviet High Command ordered the creation of new tank armies, armies of a single type of Table of Organization and Equipment (TOE) and uniform composition.[23] The new tank armies, made up of two tank corps and an optional mechanized corps, were considerably stronger than the earlier tank armies and more important, their command and control system was much tighter and more effective. The new tank armies numbered between 400 and 600 tanks each, and the Soviets created five of them by the summer of 1943 and a sixth in early 1944. In addition, throughout the winter of 1943 the Soviets improved their tank and mechanized corps' structure by adding to them support elements necessary to better sustain armored operations deep in the enemy rear. Simultaneously, the Soviets accelerated the process of reestablishing rifle corps in most of their rifle armies. In essence, there was a growing sophistication in the Soviet force structure readily apparent by the summer of 1943.

The operational pause which lasted from March to July 1943 also provided time for the Soviets to capture in their doctrine the many lessons derived from their winter experiences. They developed techniques and procedures for the use of their new force structure, and many of those techniques and procedures reached full fruition in July 1943 when the Germans conducted their last strategic offensive, the offensive at Kursk. At Kursk, for the first time in the war, the Soviets demonstrated their new strategic and operational maturity by permitting the Germans to conduct a strategic offensive operation without Soviet attempts to preempt it and by conducting a strategic defensive operation to match the German offensive effort. Although the Soviets showed great restraint by their decision to conduct a strategic defensive operation, they pointedly incorporated into their plans the intention to conduct two major counterstrokes timed to commence as soon as the German offensive wave had ebbed. Those two counterstrokes did occur, one in mid-July during the German attack and one in early August, shortly after the German attack at Kursk had failed.

It was during the Kursk counteroffensive that the Soviets revealed to the Germans their new, more mature force structure, one demonstrably more capable of achieving operational success than its predecessor. Thus the events of the winter of 1942 and 1943 culminated in a new stage in

Figure 5. Comparison of Soviet Army Force Structure, 1943 and 1944–1945

January 1943	1944–1945
Rifle Armies	Rifle Armies
Rifle Corps (a few)	Rifle Corps
Rifle Divisions (9,400)	Rifle Divisions (11,700)
Tank Armies (Mixed Composition)	Tank Armies
	Tank Corps (12,000/228)
	Mechanized Corps (16,300/183)
Tank Corps (7,800/168)	Cavalry-Mechanized Groups
Mechanized Corps (13,600/175)	Tank/Mech Corps
	Cavalry Corps
Cavalry Corps	Separate Tank/Mechanized Corps
Cavalry Divisions (4,700)	
Airborne Brigades (3,300)	Airborne Brigades (3,300)

Note: The first number in parentheses denotes unit personnel while the second number represents armored strength.
Sources: See Figure 1.

the conduct of Soviet operations, a stage that would commence in July 1943 and lead to the even greater Soviet victories of 1944 and 1945.

Maturation of Operational Maneuver

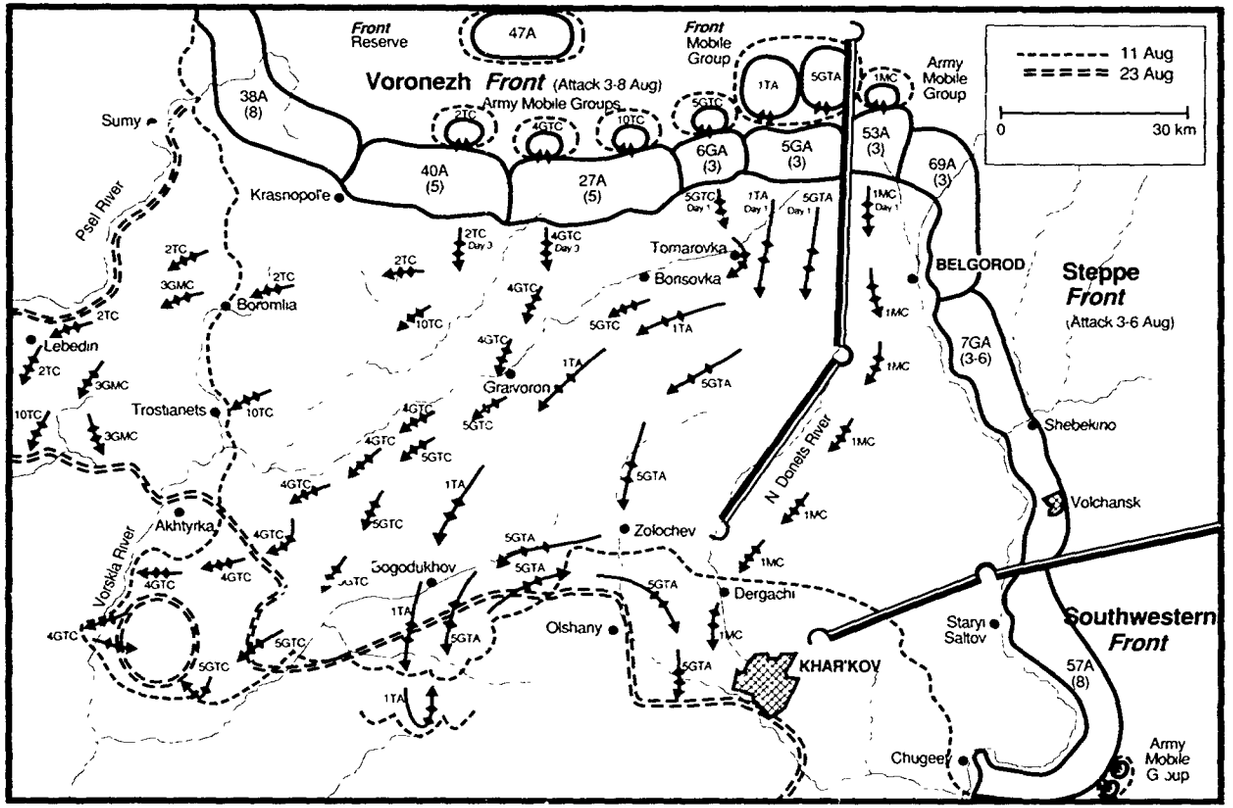
The first successful Soviet offensive operations during this new stage of war occurred in July and August 1943 during and after the German offensive at Kursk. In the counterstroke at Orel and, in particular, during the offensive at Belgorod-Khar'kov one can clearly observe the improvements in Soviet force structure that enabled the Soviets to carry out more successful operational maneuver. The Belgorod-Khar'kov Operation commenced on August 3, 1943 (Map 10). To conduct the operation the Soviets concentrated a large force and subjected it to a very rapid period of preparation closely following the intensive combat at Kursk. The operation involved the Soviet Voronezh *Front* and the Steppe *Front*, whose mission was to reduce the German salient surrounding the cities of Belgorod and Khar'kov.

One of the most notable features of the Soviet Belgorod-Khar'kov offensive was the proliferation of Soviet armored units participating in the attack.[24] Soviet armies on main attack axes had subordinate to them a full tank or mechanized corps whose mission was to exploit the tactical penetration achieved by army rifle forces. Thus, they were to initiate operational maneuver. In addition, Soviet *front* commanders for the first time in the war had at their disposal full tank armies which numbered over 500 tanks each. These armies were to capitalize on the success of army rifle and mobile forces and perform the function of deep operational maneuver. Thus, in this operation, Soviet commanders possessed the largest mobile force yet available to Soviet commanders during the war.

The Soviet concept of the operation was a rather simple one. It involved a direct attack on the nose of the German salient by four armies of the Voronezh *Front* (the 40th, 27th, 6th Guards, and 5th Guards) and by two armies of the Steppe *Front* (the 53d and 69th). Those armies would conduct the penetration operation north and northwest of the city of Belgorod and would commit their operational maneuver forces, the tank and mechanized corps, to begin the operational exploitation. Thereafter, the two large tank armies (1st and 5th Guards) would advance into combat in an exceedingly narrow sector and would carry out a deep operational exploitation into the region west of Khar'kov. Ultimately, they would encircle Khar'kov and destroy the German 4th Panzer Army and Army Detachment "Kempf."

Initially, during the Belgorod-Khar'kov Operation Soviet forces conducted a successful penetration operation and committed their maneuver forces to battle successfully. Ultimately, those armored forces drove to a depth of some 120 kilometers before German reinforcements fought them to a standstill. In this operation, however, the Soviets uncovered a whole new set of problems which they then sought to solve during the remaining two years of the war. Many of these problems related to command, control, and coordination of forces. In particular, the Soviets discovered that once the

Map 10. Belgorod-Khar'kov Operation, August 1943



armored forces were committed to deep operations, because of their higher degree of mobility, they tended to become separated from supporting rifle units and also supporting artillery. Thereafter, the armored units became more vulnerable to German counterattacks. Compounding this problem, there was also a tendency for the armored units themselves to become overextended, with lead elements (forward detachments) operating up to thirty kilometers distant from follow-on elements. The large gaps between these separated elements rendered the armored force spearhead highly vulnerable to German counterattack. In addition to these command and control difficulties, the Soviets ran into problems of sustainability in terms of fuel, ammunition, and all of those logistical items necessary to sustain deep operations. There were also problems in coordinating the air support essential for the survival of the force deep in the German rear area. These problems would take months to solve. Nevertheless, the major operational features most apparent in the August 1943 Belgorod-Khar'kov Operation were that the Soviets were able to insert large forces deep into the German rear, that they were able to advance over 100 kilometers, and that they were able to fight German operational reserves to a virtual standstill. Moreover, this was the first time in the war that the Soviets had not been forced to give up major chunks of territory to German counterattacks.

Even more important, perhaps, was the fact that these large Soviet armored forces exacted a considerable toll in manpower and armored strength on the critical and increasingly scarce German operational reserves. After the conclusion of the Belgorod-Khar'kov Operation German armies had no choice but to withdraw several hundred kilometers to a new defensive line extending along the Dnepr River. Throughout 1944 and 1945 the Soviets conducted over 100 *front* offensive operations. Many of these operations involved the use of large mechanized and armored forces under control of army and *front* commanders. Examination of several of the most important operations clearly demonstrate the tremendous strides made by the Soviets in their ability to conduct successful operational maneuver. Since the war, the Soviets have investigated and are still investigating these operations in the belief that they are directly relevant to contemporary and future combat.

The first series of Soviet offensives in 1944 took place on what the Soviets call the right bank of the Ukraine. In reality, these offensives were an extension of those that had occurred in November and December 1943 when Soviet forces initially breached the Dnepr River line. Taken together the operations formed a major strategic offensive during which the Soviets conducted eight successful *front* operations successively, and at times simultaneously. In virtually every one of these operations, the Soviets used large operational maneuver forces in the form of tank corps, mechanized corps, multiple tank armies, or what the Soviets called cavalry-mechanized groups (a unit which emerged in 1943 and was a mixture of cavalry and mechanized forces). Moreover, they conducted these operations during a time of the year when the weather had previously inhibited operations. In the spring of 1944 the Soviets continued to conduct active *front* operations right through the infamous period of *razputitsa*, or thaw, during which Russian soil normally turns into a quagmire.

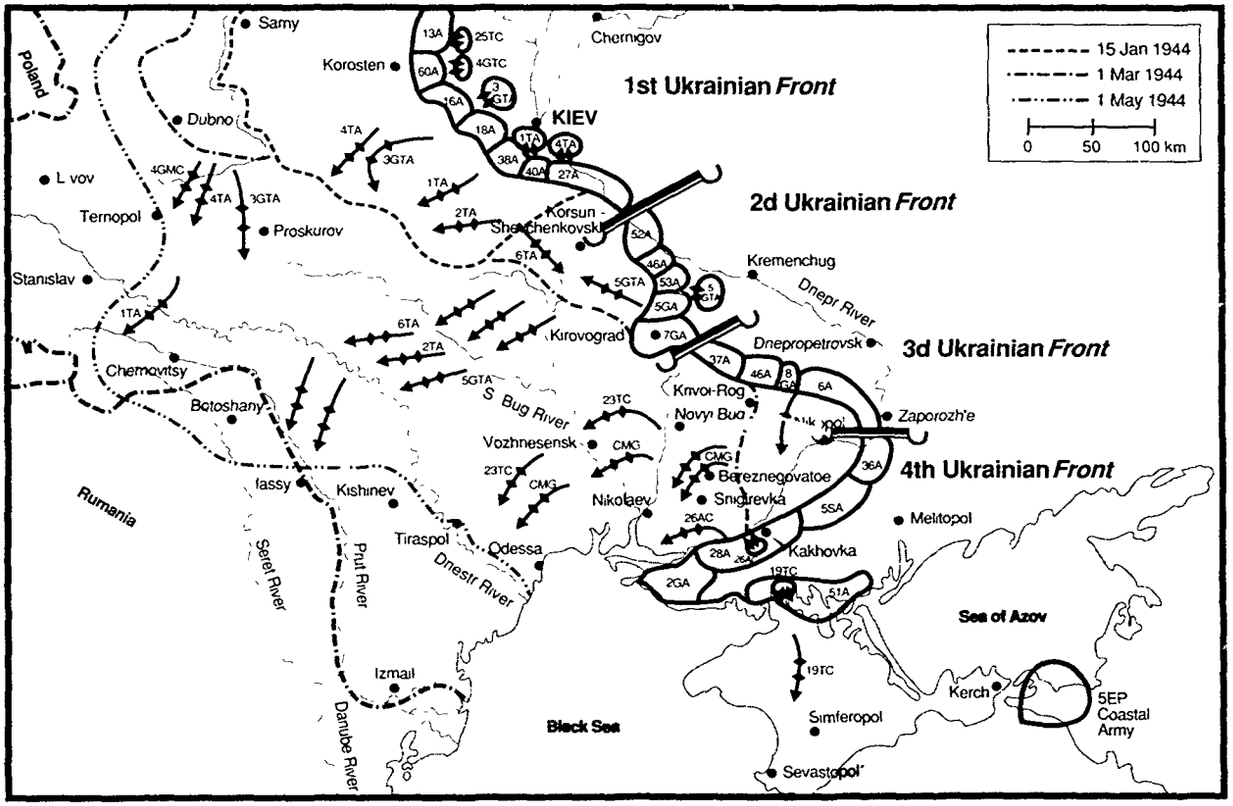
The right bank of the Ukraine strategic operation involved offensive operations by the 1st, 2d, 3d, and 4th Ukrainian *Fronts* (Map 11). In virtually all of the operations the Soviets made widespread use of tank and mechanized corps and tank armies. (The arrows on the map delineate where those tank forces operated.) Moreover, most *fronts* had subordinate to them at least one, sometimes two, and in one case, three tank armies. The net effect of the successful use of those tank armies was that by April 1944 Soviet forces had advanced all the way to the Polish-Soviet and Rumanian-Soviet borders.

The 1944 operation that the Soviets are most proud of, and indeed it was one of the most sophisticated Soviet strategic operations, was the Belorussian Operation or, as the Soviets call it, Operation Bagration. The operation commenced on June 22, 1944, against the three German armies of Army Group "Center," defending in Belorussia. Bagration was indeed an ambitious operation, for it involved the forces of four Soviet *fronts* operating on a very broad front (450 kilometers) against very deep objectives.[25] Moreover, it involved the deliberate conduct of simultaneous and successive envelopment operations. The initial Soviet operational aim was to encircle German forces around the cities of Vitebsk, Mogilev, and Bobruisk (3d Panzer Army, 4th Army, and 9th Army respectively) by means of simultaneous envelopments. After German forces in the forward defenses had been encircled, the Soviets sought to conduct a deeper strategic encirclement of all German forces forward of Minsk and then pursue German forces as far west as the East Prussian border.

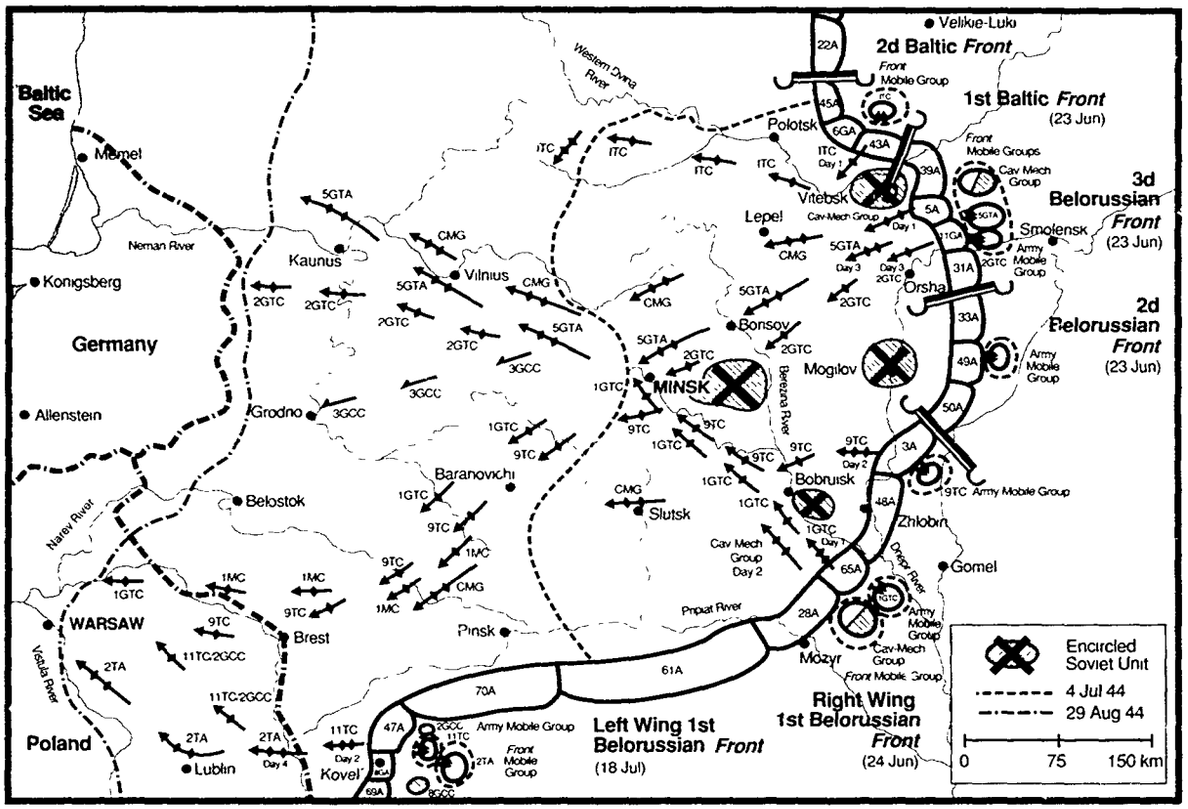
Soviet tank, mechanized, and cavalry forces played a decisive role in the Belorussian Operation (Map 12). Initially, the Soviets relied on their tank and mechanized corps and separate tank brigades to conduct the shallow envelopments and pinch off German forces in the three major cities. Subsequently, they used their larger mechanized forces, in this case the 5th Guards Tank Army and a cavalry-mechanized group in the north and a cavalry-mechanized group in the south, to conduct the deeper envelopment of Minsk and spearhead the exploitation all the way to the East Prussian border. The operation was an immense Soviet success. Large German forces were encircled at Vitebsk, Bobruisk, Mogilev, and east of Minsk; the German Army Group "Center" was virtually destroyed. In actuality, the Soviets exceeded their own expectations for, by the end of July 1944, Soviet forces had already reached the East Prussian border. The Germans were finally able to stabilize the front only by the end of August 1944.

In August 1944, just as the Belorussian Operation was grinding to a halt, the Soviets conducted the Iassy-Kishinev Operation against German and Rumanian forces in Rumanian Bessarabia (Map 13). In this operation the Soviets also relied primarily on operational maneuver and encirclement to achieve offensive success. The Soviets have studied this operation intensely since the war years, because while conducting it they successfully solved all five steps of an encirclement operation. The Iassy-Kishinev Operation involved offensive operations by the 2d Ukrainian and 3d Ukrainian *Fronts*.[26] After penetrating the German defenses each *front* then exploited the successful penetration with tank and mechanized corps which enveloped

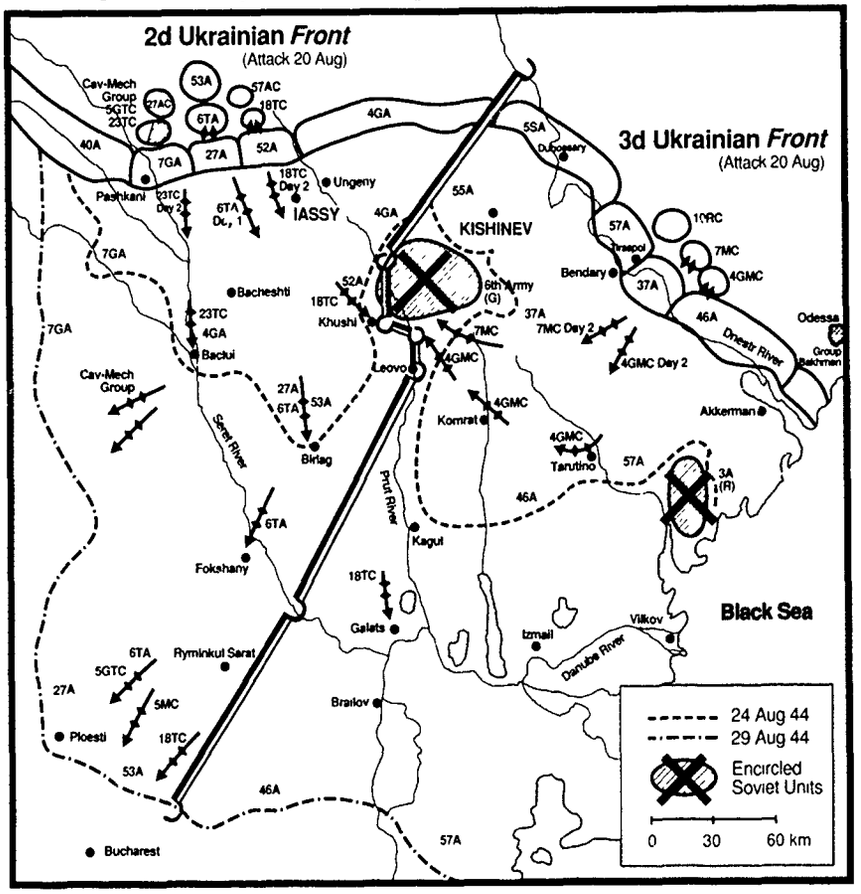
Map 11. Right Bank of the Ukraine Operations, 31 December 1943–1 May 1944



Map 12. Belorussian Operation, 23 June–29 August 1944



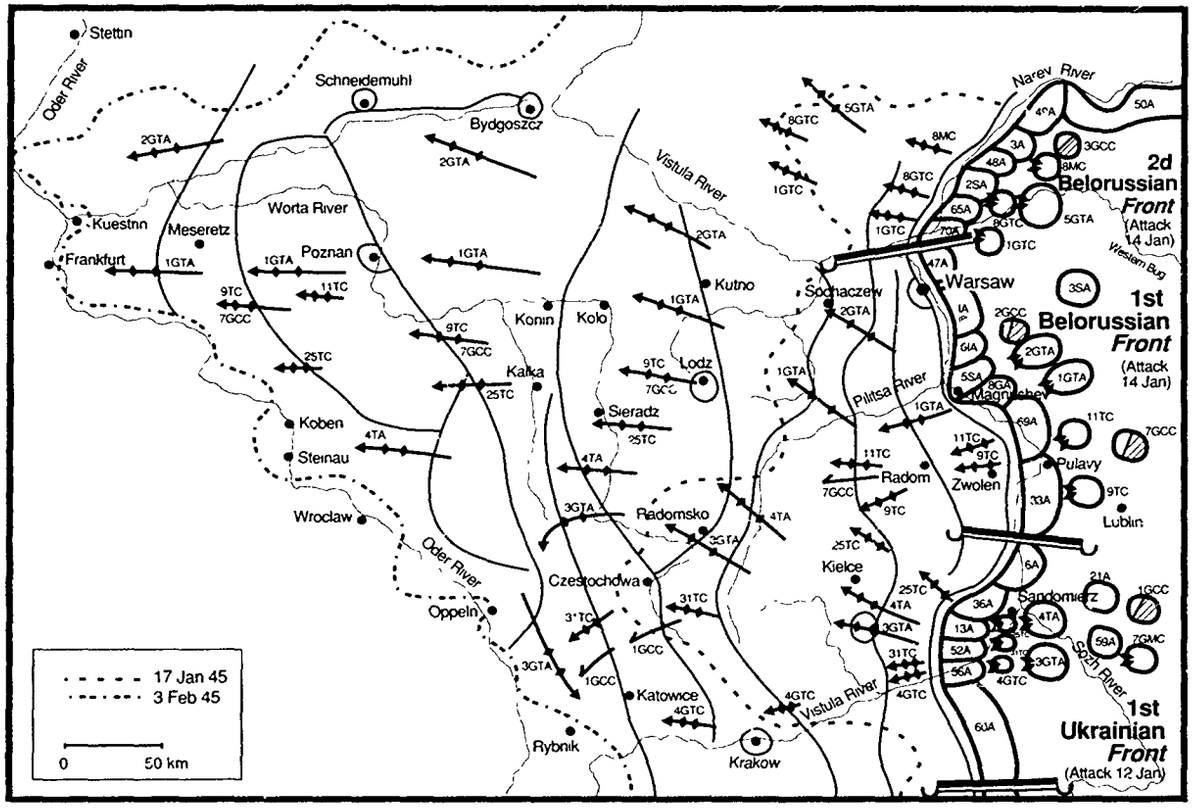
Map 13. Iassy-Kishinev Operation, 20–29 August 1944



German forces in the Iassy and Kishinev areas. Simultaneously, larger Soviet armored forces, in this case the 6th Tank Army and a cavalry-mechanized group, continued the attack deeper into Rumania to the city of Bucharest, into Bulgaria, and ultimately westward across the Carpathian Mountains into Hungary. Again the Soviets exceeded their expectations, and the operation produced the collapse of the Rumanian army and the loss of a good portion of the German Army Group "South Ukraine." Most of the credit for the success of that operation went to Soviet mechanized forces which carried out the envelopment and the deep pursuit operations.

In 1945 Soviet mobile operations became even more ambitious in scale and scope, thus reflecting growing Soviet competence as well as German weakness. Since the war the most studied of all the Soviet operations has been the Vistula-Oder Operation which occurred in January and early February of 1945. This was an operation that commenced south of Warsaw, on a broad front along the Vistula River (Map 14). During the operation Soviet forces of the 1st Belorussian and 1st Ukrainian *Fronts* broke out of bridgeheads on the west bank of the Vistula River and attacked westward in hopes of liberating the bulk of German-occupied Poland.[27] An imposing

Map 14. Vistula-Oder Operation, 12 January–3 February 1945



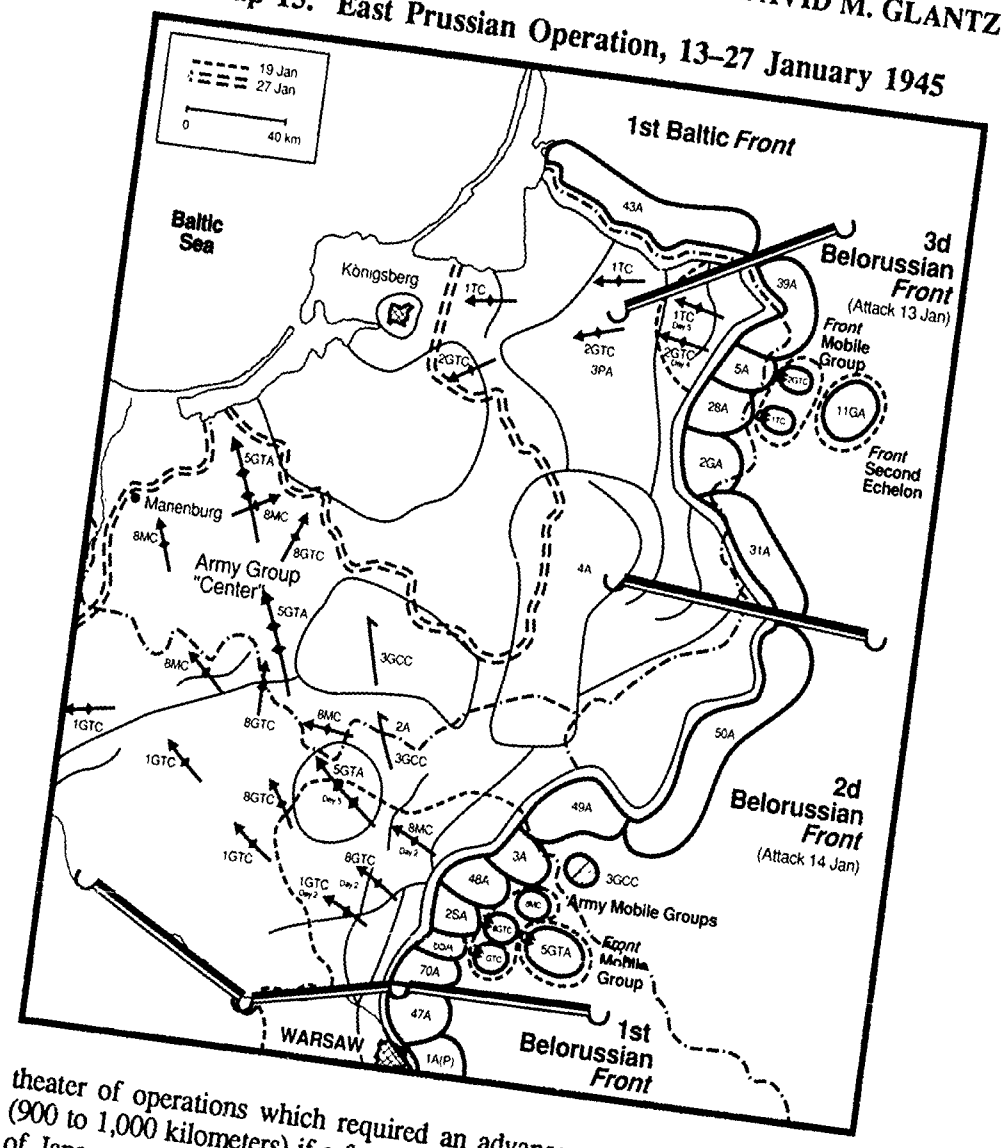
array of Soviet armor supported the offensive at virtually every command level. In every case, armies operating on main attack axes had subordinate to them one full tank or mechanized corps. The *front* commander of each of the two attacking *fronts* had subordinate to him two full tank armies. In these operations the Soviets employed a mobile force structure capable of conducting and sustaining deep maneuver. As was the case in Belorussia and in Rumania the Soviets achieved more than they expected in the operation.

The operation illustrates the flexible manner in which the Soviets employed their mechanized forces. The map shows the axes of advance of each of the mechanized and tank corps and of the tank armies. Virtually every separate tank and mechanized corps entered combat on the first day of operations with the task of completing the penetration of the German tactical defenses. The tank armies, however, were committed in a different fashion by each of the two *front* commanders. The 1st Ukrainian *Front* commander, Gen. I. S. Konev, committed his tank armies (3d Guards and 4th) very early in the operation. Those armies generated a tremendous initial offensive blow and imparted subsequent momentum which carried them to great depths very quickly. On the other hand the 1st Belorussian *Front* commander, Gen. G. K. Zhukov, held back his tank armies until his rifle forces had penetrated the full depth of the enemy tactical defenses. Thereafter, he committed his tank armies on the second and third days of the operation. The net effect was basically the same as that experienced in the 1st Ukrainian *Front* sector. The forward momentum of the tank armies ultimately carried Soviet forces to the Oder River and beyond, within sixty kilometers of Berlin itself.

While the Vistula-Oder Operation unfolded another major operation took place farther north. This operation, called the East Prussian Operation, also represents something of a model of the way in which the Soviets conducted operational maneuver in 1945, in particular against a heavier defense than along the Vistula River (Map 15).[28] For the operation army commanders again had available full tank or mechanized corps to conduct operational maneuver. The commander of each of the *fronts* also had available a *front* mobile group for deep exploitation; in the case of the 3d Belorussian *Front* two tank corps and in the case of the 2d Belorussian *Front* a full tank army (5th Guards). Again the date of their commitment and the effect of their commitment can be seen graphically. Considerable offensive momentum was generated by the carefully timed commitment of these armored forces to combat.

The last Soviet offensive operation of the war displayed certain characteristics that differentiated it significantly from wartime operations in eastern Europe or in the Soviet Union. This was the operation the Soviets conducted in August 1945 against Japanese forces in Manchuria (Map 16).[29] The Soviets in the Manchurian Operation were confronted with a new set of problems which the Soviets believe are somewhat analogous to problems that contemporary planners and operators may have to face in future wars. The Soviet operation in Manchuria was a true strategic operation in every sense of the word. It involved operations by large forces (1,500,000 men) against large forces (over 700,000 men) deployed in an extremely large theater of operations along a front of almost 3,000 kilometers. Moreover, it was a

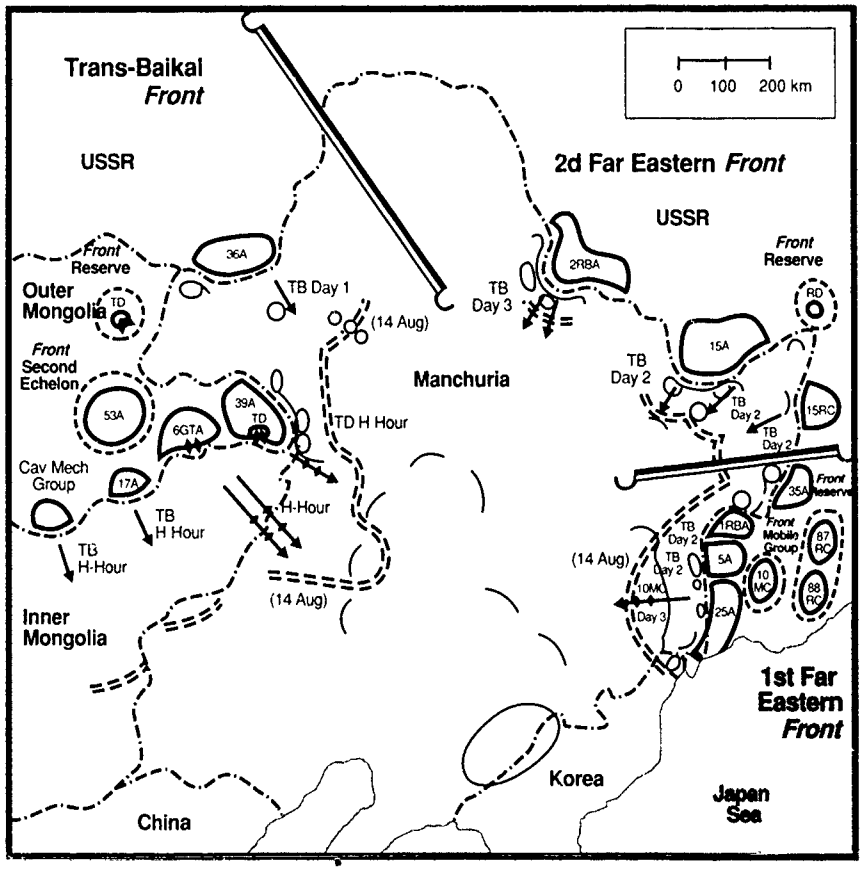
Map 15. East Prussian Operation, 13–27 January 1945



theater of operations which required an advance to a considerable depth (900 to 1,000 kilometers) if a force desired to penetrate into the very center of Japanese-occupied territory. More important, the region of Manchuria contained a very difficult terrain over which to operate. Mountains, swamps, deserts, and heavy forests insulated the key central areas of Manchuria from the outside, and this peripheral region lacked any substantial road or rail network. In fact, cracking through the outer shell of Manchuria and reaching the heart of Manchuria would, of necessity, involve widespread, large-scale operations over this exceedingly difficult terrain.

The most significant aspect of the Manchurian Operation for Soviet military planners was the necessity for conducting the operation rapidly. The imperative of time confronted Soviet political and military planners and operators because of American use of the atomic bomb at Hiroshima. Thus, it was necessary for Soviet forces to occupy Manchuria fully before Japan

Map 16. Manchurian Operation, August 1945



left the war and signed a peace or an armistice. Consequently, the Soviets employed rather radical operational and tactical techniques in their conduct of offensive operations in Manchuria However, they were measures that had been developed and tested on earli occasions in eastern Europe.

First, they deployed the bulk of theater forces well forward with the three operating *fronts* arrayed in single echelon. In addition, two of the three *fronts* deployed their forces in a single-echelon configuration. This forward deployment was supposed to impart overwhelming momentum and speed to the Soviet advance. Second, each of the three *fronts* either led the offensive with large armored formations, or committed armor forward very shortly after the operation had begun. The Soviets relied on the forward use of armored forces in Manchuria at virtually every command echelon. The Trans-Baikal *Front*, operating in western Manchuria, led its offensive with the 6th Guards Tank Army, a specially tailored army reinforced by motorized rifle forces and consisting of over 1,000 tanks and self-propelled guns. The 6th Guards Tank Army's mission was to traverse over 100 kilometers of desert, cross a mountain range which contained no roads and very few tracks, and advance over 500 kilometers within a four-day period to preempt Japanese defenses. Other forces of the Trans-Baikal *Front* conducted operations in

similar fashion and under similar circumstances. The 39th Army, attacking out of extreme eastern Mongolia, led its operations with a full tank division in advance, while each of its rifle corps led their operations with a full tank brigade. The same applied to other armies.

The initial use of armored forces well forward permitted those forces to traverse very difficult terrain, bypass heavy Japanese fortifications, and plunge deep into Manchuria. The net effect of this imaginative use of armor in western Manchuria was that the Soviets in a matter of five days time managed to traverse over 450 kilometers of terrain and totally preempt Japanese defenses. Moreover, the armored thrusts resulted in a total paralysis of Japanese command and control, an almost total loss of Japanese control over their rather large but scattered forces, and a total inability on the part of the Japanese to deal with the rapidly advancing Soviet forces. Today the Soviets consider the Manchurian Operation a microcosm of the types of problems that modern armies face in theater operations in respect to the overcoming of time constraints by the conduct of rapid operations and in regard to preempting defenses before they have jelled.

Maneuver in the First Postwar Years (1946–1954)

Although Soviet wartime operational experiences ceased in 1945 (until Afghanistan), the Soviets have continued to exploit the study of those massive and varied experiences, for they are probably more extensive in terms of magnitude and number of large-scale operations than those of any army that now exists. The Soviets in the postwar years have made extensive use of that experience and still do today, both in the tailoring of their forces and in the generation of doctrine for the wartime use of those forces.

Soviet postwar force structure and military doctrine, in particular, reflected closely the Soviet experience in the last two years of war. In 1946 the Soviets reorganized their forces to reflect basic refinements made during 1944 and 1945 by incorporating into unit TOEs those forces that they had routinely attached to operating units during the latter years of the war (Figure 6).[30] For example, the Soviet wartime tank and mechanized corps became tank and mechanized divisions in the postwar years and the Soviet tank armies became mechanized armies. The new mechanized armies were tailored on the basis of experience obtained in the Berlin Operation and were better suited than the older tank armies to operate in the more urban and wooded central European environment. They also resembled the specially tailored 6th Guards Tank Army that operated in August 1945 in Manchuria.

In addition to the new mechanized armies the Soviets formed new combined-arms armies which were in essence reshaped versions of the older rifle armies. The new combined-arms armies consisted of from two to three rifle corps, and the rifle corps were made up of rifle divisions, now with a significantly larger contingent of armor within them, and mechanized divisions, which were also beefed-up versions of the wartime mechanized corps. Rifle corps had either three rifle divisions, or two rifle divisions and one mechanized division. A new type rifle division, introduced after 1948, had

a significant number of vehicles and ultimately some armored personnel carriers as well. This postwar army was one which drew heavily upon the mobile experiences of 1944 and which had within it mechanized forces capable of conducting tactical and operational maneuver at the corps, army and *front* levels. Although more mobile, these forces were also quite heavy in a combined-arms sense.

Figure 6. Soviet Army Force Structure, 1946–1956

Combined-Arms Armies
- Rifle Corps
- Rifle Divisions (13,300/77)
- Mechanized Divisions (13,400/269)

Mechanized Armies
- Mechanized Divisions
- Tank Divisions (13,700/426)

Airborne Divisions/Brigades

Note: The first number in parentheses denotes unit personnel while the second number represents armored strength.
Sources: "Recent Changes in Soviet Divisional Organization," *Intelligence Review* 222 (August–September 1955), pp 10–14; A. Dumin "Razvitie sukhoputnykh voisk v poslevoennyi period," VIZh 5 (May 1978), pp 33–36.

In the immediate postwar years Soviet *fronts* were to operate in wartime similar to the manner in which Soviet *fronts* had operated in 1944 and 1945 (Figure 7). Within the *front* the combined-arms army, consisting of rifle corps and support units, would conduct the penetration operation. Each of these combined-arms armies contained an army mobile group, consisting of one or two mechanized divisions or tank divisions, which was specifically assigned the task of conducting operational maneuver and exploitation. In addition, the *front* commander had available for employment *front* mobile groups in the form of one or two armies which were designated to conduct operational maneuver in accordance with the *front* commander's plan.[31]

Projected wartime army operations also displayed an increased capability on the part of the army commander to conduct operational maneuver (Figure 8). The army commander possessed one or two tank or mechanized divisions which he could use as his own exploitation force, and, in addition, each of his rifle corps had one mechanized division which was capable of conducting limited tactical or operational maneuver. Thus heavy mechanized forces were integrated within the rifle corps, within the combined-arms army, and within the *front*, which could be committed to combat successively to develop opera-

Figure 7.

***Front* Operational Formation, 1946–1953**

Front Immediate Mission
Army Subsequent Mission

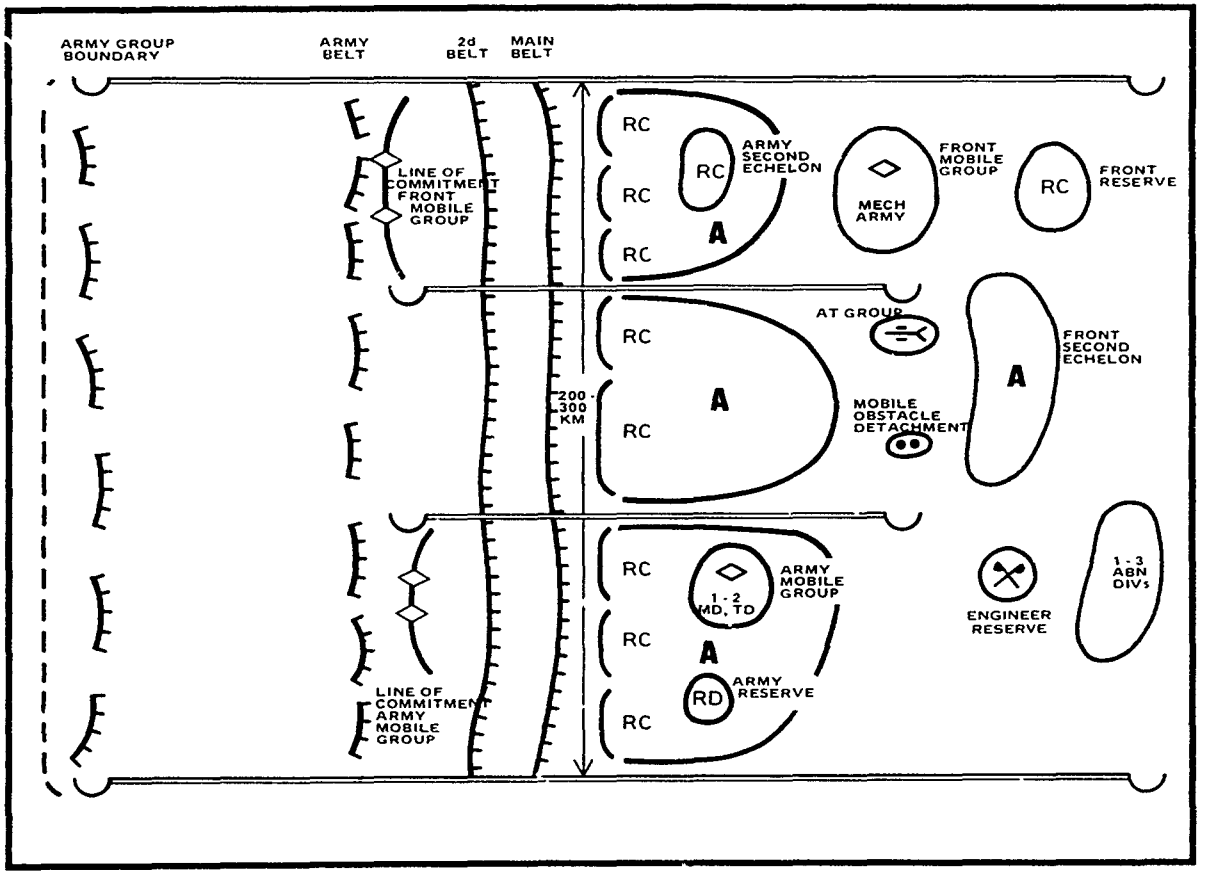
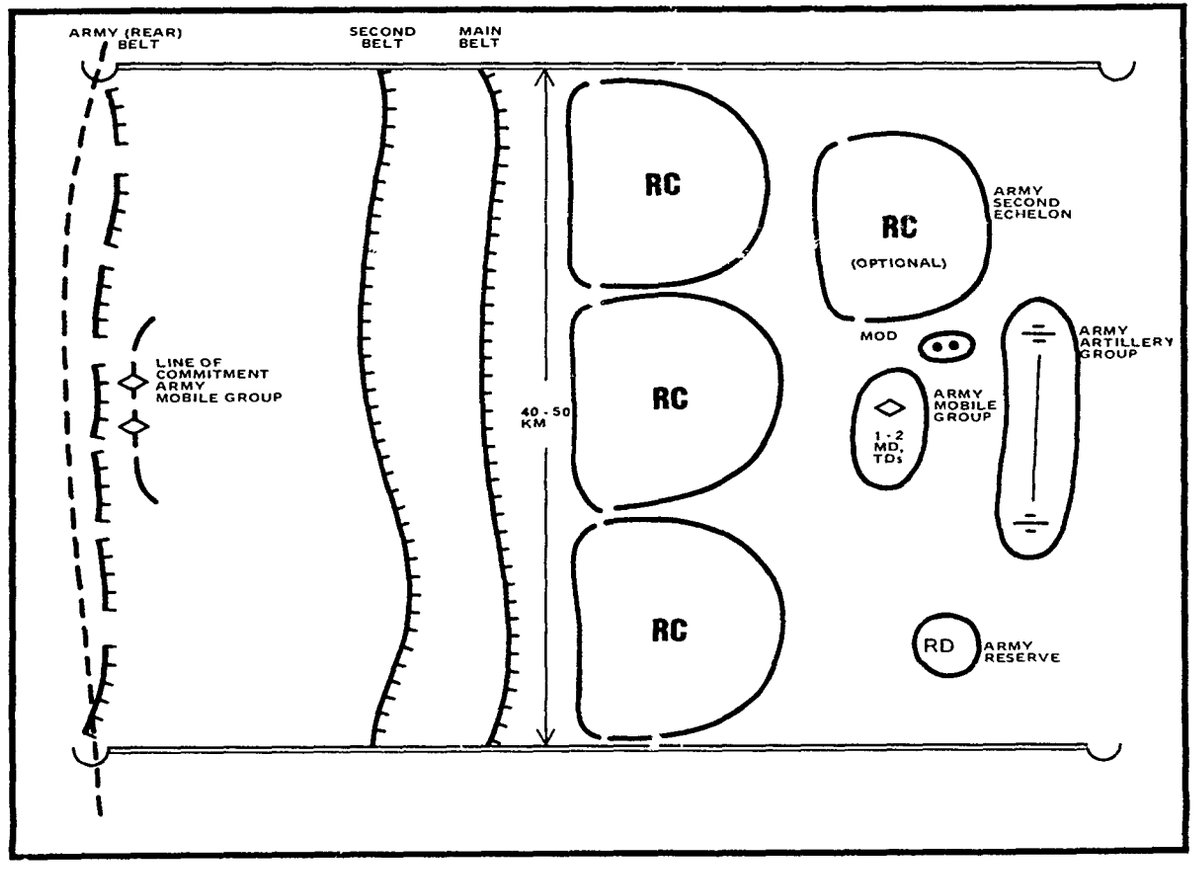


Figure 8.

Army Operational Formation, 1946–1953

Army Immediate Mission



tional maneuver to greater offensive depths than had been the case in the period prior to war's end.[32]

Impact of the Zhukov Reforms

However, times change, as do weapons, commanders, and political leaders. After the death of Stalin in 1953, the Soviet army began to change for a variety of reasons. The first impetus for change was the new political leadership. The second, and certainly more important, was the apparent necessity for taking into account the impact of nuclear weapons on the battlefield. By 1954 that impact was becoming clear to all. Responding to the nuclear challenge, between 1954 and 1958 the Soviets instigated an intensive process of rethinking their military doctrine and restructuring their armed forces to satisfy the requirements of doctrinal change. The initial changes were instituted by Marshal Zhukov as Minister of Defense, but even after Zhukov's removal, Marshal Malinovskii continued the basic Zhukov reforms.

The Zhukov reforms changed the face of the Soviet military in general and, in particular, the configuration of Soviet ground forces. The most fundamental changes occurred within the mechanized force structure, because by 1954 the Soviets considered their large mechanized armies and divisions to be simply too large and cumbersome, and hence too vulnerable to survive on the emerging nuclear battlefield. Simply stated, they were too lucrative a nuclear target.

The Zhukov force structure reforms sought to create and maintain a highly maneuverable yet less vulnerable combat force and to make all Soviet forces equally maneuverable on the nuclear or conventional battlefield. Hence, Zhukov abolished the large mechanized armies and replaced them with new, smaller tank armies (Figure 9).[33] He also abolished the mechanized divisions and the older rifle divisions and in their stead created more streamlined and mobile motorized rifle divisions. The new combined-arms army was now made up of a mixture of three to four motorized rifle divisions and one tank division, and the new tank army consisted of three to four tank divisions and possibly one motorized rifle division. The important point doctrinally was that while the Soviets recognized the importance of nuclear weapons and tailored their forces accordingly, they also recognized that nuclear weapons were still but one type of weapon on the modern battlefield. The Soviets assumed that a large conventional capability was still necessary. Hence, their motorized rifle divisions and tank divisions were still a rather potent force in terms of the total number of divisions in the force structure (175–80) and of the combined-arms strength of each division.

The operational use of those new forces until roughly 1962 still resembled the patterns of earlier years (Figure 10).[34] Within the *front* operational formation, combined-arms armies would conduct the basic offensive penetration operation, if in fact the penetration of any enemy defense was required. Within each combined-arms army, motorized rifle divisions would conduct the penetration operation; and tank divisions would conduct initial operational maneuver by beginning the exploitation into the opera-

Figure 9. Comparison of Soviet Army Force Structure, 1946–1956 and 1958–1962

1946–1956	1958–1962
Combined-Arms Armies	Combined-Arms Armies
Rifle Corps	Motorized Rifle Divisions (13,700/220)
Rifle Divisions (13,300/77)	Tank Divisions (10,900/350)
Mechanized Division (13,400/269)	
Mechanized Armies	Tank Armies
Mechanized Divisions	Tank Divisions
Tank Divisions (13,700/426)	Motorized Rifle Division
Airborne Divisions/Brigades	Airborne Division (7,000)

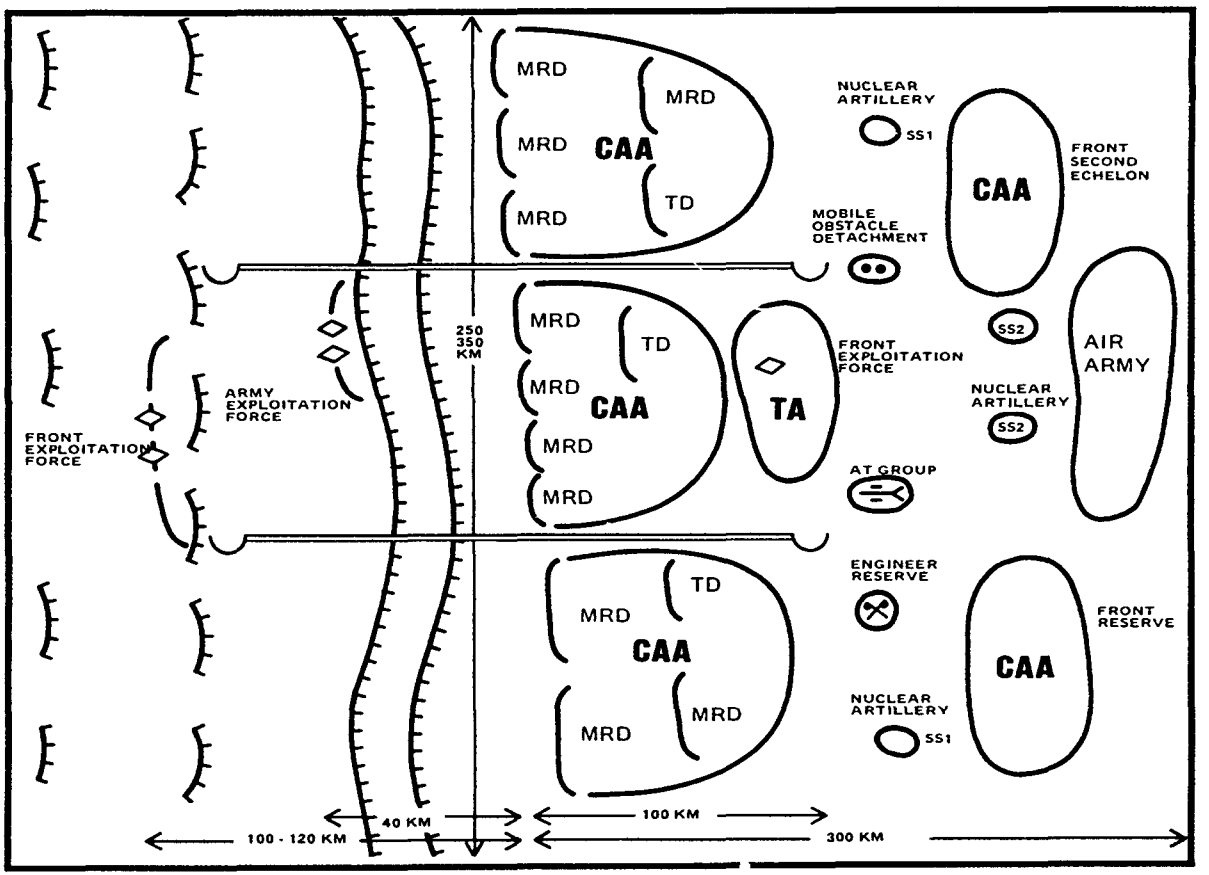
Note: The first number in parentheses denotes unit personnel while the second number represents armored strength.

Sources: "Recent Changes in Soviet Divisional Organization" *Intelligence Review* 222 (August–September 1955), pp 10–14, "Organizational Employment of Soviet Line Divisions," *Intelligence Review* 254 (July 1962), pp 9–12.

Figure 10.

***Front* Operational Formation, 1958–1962**

Immediate Mission: 150–270 km
Subsequent Mission: 400–550 km



tional depth of the enemy defense. At *front* level the tank army would perform roughly the same function of deep exploitation that the older and larger mechanized army had performed. However, the Soviet term *podvizhnyi grup* (mobile group), which they had earlier used to describe the forces conducting operational maneuver at army and *front* level, went out of use after 1956 primarily because the term was superfluous and meaningless since all forces were now mobile. The important point was that while the terminology was dropped the function of those units was not. They were still considered exploitation forces designed to perform the mission of conducting operational maneuver.

Within the army operational formation a similar effect was apparent (Figure 11). The main element tasked with conducting operational maneuver—the tank division of the army—would be committed to combat in much the same fashion as its predecessor tank and mechanized corps had been committed during World War II and the tank or the mechanized divisions had been committed in the immediate postwar years.

The Revolution in Military Affairs

After 1960, however, a major change occurred that had a marked effect on Soviet military doctrine and military force structure for a period of roughly eight years, from the early 1960s to the mid- and late 1960s. This change in doctrine and force structure was driven in part by political considerations and in part by military necessity. In 1960 Khrushchev and other political and military leaders decided to accept the fact that a "revolution" had occurred in military affairs. Marshal V. D. Sokolovskii articulated the meaning of the revolution of military affairs in his book *Military Strategy* (*Voennaia strategiia*), which appeared in 1962 and in two subsequent editions.[35]

In brief, Soviet acknowledgement of the existence of a revolution in military affairs reflected their belief that general war in the future would, in fact, be primarily nuclear. The net effect of that decision was the creation during this period of the Soviet strategic rocket forces and the elevation of those forces to preeminent military status. Simultaneously, the Soviets relegated the ground forces to a lower status and devoted less concern to the field of operational art. There were other manifestations of this recognition of the revolution in military affairs as well. The size of the Soviet ground force structure decreased from the level of 180 divisions in 1960 to roughly 140 divisions by 1968. The size of Soviet ground force entities including divisions, armies, and *fronts* decreased; the amount of conventional firepower in those units decreased; and the focus of Soviet doctrinal writings during 1960 to 1968 shifted markedly away from operational concerns.

The Soviet force structure in 1968 contrasted sharply with that of 1958 and clearly reflected the impact of the revolution of military affairs (Figure 12).[36] The most striking change occurred by virtue of the marked truncation in the size of the motorized rifle division from a strength in excess of 13,000 men in 1958 to a strength somewhat less than 11,000 men by 1968. There

Figure 11.

Army Operational Formation, 1958–1962

Immediate Mission: 70 km
Subsequent Mission: 270 km

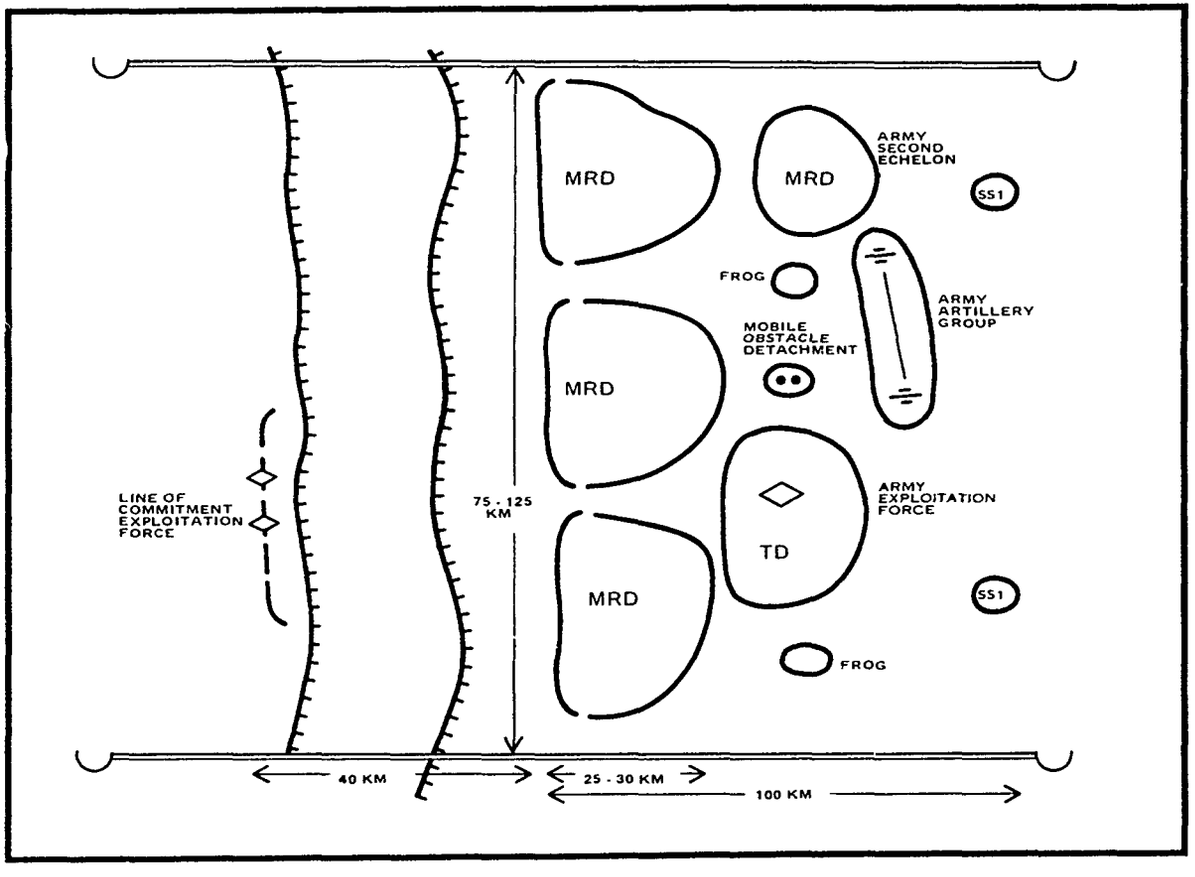


Figure 12. Comparison of Soviet Army Force Structure, 1958–1962 and 1968

1958–1962	1968
Combined-Arms Armies	Combined-Arms Armies
Motorized Rifle Divisions (13,700/220)	Motorized Rifle Divisions (10,500/188)
Tank Divisions (10,900/350)	Tank Divisions (9,000/316)
Tank Armies	Tank Armies
Tank Divisions	Tank Divisions
Motorized Rifle Divisions	
Airborne Divisions (7,000)	Airborne Divisions (7,000)

Note: The first number in parentheses denotes unit personnel while the second number represents armored strength.
Source: Defense Intelligence Agency, *Soviet Armed Forces Motorized Rifle Division* (February 1968 SECRET; declassified 1982), p 4.

was a similar although not so great reduction in the strength of the tank division. After 1960 there was also a tendency for the Soviets to create smaller, more compact tank armies. In essence, the Soviet force structure of the early and mid-1960s was a force structure that was much more austere, much more tailored to conduct battle and survive in nuclear battle, and clearly of secondary support to nuclear forces and weapons on the nuclear battlefield.

After 1960 Soviet operational formations also changed significantly.[37] At the highest level, the wartime *front* would consist of three or four combined armies and a tank army (Figure 13). There was greater force dispersion across the *front* and greater dispersion of forces in the depths of the formation. At *front* level, and at army level as well, there was a tendency to rely on tank forces to lead the attack at every command level based on the premises that tank forces were more survivable in a nuclear environment, and a rapid advance was critical. Moreover, within the *front* there was no specific force entity assigned the mission or function of performing operational maneuver. In essence, these forces of the 1960s were designated to clean up or tidy up the nuclear battlefield. Within the army operational formation the same effect was apparent: greater dispersion of forces for protection's sake; greater projected depths of operations; lack of a distinctive force tasked with performing the function of operational maneuver; and a greater use of tank forces wherever possible in the first echelon (Figure 14). This general tendency in Soviet force structuring and in Soviet military doctrine persisted throughout most of the 1960s.

Reassessment of the Revolution in Military Affairs

Late in the 1960s, however, the situation slowly began to change as demonstrated by a whole host of indicators. Simply put, from the late 1960s into the early 1970s the Soviets began to look again at the subject of operational art with much greater intensity than they had in the previous several years. This indicated a growing Soviet belief in the possibility, and even the likelihood, that war would be conventional rather than inevitably nuclear. This shift was evident in theoretical works where the sole concern with nuclear operations began to erode. At first the Soviets began to qualify their description of war as nuclear by adding the phrase, "However, we recognize the possibility of conventional operations." In time the "however" clause became larger and more elaborate.[38] Finally, the Soviets reached a point in these doctrinal works where conventional operations received as much attention, if not more, than nuclear operations. One could also note the clear shift in Soviet emphasis through their investigation of their own Second World War experiences. This shift was shown by the tremendous outpouring of investigative work in the late 1960s, which mushroomed into even more extensive investigations in the 1970s concerning virtually every aspect of the conduct of operational maneuver as well as a wide range of other operational topics.

In addition to changes in the theoretical and practical realm, changes also were apparent in the Soviet force structure (Figure 15).[39] Since 1968

Figure 13.

***Front* Operational Formation, 1968**

Immediate Mission: 300 km
Final Mission: 800 km

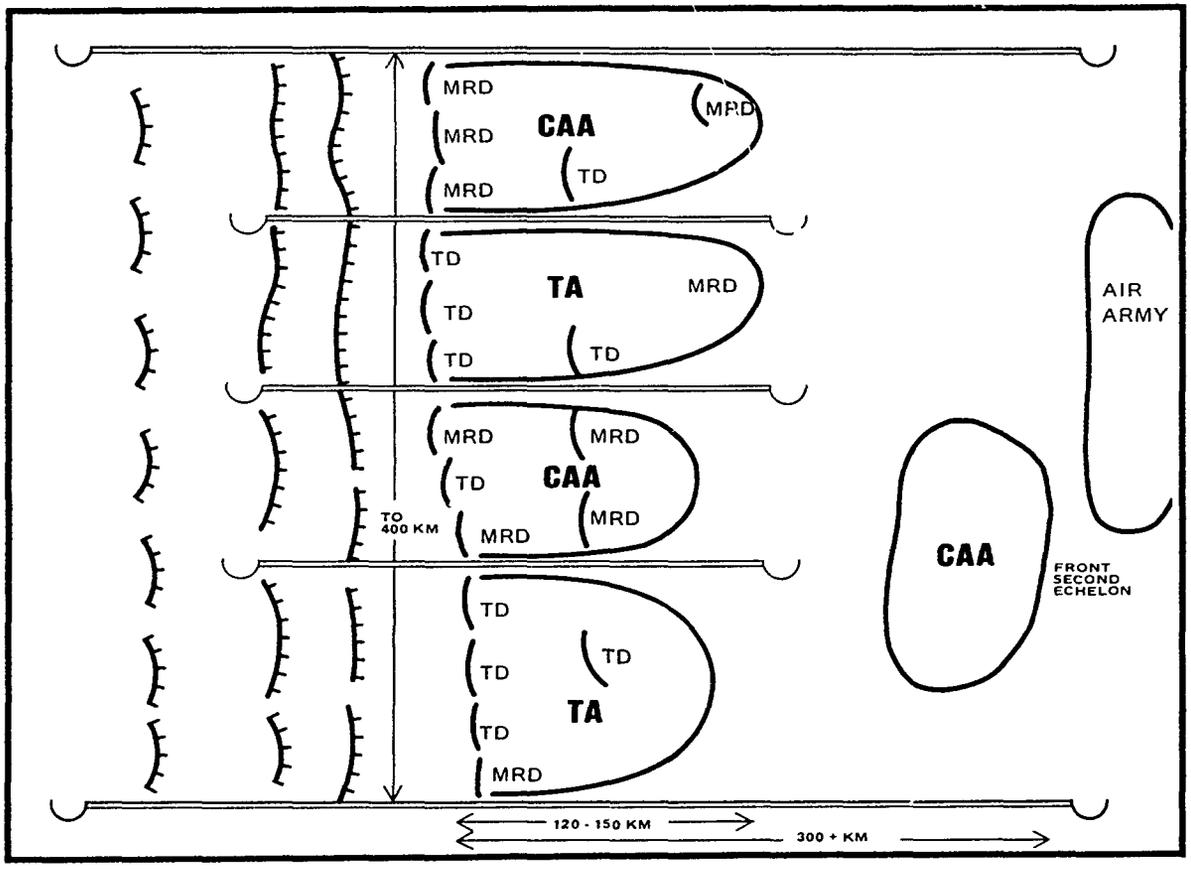


Figure 14.

Army Operational Formation, 1968

Immediate Mission: up to 100 km
Subsequent Mission: up to 300 km

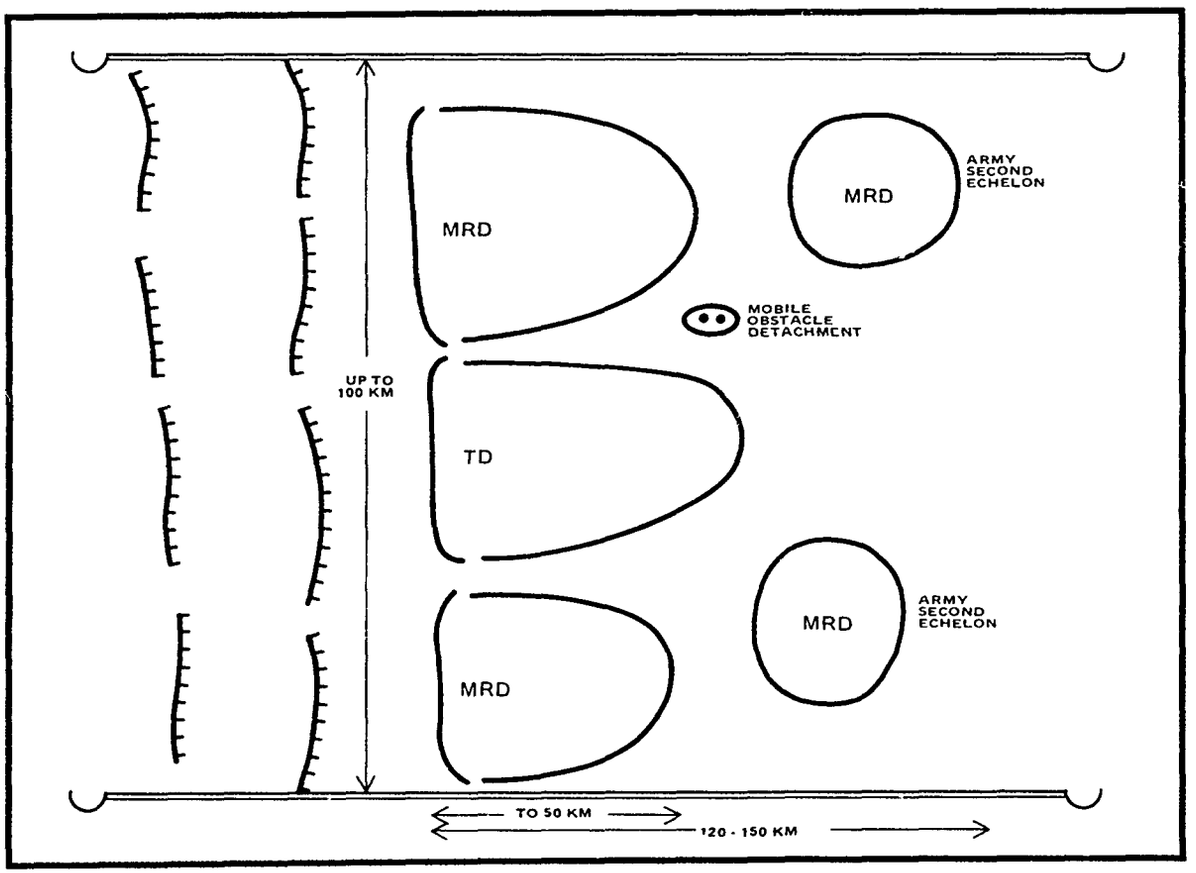


Figure 15. Comparison of Soviet Army Force Structure, 1968 and 1987

1968	1987
Combined-Arms Armies Motorized Rifle Divisions (10,500/188) Tank Divisions (9,000/316)	Combined-Arms Armies Motorized Rifle Divisions (12,890/272) Tank Divisions (11,470/322)
Tank Armies Tank Divisions	Tank Armies Tank Divisions Motorized Rifle Divisions
	Separate Tank/Mechanized Combined-Arms Corps* (12,000/350/450)
Airborne Divisions (7,000)	Airborne Divisions (8,500)
	Air Assault Brigades (2,000)

*To perform operational maneuver within *fronts* and armies, separately or grouped as small tank armies.
Note: The first number in parentheses denotes unit personnel while the second number represents armored strength.
Source: Headquarters, Department of the Army, "Soviet Army Troop Organization and Equipment," *FM 100-2-3* (July 1984), pp 4–48.

virtually every entity in the Soviet force structure has become more balanced in terms of its combined-arms capability. Motorized rifle divisions have been added to tank armies, and the size, strength and number of the motorized rifle divisions has rebounded to where it was in 1958. A similar effect is noticeable in the tank division and in the structure of the army and the *front*. These additions represent a clear reemphasis of the necessity to create the sort of forces required to conduct successfully conventional ground operations and operational maneuver. Moreover, Soviet concern for and study about mobile groups and their role in *front* and army operations in the Second World War indicates that in future wars, in fact even in peacetime, they will probably again field tank, mechanized, or combined-arms corps designed to perform the same function those units had been accustomed to performing in earlier years, the function of operational maneuver.

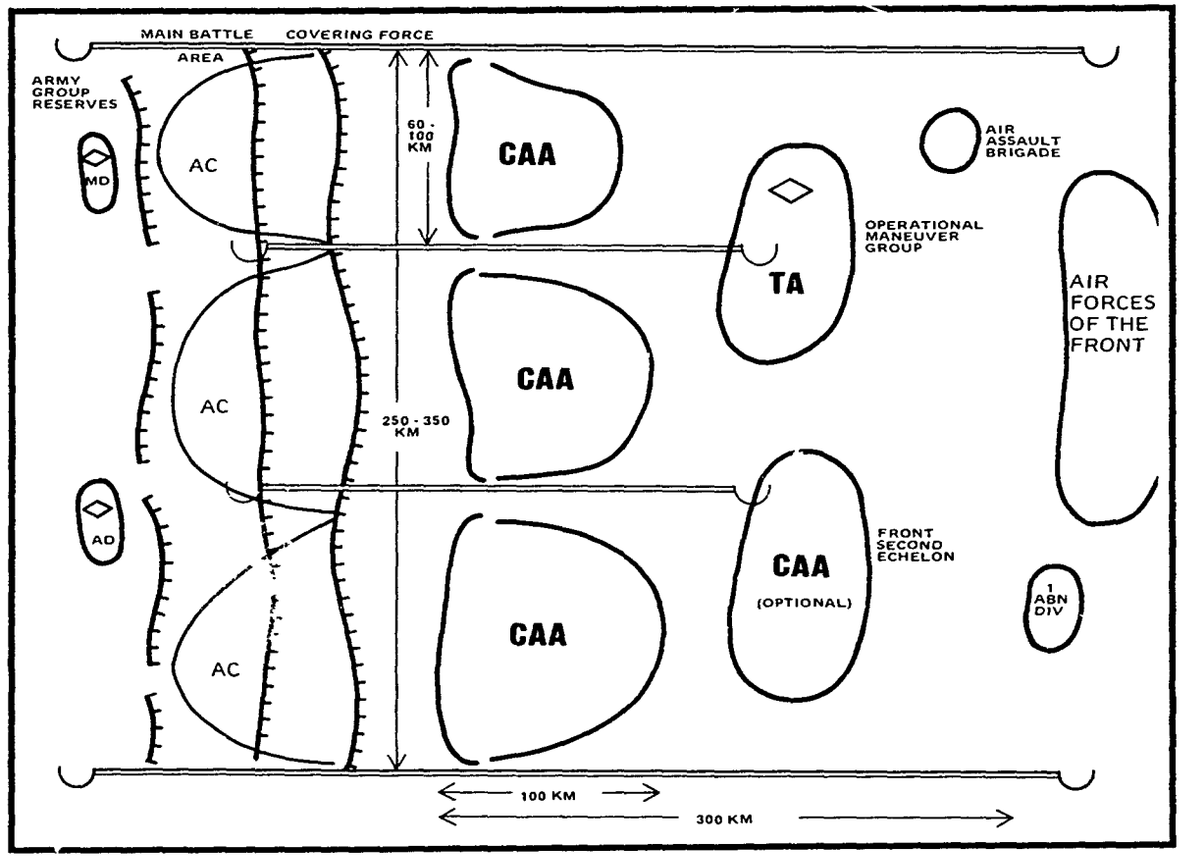
How then would this new force structure be used in a contemporary conflict? Obviously, the Soviets do not have single, simple solutions to their offensive problems, for there exists and has always existed a range of situations in which they would use their forces. There has been a tendency for Westerners to stereotype the way in which the Soviets conduct offensives without regard to terrain, the nature of the defense, the nature of the theater of operations, or the circumstances of the conflict. The stereotype usually involves but one snapshot of how the Soviets organize for combat. Here I will break away from that stereotype to focus on how the Soviets are likely to organize their forces to conduct offensive operations in three widely varying circumstances: against a heavy, prepared defense; against what might be called a partially prepared defense; and against a virtually unprepared defense. Clearly the Soviets would prefer to attack the latter rather than the former. Virtually every indicator contained within Soviet theoretical works, and particularly within those which deal with what the Soviets call "the initial period of war" (*nachal'nyi period voiny*), indicates their firm belief that in preparing for modern war it would be folly to engage in the classic type of slow mobilization which preceded previous wars. These works also severely question the utility of conducting classic set-piece battle against fixed defenses with forces arrayed in deep, patterned formations. Succinctly put, the Soviets have renounced what they call the "gnawing through of the defense," simply because in a potential nuclear environment that method indeed could be a suicidal type of offensive to launch. Hence, they prefer attacking an unprepared or partially prepared defense, even at the cost of little or no advance force mobilization.

How then would the Soviets conduct operations in each of these three circumstances? First, regarding a *front* operational formation arrayed against a fully prepared defense, the tendency would be for the Soviets to array their forces more deeply than they would normally prefer (Figure 16). This deep-echeloned, concentrated force array would offer lucrative targets to both nuclear and conventional forces, while the longer duration of the penetration operation and more linear configuration of the *front* would provide the time necessary for an opponent to both decide to use nuclear weapons and target those weapons. Hence the Soviet reluctance to engage a well-prepared defense. In the event of such an attack the Soviets are likely to deploy the

Figure 16.

***Front* Operational Formation, 1987: Against a Fully Prepared Defense**

Immediate Objective: 250 km
Subsequent Objective: 600 km



front in a two-echelon configuration. The most important element of this two-echelon formation will be the operational maneuver group (the group designated to perform operational maneuver). At *front* level it is clear that the modern tank army, perhaps containing corps rather than divisions, would perform the same function as the old mobile group performed, the function of operational maneuver.[40] The tank army would do so in tandem with new elements within the force structure of the *front*, specifically the air assault brigade, and perhaps also with older force elements within the *front*, such as the airborne division. The Soviets have continued to emphasize the vertical dimension of their operational maneuver concepts. This vertical dimension has expanded and may expand farther in the future, perhaps through creation of an air assault corps at *front* level and an air assault brigade at army level. Air assault units are likely to appear within divisions as well.

Within the army operational formation in a situation of an attack against a prepared defense, the Soviets will also tend to echelon forces a bit more deeply than they would prefer in order to protect forces from the effects of a potential nuclear exchange (Figure 17).[41] In this case the army commander would possess either a tank division (or a corps) specifically designated to perform the function of operational maneuver. At army level there would also exist a vertical dimension of maneuver performed by an air assault brigade or a helicopter-borne motorized rifle battalion.

Against a partially prepared defense, the Soviets would exploit their extensive experience obtained in the Vistula-Oder Operation, in Manchuria and elsewhere during the war. They would deploy the bulk of their forces as far forward as possible in order to generate great initial shock and subsequent high momentum of advance, all the while denying the enemy lucrative targets in the Soviet rear area (Figure 18).[42] Additionally, the Soviets believe that it is and will be only prudent to develop operational and tactical techniques that would deny the enemy the ability, or at least make it difficult for him, to respond with nuclear weapons, even if he wished to. Specifically, the Soviets would exploit the enemies' targeting difficulties by propelling their forces forward rapidly along multiple axes to produce rapid and thorough intermeshing of attacking forces with those of the defender. Multiple deep thrusts into the enemies' operational rear can also contribute to a paralysis of command and control and perhaps the enemies' will to resist. This also reduces the likelihood of a nuclear response.

At the *front* level against a partially prepared defense the tank army would perform the task of conducting operational maneuver. The Soviets would deploy the tank army as far forward as practicable, and they would commit it to action as early as possible, again based on the assumption that one must propel one's forces forward as rapidly as possible in order to decrease the vulnerability of those forces to nuclear attack and to paralyze the enemy's command and control system.

The same principles will apply to the army's operational formation when engaging a partially prepared defense (Figure 19). At army level a new element appears within the operational formation, one which we do not recognize very often today, but one which the Soviets have written about as much as they have about the mobile group (operational maneuver group).

Figure 17.

Army Operational Formation, 1987: Against a Fully Prepared Defense

Immediate Objective: 100 km
Subsequent Objective: 250 km

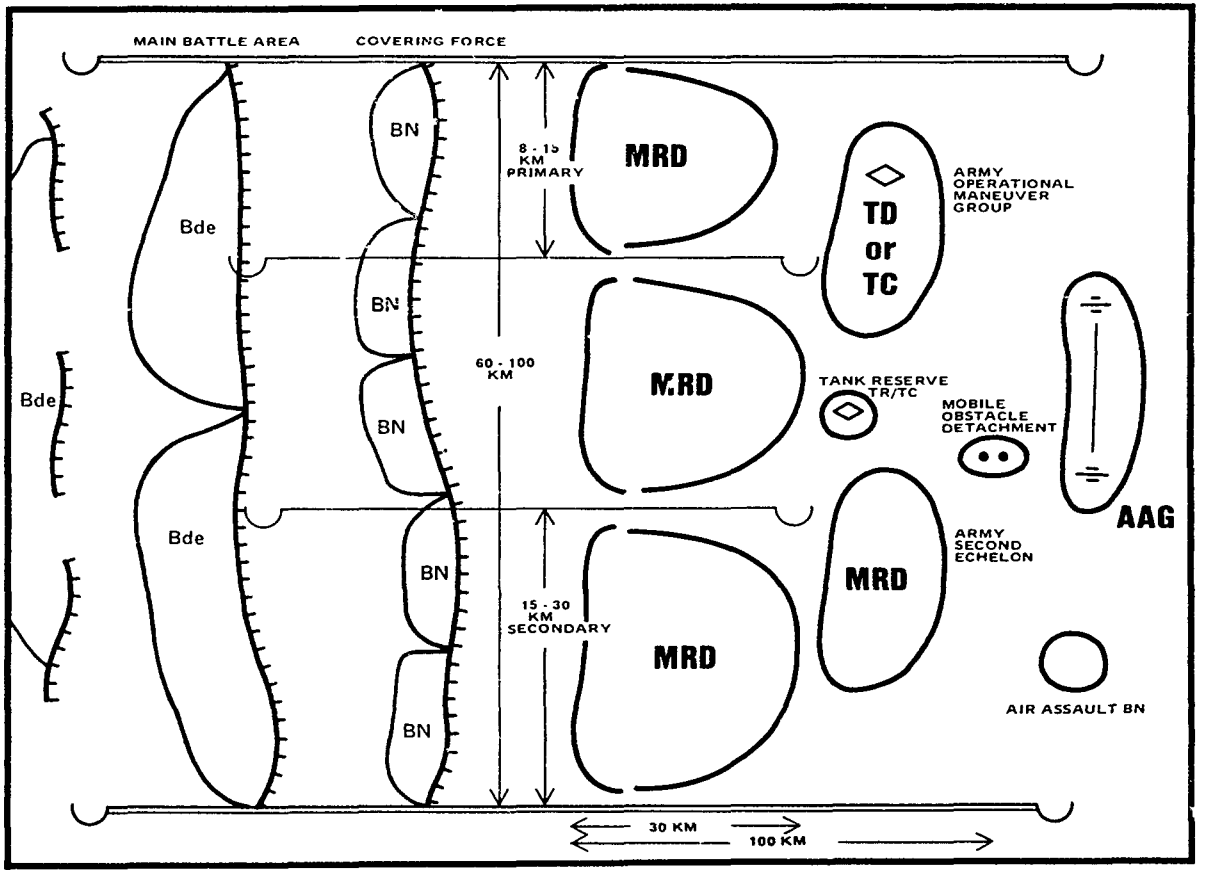


Figure 18.

***Front* Operational Formation, 1987: Against a Partially Prepared Defense**

Immediate Objective: 300 km
Subsequent Objective: 700 km

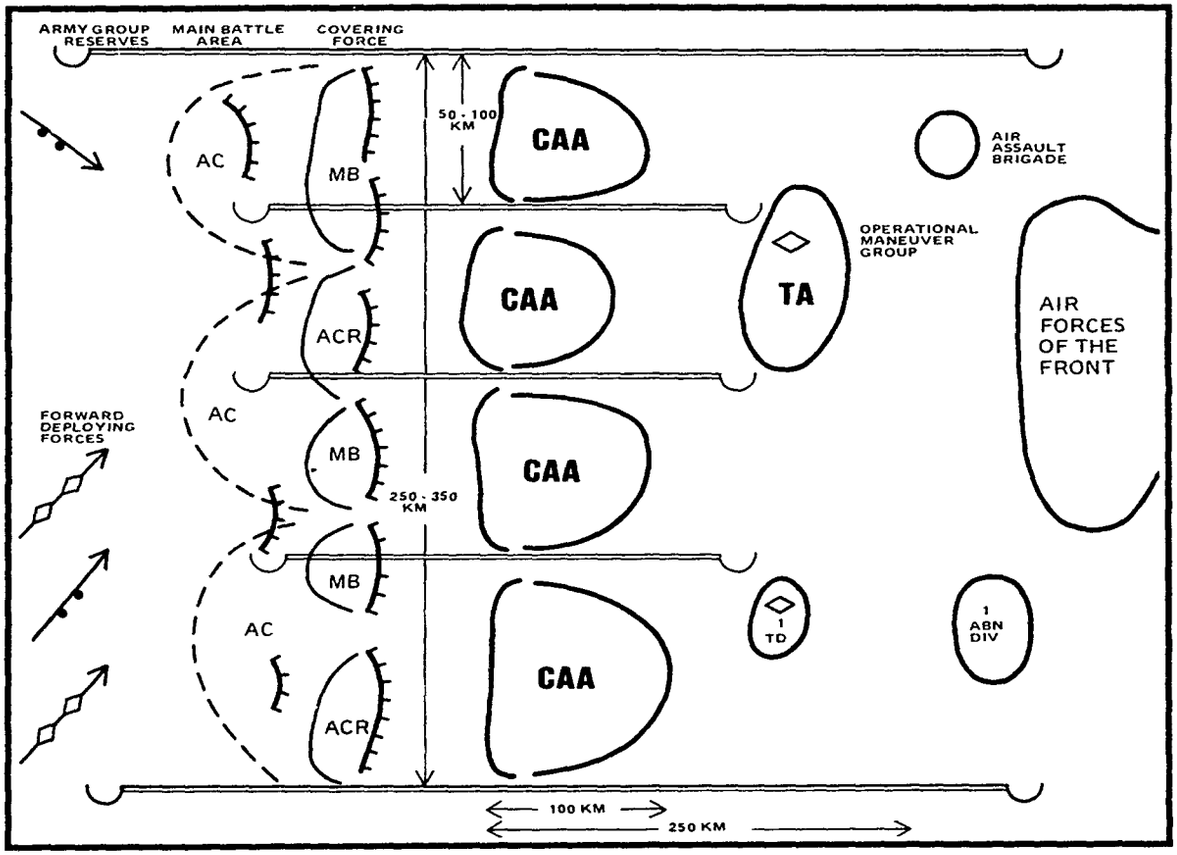
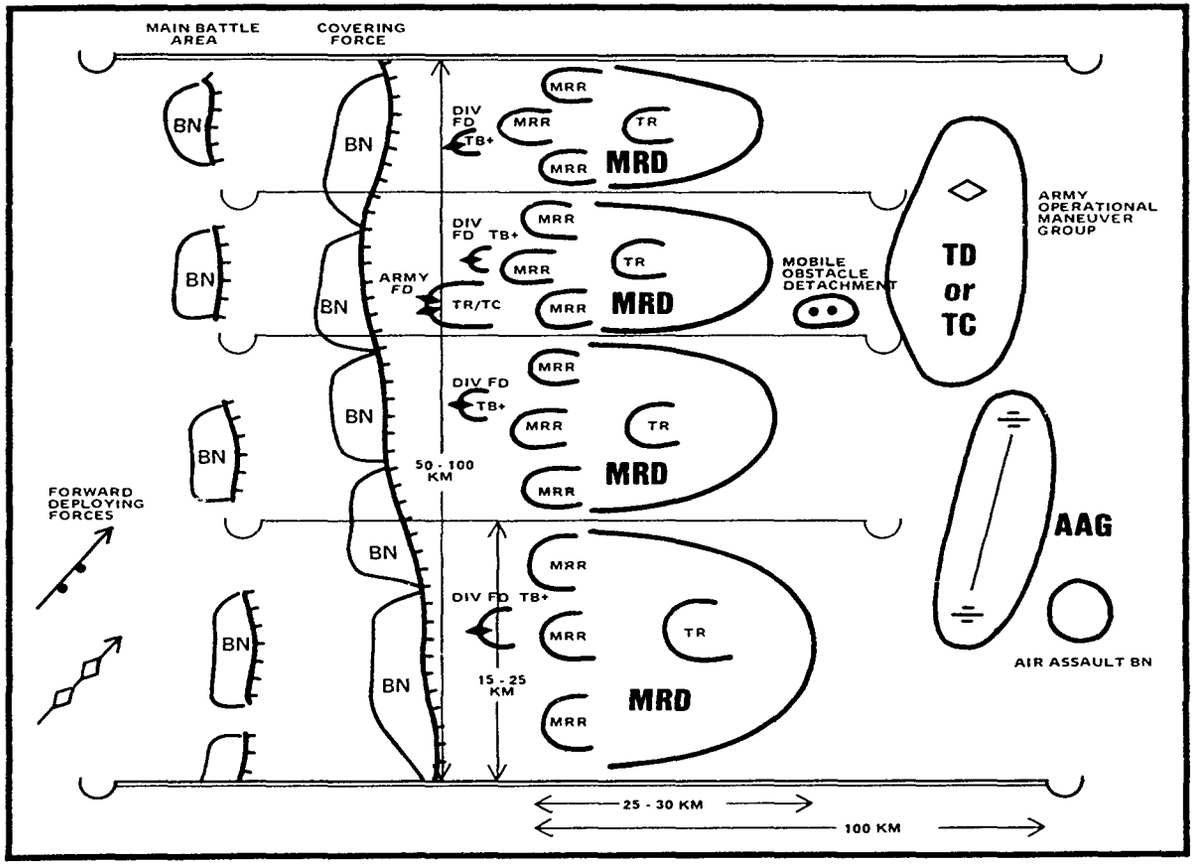


Figure 19.

Army Operational Formation, 1987: Against a Partially Prepared Defense

Immediate Objective: 120 km
Subsequent Objective: 300 km



The Soviets call that element the forward detachment (*peredovoi otriad*).[43] The army will form for combat with the bulk of its forces forward. It will have an operational maneuver group in the form of a tank division (or a corps), and that force will probably also deploy as far forward as possible to capitalize on offensive successes by beginning operational exploitation as quickly as possible.

Forward detachments will probably spearhead operations by army line units and by the army operational maneuver group. The Soviets are prepared to use forward detachments against both partially prepared defenses and unprepared defenses at both army and division level. They used forward detachments extensively during the Second World War, and their doctrinal writings continue to accord them an important role at both the tactical and operational levels. The forward detachment differs from the element with which we normally confuse it, the advanced guard, in that the advanced guard is primarily a security element, whereas the forward detachment has a distinct tactical (and sometimes even operational) function: namely, to preempt or disrupt the defense; to disrupt enemy deployments; and to facilitate the advance of the main force. The two most important functions are preemption or disruption of partially prepared or unprepared defenses.

In wartime it is likely that Soviet armies will employ forward detachments. Classically an army forward detachment has been of tank corps or reinforced tank regiment strength, roughly 200 tanks. The forward detachment would be the same size today, only more tailored to the situation which it faces. Its mission would be to lead the army attack to as great a depth as it can, but certainly well into the enemy defenses (or where those defenses would be were they in fact in place) and to disrupt or preempt those defenses. For example, an army forward detachment could attack to a depth of from forty to eighty kilometers, that is completely through the entire depth of the enemy's tactical defenses. Likewise, each of the army's motorized rifle divisions would also have a forward detachment. In the latter stages of the Second World War, most rifle corps and divisions on main attack axes used a task-organized tank brigade (equal to a reinforced tank battalion) to perform that function; and in virtually every operation, whether it was a pursuit, meeting engagement, or exploitation, after the penetration operation the rifle division led its operations with that tank heavy forward detachment. Today, I expect the Soviets to do likewise in an attack against a partially prepared defense or against an unprepared defense.

The primary mission of the division's forward detachment is to disrupt or preempt the enemy defense by penetrating into and occupying a portion of it, thereby disrupting its coherence. A divisional forward detachment could attack to a depth of between twenty and forty kilometers—that is beyond an enemy's covering force and well into the tactical defenses, although perhaps not entirely through the defense's entire depth. It is also likely that a heliborne motorized rifle battalion within the combined-arms or tank army, would have the mission to act as the vertical element of either the army's forward detachment or a key motorized rifle division's forward detachment. In general terms, as a defense becomes more coherent, there is less likelihood of the Soviets leading their operations with forward

detachments. Thus, in essence, the forward detachment performs the same sort of function that the awl performs in carpentry work. It paves or eases the way for the screw or nail to be inserted into the wood. These forward detachments are indeed awls to be followed by main forces and by operational maneuver groups.

The offensive situation that the Soviets would prefer to face is an attack against an unprepared defense.[44] I define an unprepared defense as a defense that has had time to erect part of its covering force but no more. Hence, operations in such circumstances would take the form of an extended meeting engagement. This perhaps accounts for the increased and intensive Soviet study of and practice in conducting meeting engagements throughout the 1970s and 1980s. The *front* operational formation in the circumstance of an attack against an unprepared defense would probably be single echelon and would probably involve commitment of the *front's* tank army to lead the *front* attack (Figure 20). This configuration represents the ultimate Soviet attempt to preempt enemy defenses initially, avoid the use of nuclear weapons, and win quick, decisive victory. Being prudent people, the Soviets would probably keep some tank forces in reserve.

The army operational formation deployed against an unprepared defense would display similar features (Figure 21). Most noticeable would be the predominance of and the reliance upon forward detachments to lead the attack: forward detachments at army level in the form of a reinforced tank regiment or tank corps; forward detachments at division level in the form of tank brigades or reinforced tank battalions; and forward detachments of motorized rifle regiments in the form of reinforced motorized rifle battalions. In this offensive configuration, main Soviet forces would be preceded by a virtual wave of forward detachments advancing on separate axes all with the primary aim of preempting or disrupting the defense before it jells. These forward detachments would pave the way for the operations of Soviet main force units and of deeper operating forces, the tank division (or corps) of the army and the tank army (or armies) of the *front*. The Soviets believe the use of forward detachments and operational maneuver groups can create and impart tremendous momentum to the attack and permit it to advance to even greater depths than in earlier periods.

Conclusions

Contemporary Soviet mobile concepts clearly have developed out of the study of Second World War and postwar experiences and are firmly rooted in them. They are concepts that pay considerable attention to the factors of time and space, and they involve careful tailoring of forces and the development of new concepts of mass and concentration through the time-phased use of forces, rather than by the classic linear massing of forces in dense and highly vulnerable formations. While these concepts are derived from intense Soviet study of their prior experiences with operational maneuver, in particular those of the Second World War, the Soviets have been careful to balance this extensive research against the new requirements engendered by

Figure 20.

***Front* Operational Formation, 1987: Against an Unprepared Defense**

Immediate Objective: 350 km
Subsequent Objective: 800 km

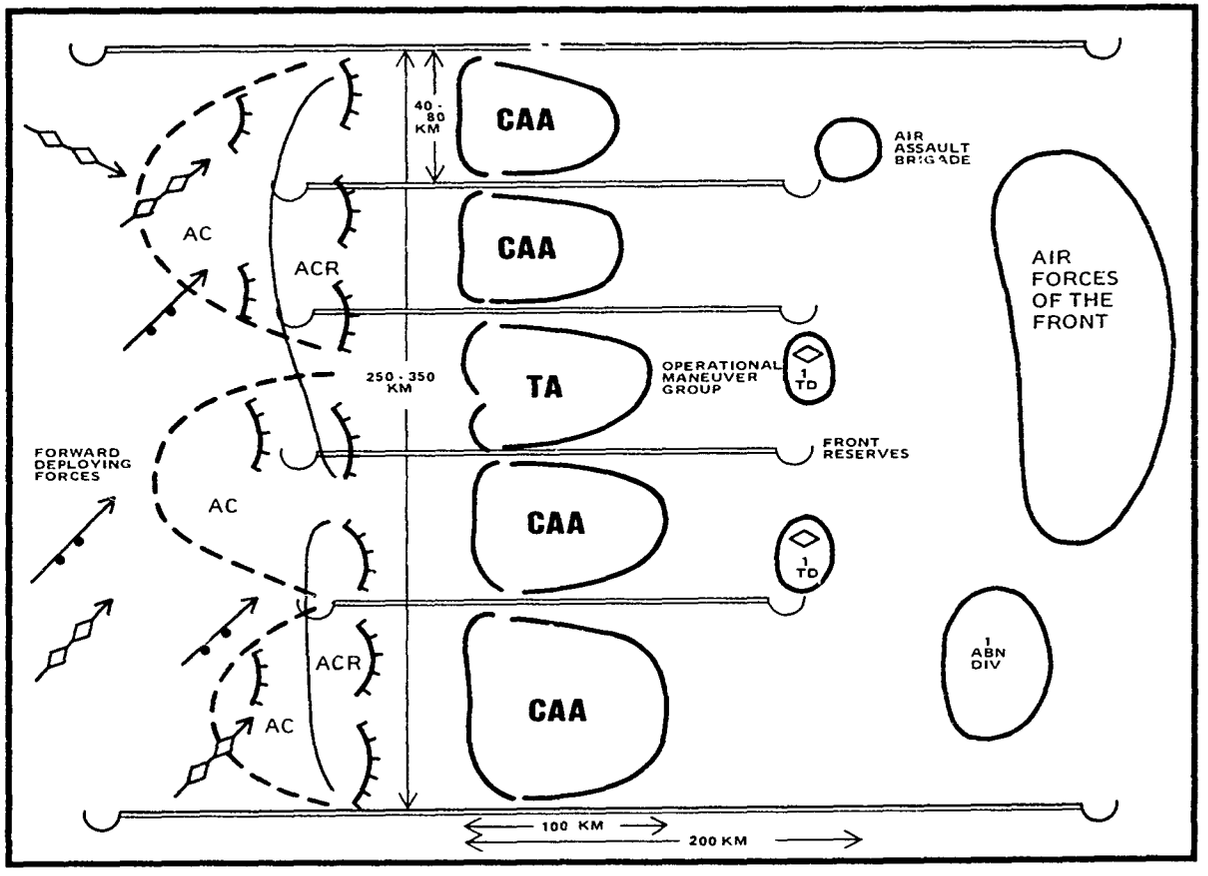


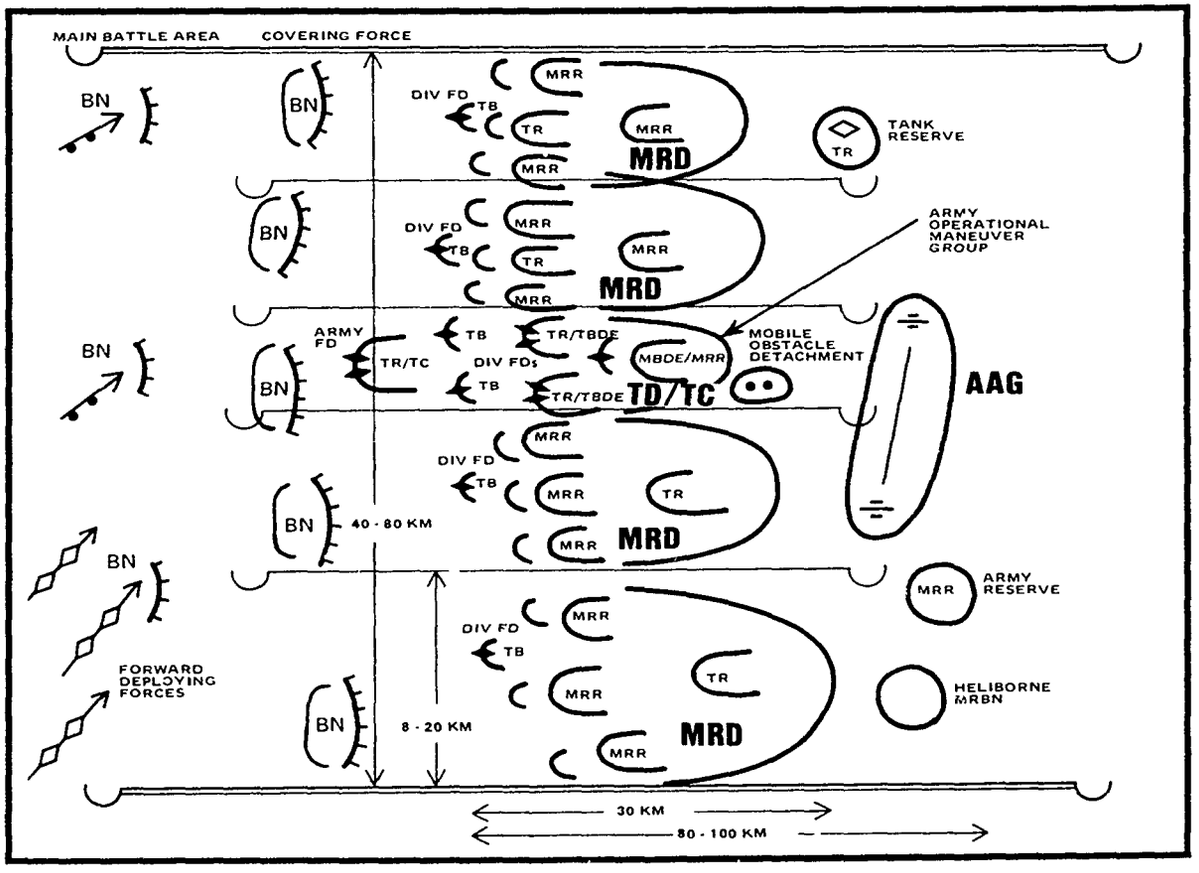
Figure 21.

Army Operational Formation, 1987: Against an Unprepared Defense

Immediate Objective: 150 km
Subsequent Objective: 350 km

Divisional Forward Detachments (TB)

Regimental Forward Detachments (MRBN+)



changing technology, improved weaponry, improved command and control, the revolution in electronics, and changes in a multitude of other areas.

The Soviets realize that technological changes in weaponry, and particularly in the field of electronics and computer science, pose new challenges to the military planner and operator.[45] Although these challenges often take the form of problems, they also offer opportunities to an army that objectively analyzes the nature of technological change and capitalizes on the essence of that change. Through the study of the past the Soviets have defined the basic requirements for conducting successful operational maneuver with mobile forces in the present and future. They have distilled from this study those constraints which govern the degree of success a mobile force can achieve. These constraints take the form of basic battlefield tactical and operational conditions. To overcome these constraints and assist in the planning and conduct of future operations, the Soviets employ a system of norms distilled from prior experience which provides basic indices for the conduct of all facets of operational maneuver. In the absence of other data, the Soviets consider these norms to be a suitable starting point and guide for planners.

However, in a period when all forces tend to be mobile in the Soviet view, it is necessary to capitalize on technology in order to provide operational maneuver forces with a marked advantage over other mobile forces. The Soviets believe they can provide operational maneuver forces with a special maneuver quality differentiating them from other line forces—an advantage on the battlefield. First, this advantage is best achieved by crisper, more timely procedures to exploit the factor of time in all phases of planning and conducting operations. Here the computer and mathematical calculations can produce increased efficiency that may make the difference between battlefield success and failure. Hence the Soviets have subjected their planning procedures and virtually every aspect of the conduct of operations to the scrutiny of systems analysts and mathematicians. This approach has produced a myriad of nomograms and equations which, when applied to the traditional system or norms, can produce more accurate indices for the planning and conduct of military operations.[46] These efforts promise to increase the efficiency of planning and conducting operations and result in saved time. This exploitation of the factor of time, combined with a sound understanding of the nature of operational maneuver will, in the Soviet view, result in a marked advantage over their opponent on the future battlefield. Second, the Soviets will carefully tailor and task-organize operational and tactical maneuver forces to meet concrete combat conditions. This will result in greater combat capability, sustainability, and survivability in deep operations. Finally, the Soviets will continue to emphasize the vertical and joint dimension of operational maneuver. They will expand the role and function of air assault forces in deep operations and will allot the necessary rotary and fixed-wing air support to provide the necessary cover for forces as they operate deep in the enemy rear.

Intensive Soviet study of the past combined with a recognition of the technological realities of the present can produce a sharper, more effective Soviet military force in the future. Immense changes have occurred in the

Soviet army since 1968. Evidence of these changes was clear by the late 1970s and will become even clearer in the future. The essence of these changes is that the Soviets believe the successful conduct of imaginative operational maneuver has been and will remain the key to offensive success on the modern battlefield.

Notes

1. For a detailed account of the action on August 3, 1943, see David M. Glantz, *From the Don to the Dnepr: A Study of Soviet Offensive Operations, December 1941–August 1943* (draft manuscript, U.S. Army War College, Carlisle Barracks, Pa., 1985), pp 291–97. See also N. K. Popel', M. A. Shalin, I. M. Kravchenko, *Liuki otkryli v Berline: boevoi put' 1-i gvardeiskoi tankovoi armii* (Moscow, 1973), pp 73–75; P. Ia. Egorov, I. V. Krivoborskii, I. K. Ivlev, A. I. Rogalevich, *Dorogami pobed: boevoi put' 5-i gvardeiskoi tankovoi armii* (Moscow, 1969), pp 62–64.

2. A. A. Svechin, "Strategiia (1927)," *Voprosy strategii i operativnogo iskusstva v sovetskikh voennykh trudakh (1917–1940 gg.)* (Moscow, 1965), p 20.

3. Ibid.

4. The 1929 Field Service Regulations (*ustav*) articulated the concept of deep battle. See V. Matsulenko, "Razvitie taktiki nastupatel'nogo boia" *Voenno-istoricheskii zhurnal* (hereafter cited as VIZh) 2 (Feb 1968), pp 28–29. The concept of deep operations followed in the mid-1930s but was never fully developed. See M. Zakharov, "O teorii glubokoi operatsii," VIZh 10 (Oct 1970), pp 10–13.

5. The development of Soviet armored and mechanized units in the 1930s was detailed in A. Ryzhakov, "K vopsosy o stroitel'stve bronetankovykh voisk Krasnoi armii 30-e gody," VIZh 8 (Aug 1968), pp 105–11.

6. Analysis of the experience of Soviet tank specialists in the Spanish Civil War cast doubt on the feasibility of using large tank units in combat because of the difficulty of controlling them and because of their vulnerability to artillery fire. Soviet occupation of eastern Poland in September 1939 highlighted the command and control difficulties involved in employing large mechanized forces. Zhukov's successful use of mechanized forces against the Japanese on the Khalkhin-Gol River in August 1939 received attention not only for the successful use of tank forces but also for the excessive amount of time required to crush Japanese resistance.

7. The Soviets stated as much in an article by A. Konenenko, "Boi vo Flandrii (Mai 1940 gg.)," VIZh (Mar 1941), pp 20–24.

8. A summary of Soviet force structure in 1941 found in M. V. Zakharov, et al, *50 let vooruzhennykh sil SSSR* (Moscow, 1968), pp 23[illegible]–38; I. V. Pavlovskii, *Sukhoputnye voiska SSSR* (Moscow, 1985), pp 65–69.

9. Recent Soviet accounts of tank battles in the Kiev Military District include M Dorofeev, "O nekotorykh pnchinakh neudachnykh deistvii mekhanizirovannykh korpusov v nachal'nom periode Velikoi otechestvennoi voiny," VIZh 3 (Mar 1964), pp 32–44; A. Vladimirskii, "Nekotorye voprosy provedeniia kontrudarov voiskami lugo-zapadnogo fronta, 23 iiunia-2 iiulia 1941 goda," VIZh 7 (Jul 1981), pp 21–28.

10. I. Kh. Bagramian, ed, *Istoriia voin i voennogo iskusstva* (Moscow, 1970), pp 144–45.

11. Pavlovskii, pp 108–10.

12. The Soviet armored force in December numbered seven old, understrength tank divisions; 79 separate tank brigades; and 100 separate tank battalions (Pavlovskii, p 110).

13. I. Kh. Bagramian, *Tak nachinalas' voina* (Moscow, 1975), pp 433–69.

14. I. E. Krupchenko, ed, *Sovetskie tankovye voiska, 1941–1945* (Moscow, 1973), pp 46–51; F. Tamonov, "Primenenie bronetankovykh voisk v bitve pod Moskvoi," VIZh 1 (Jan 1967), pp 14–23; P. Rotmistrov, "Bronetankovye voiska," VIZh 1 (Jan 1982), pp 18–25.

15. O. A. Losik, ed, *Stroitel'stvo i boevoe primenenie sovetskikh tankovykh voisk v gody Velikoi otechestvennoi voiny* (Moscow, 1979), pp 50–53.

16. Krupchenko, pp 58–60; A. I. Radzievskii, *Proryv* (Moscow, 1979), pp 25–29; K. S. Moskalenko, *Na iugozapadnom napravlenii* (Moscow, 1969), pp 200–213.

17. A. I. Radzievskii, *Tankovyi udar* (Moscow, 1977), pp 24–25. For a critique of the tank army force structure see P. A. Rotmistrov, *Stal'naia gvardiia* (Moscow, 1984), p 163.

18. The Soviets created eight of these corps by the end of 1942 (Radzievskii, *Tankovyi udar*, p 24).

19. On January 1, 1943, the force structure included the 3d and 5th Tank Armies. The other four such armies had been disbanded after heavy fighting, much of it on the approaches to Stalingrad.

20. Krupchenko, pp 75–85; Radzievskii, *Proryv*, pp 35–41; K. K. Rokossovskii, ed, *Velikaia pobeda na Volga* (Moscow, 1960).

21. Glantz, *From the Don to the Dnepr*, pp 13–92; *Sbornik materialov po izucheniiu opyta voiny*, No. 8: *Avgust-Oktiabr' 1943g* (Moscow, 1943), portions of which deal with a candid critique of tank and mechanized corps operations from November 1942 to February 1943.

22. Ibid, pp 102–79; for details of the operations of one tank corps, see A. V. Kuzmin and I. I. Krasov, *Kantemirovtsy: boevoi put' 4-go gvardeiskogo tankovogo Kantemirovskogo ordena Lenina krasnoznammennogo korpusa* (Moscow, 1971), pp 50–68; A. G. Yershov, *Osvobozhdenie Donbassa* (Moscow, 1973). For verification see *Lagenkarten der K. T. B. des III Pz. Korps*, Lage 2-2-43-10-2-43 (originals).

23. Losik, pp 70–73.

24. Glantz, *From the Don to the Dnepr*, pp 248–434; P. Rotmistrov "Bronetankovye i mekhanizirovannye voiska v bitva pod Kurskom," VIZh 1 (Jan 1970), pp 12–22. Babadzhanian, *Liuki otkryli*, pp 62–94; Egorov, *Dorogami pobed*, pp 55–86.

25. A. M. Samsonov, ed, *Osvobozhdenie Belorussii, 1944* (Moscow, 1974) pp 15–109, 138–47, 404–94, 585–645; *Transcript of Proceedings, 1985 Art of War Symposium: From the Dnepr to the Vistula: Soviet Offensive Operations, November 1943–August 1944* (Carlisle Barracks, Pa., 1985), pp 243–449; Egorov, *Dorogami*, pp 218–65.

26. *Transcript of Proceedings*, pp 449–539; V. A. Matsulenko, *Udar s Dnestrovskogo platsdarma* (Moscow, 1961); G. T. Zavizion and P. A. Koriushin, *I na Tikhom okeane* (Moscow, 1967), pp 60–94.

27. Krupchenko, pp 239–57; Babadzhanian, *Liuki otkryli*, pp 213–49; F. I. Vysotskii, et al, *Gvardeiskaia tankovaia* (Moscow, 1963) pp 144–63; A. M. Zvartsev, ed, *3-ia gvardeiskaia tankovaia* (Moscow, 1982), pp 191–220; D. D. Leliushenko, *Moskva-Stalingrad-Berlin-Praga* (Moscow, 1985), pp 276–314.

28. Egorov, *Dorogami*, pp 289–337; Krupchenko, pp 257–65.

29. D. M. Glantz. "August Storm: The Soviet 1945 Strategic Offensive in Manchuria," *Leavenworth Papers*, 7 (Ft. Leavenworth, Kans., 1983); Zavizion, *I na Tikhom okeane*, pp 206–44.

30. Pavlovskii, pp 208–12; B. V. Panov, et al, *Istoriia voennogo iskusstva* (Moscow, 1984), pp 445–47.

31. Panov, pp 448-50; Z. Zlobin, "Sovremennaia frontovaia operatsiia," *Voennaia mysl'* (Apr–May 1945), trans Directorate of Military Intelligence (Army Headquarters, Ottawa, Canada), p 3.; M. Cherednichenko, "Razvitie teorii strategicheskoi nastupatel'noi operatsii v 1945–1953 gg.," VIZh 8 (Aug 1976), p 39.

32. Cherednichenko, p 44.

33. Panov, p 460; for early changes see "Recent Changes on Soviet Divisional Organization," *Intelligence Review* 222 (Aug–Sep 1955), pp 10–14. Details of reorganization in "Organizational Employment of Soviet Line Divisions," *Intelligence Review* 254 (Jul 1962), pp 9–12.

34. Panov, pp 462–63; V. A. Semenov, *Kratkii ocherk razvitiia sovetskogo operativnogo iskusstva* (Moscow, 1960), pp 290–91.

35. V. D. Sokolovskii, *Voennaia strategiia* (Moscow, 1968), trans Foreign Technology Division, U.S. Air Force.

36. Defense Intelligence Agency, *Soviet Armed Forces Motorized Rifle Division* (Feb 1968 SECRET; declassified 1982), p 4.

37. Bagramian, pp 502–4; Panov, pp 463–65; N. Kireev,"Primenenie tankovykh podrazdelenii i chastei pri proryve oborony protivnika," VIZh 2 (Feb 1982), pp 37–38.

38. For an example of this qualification see Sokolovskii, *Voennaia strategiia*, 3d ed (Moscow, 1968), p 289; also I. Kh. Bagramian, ed, *Voennaia istoriia* (Moscow, 1971), p 345 and V. G. Kulikov, "Operativnoe iskusstvo," *Sovetskaia voennaia entsyklopediia* (hereafter cited as SVE) (Moscow, 1978), VI, pp 53–57.

39. "Organization and Equipment of the Soviet Army," *CACDA Handbook 550-2* (Ft. Leavenworth, Kans., 1981), p 2-1; "Soviet Army Troop Organization and Equipment," *FM 100-2-3* (Coordination draft, Aug 1982), pp 4–48.

40. "Armiia," SVE, II (1977), p 255. Concerning operational maneuver forces see S F

Begunov, A. V. Postovalov, "Manevr," SVE, V (1978), p 114; Y. Novikov, F. Sverdlov, *Maneuver in Modern Land Warfare* (Moscow, 1972).

41. M. M. Kir'ian "Armeiskaia nastupatel'naia operatsiia," SVE, I (1976), pp 239–44; Kireev, pp 38–40; P. Tsigankov, "Razvitie taktiki nastupatel'nogo boia strelkovykh (motostrelkovykh) i tankovykh podrazdelenii v poslevoennye gody," VIZh 7 (Jul 1977), pp 41–45.

42. The Soviets see the Manchurian Operation (August 1945) and the Vistula-Oder Operation, (January–February 1945) as somewhat analogous to a contemporary operation against a partially prepared defense. In both operations the Soviets focused on surprise, on rapid penetration of defenses (or preemption), on the attainment of great offensive momentum, on meeting engagements with deploying enemy reserves, and on the question of sustaining operations in great depth.

43. Kireev, p 63; Kir'ian, pp 243–44. For an explanation of the organization and use of forward detachments see also A. Kliuchkov, "The Tank Battalion in the Forward Detachment," *Journal of Armored and Mechanized Forces* (Jul 1946), trans USA–G–2, pp 1–13; I. Vorob'ev, "Forward Detachments on Offensive Operations and Battles," *Voennaia mysl'* (Apr 1965), trans Foreign Technology Division, U.S. Air Force; "Peredovoi otriad," SVE, VI (1978), p 282; "Peredovoi otriad," *Voennyi vestnik* (Feb 1983), p 36; "Modern Battle: Questions and Answers," *Soviet Military Review* (May 1981), pp 29–31.

44. This situation would be analogous to Soviet operations in western Manchuria during the Manchurian strategic offensive (August 1945).

45. See the numerous articles by V. Bondarenko in *Kommunist vooruzhennykh sil'*.

46. For example, see A. Ia. Bainer, *Taticheskii raschet* (Moscow, 1982).

The Soviet Use of Military History for Operational Analysis: Establishing the Parameters of the Concept of Force Sustainability

Christopher N. Donnelly

The study of military history in the Soviet Union, as Peter H. Vigor's paper shows, is very different from what it is in the United Kingdom or the United States, both in its nature and in its function within the system. However, to say this is not to deride the Soviet approach, merely to point out its differences. As Mr. Vigor notes, the Soviet approach does have its positive side. The tendentious nature of Soviet military history and its frankly irritating narrowmindedness should not blind us to its contribution to the development of military art. Indeed, there is one area in particular where the Soviets make much more use of military history than do we, and to good effect it would seem. This is the use of military history for the purposes of operational analysis.

The Soviet armed services see themselves as being in a period of great change, influenced by rapid developments in technology and complicated by the current international political situation. This is forcing on the armed services the need to review their organizational structure,[1] tactical and operational concepts, and training and equipment programs. By an evaluation of their military-historical experience, the Russians hope to find answers to some of today's pressing problems in the political, strategic, operational, and tactical spheres:

> *The creative development of Soviet military science and military art is impossible without a thorough historical analysis of the whole process of the evolution of military theoretical views at various stages of Soviet military development. . . . Such an approach is more necessary than ever with today's rapid progress in military technology, because sound scientific predictions as to the long-term development of military affairs must be based on scientific-theoretical potential compiled over past years, and taking long-term trends into account.*[2]

Summing up the results of a meeting of military historians, Gen. E. A. Kuznetsov, at the time Chief of Staff of the Urals Military District, pointed out that military history must help to improve the effectiveness of scientific research, and promote a more active practical use of the results of these experiments in the army.[3] The importance of "bringing the experience of past wars and of local wars into the training process"[4] is growing as the introduction of complex new equipment and the need for higher combat readiness makes training more complicated. Although this "systematic exploitation of experience" is unbalanced by the difficulties Soviet military historians face when trying to discuss Soviet failures and defeats,[5] it is, at least in Soviet eyes, by no means totally deprived of value or validity by these self-imposed ideological limitations.

The best way to illustrate this Soviet approach to the utilization of "military history" (or "military experience," if you prefer) is to do so by choosing as concrete an example as possible. There are many examples that could be chosen to illustrate the use of tactical lessons drawn from history being used to educate the modern Soviet commander, but by their very nature the impact of these lessons on the individual can only be a matter for conjecture. However, in the field of operational analysis and planning, historical experience forms an important part of the data base on which the Soviet concepts are based and from which planning is developed. This use of military historical experience is more evident when Soviet procedures in operational analysis are contrasted with those in NATO armies (especially in U.S. and British Armies). Because the subject is of interest to NATO at the moment, we have chosen to investigate, as an example of Soviet procedures, their approach to "sustainability" and their use of military history in establishing the parameters of this concept.

"Improve sustainability" has been a fashionable cry in NATO for some years now. We have found that, to most officers of our acquaintance, the term is almost synonymous with "improve logistics." In fact, despite the currency of the concept, NATO does not yet have an agreed definition of the term "sustainability," but the following definition has been approved by the Supreme Allied Commander, Europe (SACEUR) for use within Allied Command Europe (ACE) and has been circulated by the Military Agency for Standardization (MAS) to nations for comments and approval:

> *Sustainability: the ability of forces to maintain the necessary level and duration of combat activity to achieve their objectives. This requires having sufficient personnel, equipment and stocks on hand and also having the ability to resupply and reinforce on a continuous basis. Sustainability is normally expressed in days. It then reflects the commander's subjective assessment of the overall capabilities of his command to sustain military operations.*[6]

This broad definition encompasses all those elements which combine to form the essence of sustainability, including the concept of time and balance in establishing requirements.

No one, we are sure, would dispute the importance of improving sustainability as it has been defined above. However, the definition does

make clear that sustainability, as it is perceived in NATO, can only be regarded as an educated guess. The accuracy of the guess will depend on the education, experience and intuition of the individual commander. Some commanders may, on account of their innate ability, make a very accurate guess, others may not be so accurate.

Like their societies, many NATO armed forces (the British and U.S. armed forces are prime examples) place great stress on individual ability, and the individual's contribution to the battle. The "human factor" is so often seen to be the deciding one in war, and we place great store on individual performance and initiative, choosing to rely for our defense on small elite armies rather than mass conscript forces. The degree of initiative allowed to, and the level of versatility and skill demanded from, say, the pilot of a U.S. F-16, the captain of a British type 22 frigate, or the commander of the Abrams or Challenger tank, is very much higher than that demanded of their Soviet counterparts. The above definition of sustainability, which stresses the subjective nature of the commander's assessment, serves to illustrate this philosophy very well.

The Russians also recognize the supreme importance of the "human factor" in war, but their reaction to this recognition is to reduce their reliance on individual performance rather than maximize it so that the military system is less influenced by the inevitable shock and casualties of battle. This basic principle is, perhaps, the first factor which determines the difference between Soviet and Western operational planning.

The second important factor making for a different approach to planning is, as was mentioned above, the inclusion in all operational analysis of a very large element of what the Russians call "military history," but what is perhaps better translated as "military experience," as it concentrates most heavily on "historical" experience post-1941 and includes a study of such historical campaigns as the recent Falklands conflict, the wars in Lebanon, and Soviet experience in Afghanistan since 1979. We have never seen any technical evaluation of a weapon's effectiveness discussed without at least an attempt to equate it with some wartime experience.[7] Nor have we seen any new tactic proposed nor any concept developed without reference to Soviet experience in the 1941-45 war, and particularly in the last year of that war when the Soviet Army embarked on its most successful high speed offensive operations.

Both these factors are closely linked. The statistical calculations on which Soviet battle planning relies are derived from a combination of historical experience and the scientific measurement of weapons' effects. This ensures that not only is it possible to make a detailed and quantitative assessment of battlefield requirements (the number of guns or tanks per kilometer and the necessary ratios of superiority for a breakthrough attack, the required amount of fuel and ammunition for an offensive, etc.), but also that this assessment takes full account of the impact of the stress of battle upon the human beings who must participate in it and upon whose performance its course depends.

Furthermore, the existence of a military doctrine (i.e., a structured framework of views on war which is enforced upon every one in the Soviet

Union with some role to play in that military machine, be it as soldier, weapons designer, tactician or politician), ensures that this approach is applied consistently and comprehensively throughout the Warsaw Pact military system. Because Soviet military doctrine is applied to the other Warsaw Pact countries, they all subscribe to the same military philosophy and have very similar operational procedures. This is in marked contrast to the variety of procedures that exist within NATO.

So fundamental is this concept of doctrine to the Soviet and East European approach to preparing for war that to portray it as something "imposed" on the military system is really to misrepresent it. It has become embodied in the philosophy of the military approach—it is a way of thinking, an attitude of mind. It is, moreover, one which is closely linked to the Marxist "scientific" approach to life and society as a whole. Nothing is to be left to chance, the role of luck must be reduced to a minimum.

This philosophy is also linked to the reduction of the role of individual initiative in the running of the battle, making the battlefield more predictable. In the Soviet view, the more predictable and calculable that the battlefield can be made, the greater the reliance that can be placed on drills at all levels. The more drills that can be developed, the better the vocational training soldiers and staff officers can be given, for an enormous weight of experience can be brought to bear on developing the best drills for the circumstances. The better drilled a unit or a headquarters is, the more rapidly it can react, a rehearsed drill being much quicker to implement (and much more resistant to the shock of battle) than a newly conceived plan or idea, no matter how clever. The perception of the need for speed in every action is one of the basic principles of Soviet operational art and tactics today.

The successful implementation of drills—standard operating procedures—for unit and formation tactics, army and *front* staff planning and so on, is, of course, dependent not only on training, but on keeping the unit or staff team in question functioning. The more the force structure or composition of the team for which the drill was worked out changes, the less easily the drill can be applied, i.e., the greater the level of losses, the less efficient the drill. However, if this degradation too can be accurately estimated and educed to a numerical equation, and included in calculations for the operation, then plans can be made to take account of casualties and to restore combat capability and measures can be taken before the battle starts to reduce the impact of casualties on the system.

That this system may make a military unit less effective at coping with the unexpected may be true, but the Russians do accept that not everything can be planned for or drilled for, and they did display a creditable resilience in 1941. It is a Soviet maxim that there are very few new ideas employed in war, and if past battles are studied sufficiently well, if intelligence about the enemy is good, and if surprise and speed are achieved then, unless he has accomplished some "technological breakthrough" in weaponry, the enemy is unlikely to be able to implement anything radically new at all, and will be reduced to purely defensive reaction. A good example of the impact of "something new" on Soviet operations can be seen in the impact of terrain on Soviet operational planning. The impact of hilly terrain on an offensive

was outside Soviet experience in 1943-44 and very seriously affected operational performance in the Carpathian operations. However, by the time of the Manchurian Operation in 1945 this new experience had been assimilated into Soviet calculations and was reflected in the planning for that operation.

We consider that the principles of calculation and operational analysis are basic to the Soviet concept of command and control, and are the key to understanding how the Soviet Army assesses the sustainability of its formations and units in battle. On the basis of these calculations, tables of organization and equipment are decided, tactics and operational plans and procedures are developed, equipment is procured, and men are trained. All these elements of "troop control" contribute to the survivability and sustainability, i.e., "the viability," of the Soviet armed forces in war. We will devote the remainder of this paper to exploring this concept in greater detail.

As there is no official NATO definition of "sustainability," and as the word does not yet appear in either standard or military English dictionaries, it is not possible to give an *authoritative* translation of the term into Russian. The concept most closely equated to the NATO definition is *zhivuchest'* (viability). It is an accepted Russian word defined in standard Soviet civilian dictionaries as "capability of life, staying power, steadfastness," being derived from the verb *zhit'* (to live).[8] This term appeared in a military context in the 1952[9] and 1972[10] editions of the *Great Soviet Encyclopedia* with the very limited meaning of *zhivuchest' korablia (sudna)* (the viability or unsinkability of a ship) and in 1952 as *zhivuchest' orudiia* (the "active life" of a gun). The term *zhivuchest'* was omitted from the 1965 edition of the *Dictionary of Basic Military Terms*.[11] *Zhivuchest'* appears in the *Soviet Military Encyclopedia* of 1977 with several subordinate definitions.[12] In the 1983 edition of the *Soviet Military Encyclopedic Dictionary* it is given extensive coverage,[13] receiving proportionately very much more space than in the earlier *Soviet Military Encyclopedia* article. We take this as evidence of a growth of interest in the subject, and of the development of the concept over the last decade or so. The relevant definitions in the *Soviet Military Encyclopedic Dictionary* begin as follows:

> Zhivuchest' *(mil). The capability of troops (forces), weapons, military equipment, rear installations or command and control systems to preserve or quickly restore their combat capacity (the capability to fulfill their appropriate military task).*

Subsidiary definitions expand and elucidate the term, by demonstrating its application in specific circumstances. These definitions begin as follows:

> Zhivuchest' voisk (sil). *The viability of troops (forces) is ensured by their being properly organized and structured; being appropriately and adequately equipped; having a high level of field (naval or air) training; taking protective measures; using the protective features of the terrain; completing the engineering preparation of the terrain; accomplishing timely dispersal and change of locations; creating reserves of forces and*

> *equipment; and, taking measures for protection from weapons of mass destruction.*

The text continues, including many more subsidiary definitions of the term and its derivatives. However, the above extract is sufficient to make the major point: that the Russians have a comprehensive definition of the concept and subjectivity has no place in it.

But if the concept does not require subjective judgment, then it must be objective, and if it is objective it must be based on objective (mathematical) analysis and on objective data—fact, not guesswork. The extent to which, even to establish the objective data, the Russians have relied on their analysis of military history was very well demonstrated in the study by the then Commandant of the Frunze Military Academy, Army Gen. A. I. Radzievskii, in an article in 1977:

> *What is viability? In a wide sense viability means the capability of units, formations and larger groupings to maintain and preserve their combat effectiveness in various circumstances and to continue the implementation of combat tasks in the face of vigorous enemy counteraction.*[14]

Radzievskii went on to define the term in detail in an admirably thorough and logical manner. He assessed that during the last war the main ways of achieving a high degree of viability of forces were by the following: improvements in levels (i.e., quantity) of equipment; improving the quality of equipment and weapons (better design, r .stance to wear and tear, invulnerability to fire, adaptability to the terrain, etc.); making more effective use of equipment and weapons in combat; improvements to the organizational structure of units, formations and larger groupings; developments in the art of organizing and conducting battles and operations; improvements in support of battles and operations by timely replacement of losses in manpower, equipment, weapons and materiel reserves; the development of a high level of moral and combat qualities in the men; and, training commanders, headquarters staffs and troops in skillful action during battle and operations.

Viability, he said, presupposes the existence of a rational organizational structure of units and formations. The experience of war shows that the main improvements in this area were as follows: an increase in the firepower, shock power and maneuverability of subunits, units and formations; the creation of stable organs of control; improvements in the ability to go on fighting despite considerable losses; establishing the proper ratio of personnel in combat, supporting, and rear subunits and units. Improvements in the organizational structure of the various arms and services, continued General Radzievskii, made for new and better ways of conducting an offensive battle (operation), helping to reduce losses among Soviet troops and to improve their "viability" in combat.

To support the above point, he chose to cite, as examples, that between July 1941 and July 1942 a rifle division was reduced in personnel by almost a half but its firepower increased considerably: the number of mortars in the division more than doubled from 76 to 188; artillery guns increased from 54 to 74; submachineguns from 171 to 711; and machineguns from 270 to 449.

The division received 228 antitank guns. In July 1941 the division could fire from standard small arms a total of 140,450 rounds per minute. By July 1942 this had risen to 198,470. The weight of the artillery salvo increased over the same period from 348 kg to 460 kg and the weight of the mortar salvo more than trebled from 200 kg to 626 kg.

In December 1942 a single structure was introduced for the rifle and guards divisions. During the third period of the war this structure was again changed as a result of improved Soviet economic potential and battle experience. Between July 1942 and December 1944, the weight of the artillery and mortar salvo of a division increased from 1,086 to 1,589 kg and by the end of the war it reached 2,040 kg. At the same time the mobility and maneuverability of the division increased.

In the interests of improving command and control the reestablishment of the rifle troops as corps was virtually complete by the end of 1943. At the same time the structure of all-arms armies improved. All this enabled rifle troops to maintain viability and conduct offensive action for a prolonged period of time. Considerable changes took place during the war in the organization of the formations and larger groupings of tank and mechanized troops. The experience of the first offensive operations of 1941 and 1942 confirmed beyond all doubt the need for large tank formations and larger groupings capable of acting swiftly in operational depth and of being less vulnerable to the enemy artillery and air force, i.e., capable of maintaining combat effectiveness for a prolonged time.

According to General Radzievskii, a great role in increasing the maneuverability and shock power—and consequently in improving the viability of tank armies—was played by establishing a single organizational structure of two tank and one mechanized corps, plus tank-destroyer, self-propelled artillery, antiaircraft, mortar, engineer, and rear units. Given means of air defense, tank armies of this type gained considerable independence and combat effectiveness. By the beginning of the summer-autumn campaign of 1943, five tank armies of this homogeneous composition had been set up, and in January 1944, a sixth was formed.

Of great importance to the increase in the viability of units, formations, and larger groupings was developing the art of organizing and conducting battles and operations. During the preparatory period, most important was skillful disposition of the elements of the battle formation (operational structure) of forces, control posts, elements of the rear, and material and technical resources. The experience of the war showed that the formation structure of forces in battles and operations should contribute in every way to the implementation of one of the most important principles of military art: the concentration of pressure on a decisive spot at the right moment.

During the first period of the war (June 1941–December 1942) the viability of the ground forces was improved by the achievement of complete air superiority. This was attained by devoting up to 40 percent of aircraft sorties to this purpose. The density of preparatory bombing attacks also increased from 5 to 10 tons per sq km in 1943 to 50 to 60 tons per sq km and sometimes even more in 1944–45. In the Berlin Operation it was 72, and in the Lvov-Sandomir Operation, 102 tons per sq km.

Considering the lack of an agreed NATO definition of "sustainability" and the fact that it was only on the initiative of SACEUR that it was discussed at all, Radzievskii's extremely thorough historical analysis of 1977 is most impressive. It shows that the Russians have thought very carefully about the problem.

What is striking about Radzievskii's resume (of which the above is only a short selection of his main points) is the slant which he gives to the concept of achieving "viability." As a wartime Army Chief of Staff, Radzievskii was well acquainted with the problem of how to sustain his forces in action. In the 1970s, entrusted with training Soviet staff officers he was very much at pains to point out that not only was viability not a "subjective assessment," but also that it was very much more than just a question of logistics. It is the active prosecution of the battle, the provision of the proper equipment and the maintenance of supplies and reserves, the careful structuring of forces, the skillful choice of operation, and the skill with which it can be conducted that in his influential view most contribute to an army's ability to sustain itself in battle. It is, above all, a positive approach based on military experience: the more effectively the enemy is hit, the fewer casualties he will inflict and, therefore, friendly operations can be sustained longer. Moreover, it is quantifiable, and it is historical analysis which has provided an important part of the statistical detail so necessary for accurate calculation and planning. The exploitation of this historical experience breaks down into four phases: (a) collection of data; (b) analysis of the data; (c) the application of the lessons drawn from the analysis; and, (d) checking the results of the exercise.

The collection of data is a massive task. The Soviet Ministry of Defense Central Archives (TsAMO) and the Army Central State Archives (TsGASA) are the repository of unit and formation war logs and diaries most often cited in Soviet operational analyses, but many smaller collections of material are clearly held in formation, district, national and local museums. These logs contain records of operational decisions, battles and planning details which provide much of the basic data of the experience under study. These data, however, are only available because of the decision to collect and collate it in the first place and the commitment of scarce manpower resources to recording and collating facts during and immediately after the battle. Subsequently, the commitment was also made to store and catalogue the material and make it available to (approved) researchers. This also required the allocation of significant resources.

Careful records were kept of every facet of the battlefield. As a result, General Radzievskii can state with some confidence, for example, his facts about growth in the weight of a divisional salvo. Moreover, his approach to the problem, basing his analysis on quantifiable data, is very common in Soviet military-historical research.

In addition to data on the performance of men, equipment, tactical plans, units, and formations in battle, theoretical and practical studies of new weapons and tactics are constantly conducted on a wide scale in the Soviet Army. The contemporary data are correlated with historical data in an attempt to reach a realistic assessment of the performance of the military

system under the stress of battle. The performance of a weapon under range conditions or of a unit on exercise can be degraded by an order of magnitude once the enemy shoots back. This is a lesson that the Russians, at least, do not forget.

However, it would also be unwise, the Russians say, to underestimate the impact of technological change on the battlefield. Even without "technological breakthroughs" the general improvement in weapons performance can make for significant changes in the factors making up the tactical equations. Consequently, today's tactics manuals, far from relying solely on wartime experience, include data which take into account the effect of this new technology on weaponry and the impact these weapons may have on the future battlefield.

Even when modern technology produces weapons with such different effects or with such improved performance that it is difficult to equate them to any wartime equivalent, the Russians still look to their military-historical experience for help. In such cases, it is the human reaction to new and unforeseen problems which they study and from which they draw lessons. That the subject matter of the problem may be qualitatively different is not seen as relevant in this instance.

Once collected and made available, the material must be analyzed by the relevant organization responsible for some specific function within the Soviet military system and vehicles then contrived to enable the experience to be translated into practice. It would appear that in large measure, the task of "mining" military historical experience for statistical data falls to the Military History Directorate of the General Staff. This is a large body of over 1,000 well qualified military historians, usually serving or retired officers. Many of these men apparently hold posts or chairs in departments of military colleges or academies where they are well placed to pass on the results of their research, and their approach to the very problem of military analysis, to future generations of Soviet officers.

By a combination of analysis of historical experience and operational analysis of weapons and tactics, the Soviet Army established a series of standardized procedures and norms which form the core of the Soviet command and control system. These procedures and norms were then applied by two means: battle regulations which lay down rules to be followed and having the force of law (in contrast to U.S. and British field manuals, which merely offer advice) and manuals which offer useful advice as to how the regulations are to be implemented. A large and lively military press provides a vehicle for the expression of ideas and updates on new ways to implement the regulations more effectively and how to deal with situations beyond the scope of the regulations. These standards of activity are designed to ensure an objective and common approach to the planning of future campaigns and operations.[15] The standards, which have the force and authority of regulations, i.e., law, are known as *normativy* or *normy* (norms). Here, I would like to acknowledge my debt to Maj. H. F. Stoeckli (Swiss Army) and Lt. Col. C. W. Blandy (Royal Artillery), research fellows at the Soviet Studies Research Centre, RMA Sandhurst, for their pioneering work on the investigation of Soviet norms, statistics, and calculations and to thank them for

their permission to draw on their work for many of the examples that are to follow.

The *Great Soviet Encyclopedia* describes a norm as follows: "the minimum of something, as established by a rule or plan; for example, a time norm or a sowing norm."[16] The *Soviet Military Encyclopedia* is more detailed in describing various norms (*normy*).[17] The word "norm" originates from the Latin *normatio* meaning "I regularize," and for military purposes, norms are subdivided into a number of groups: operational and tactical (spatial and temporal) norms, norms of expenditure, and norms of supply.

The first type of norms characterizes the spatial and temporal factors of operations and tactical tasks for combat forces and the terrain on which they act. Spatial operational-tactical norms take the following form: depth of battle tasks; dimensions of zones, areas, and sectors of combat operations; areas of grouping of forces; battle order, formations, and groupings along the front and in depth; and scale of redeployments and regrouping.

Temporal norms are concerned with the time taken to complete task, march, or maneuver. They are worked out taking into account the fighting strengths and capabilities of one's own forces and those of the enemy, battle experience, experience of operations and tactical exercises, degree of preparedness and training of personnel, the results of special research, terrain conditions, time of the year and time of day.

The following tables of statistics of Soviet forces in the Great Patriotic War are typical of the vast numbers of such tables which abound in modern Soviet analytical studies. They have been chosen to demonstrate how the Russians collate and use military history to establish the parameters of a concept—in this case viability. They refer to the factors making for viability outlined above in General Radzievskii's definitive article. That many of the examples are taken from his other works is not an accident. As the tables are perused the data build up into a clear picture and it becomes possible to establish operational "norms" on the basis of what was actually achieved during given operations and under given conditions. Today's tanks move faster (but not that much faster); today's guns shoot farther; today's shells explode with greater effect. But these improvements are measurable and can be easily incorporated to alter detail once the base line has been established.

The data in Table 1 shows the increase in density of personnel and weapons on the breakthrough sector between the first and third periods of the Great Patriotic War (GPW). This grew some two to three times in infantry, four to ten times in artillery, and six to ten times in tanks and SP guns. The higher densities enabled the Russians to achieve what they consider to be a decisive superiority over the enemy on the axis of the main thrust, especially during the breakthrough battle. In real terms this amounted to between 3 to 5:1 in infantry and 6 to 8:1 in tanks and artillery. This was a most significant contribution to achieving greater "viability" as defined by Radzievskii. The scale of *front* offensive operations also increased during the war (Table 2).

The development in size and scope of frontier offensive operations was reflected in the dimensions of the rear areas, as can be seen from Table 3. The value of the data in providing a statistical framework for the scale of future operations for a high speed offensive needs no stressing.

Table 1. Density of Forces and Weapons on Breakthrough Sectors
(km of breakthrough sector)

Forces/Weapons*	1st period†	2d period†	3d period†
Rifle troops	0.2-0.25	0.33-0.4	0.4-0.83
Guns and mortars	20-80	120-220	200-300
Tanks and SP Guns	3-12 (inf sup 3-6)	18-40 (inf sup 10-20)	70-85 (inf sup 12-30)

*Troop strength measured in divisions per kilometer.
†The Soviets define the 1st Period of the "Great Patriotic War against Nazi Germany" as June 1941–December 1942, the 2d Period as January 1943 to June 1944, and the 3d Period from then to May 1945. (The reader will recall a somewhat different view of this periodization in the article by Von Hardesty, p 170. Ed.)
Source: A. I. Radzievskii, *Tankovyi udar* (Moscow, 1977), p. 40.

Table 2. Scale of *Front* Offensive Operations

	1st period	2d period	3d period
Sector of advance in km	300-400	75-250	200-250
Depth of operation in km	70-80	100-200	200-300

Source: Radzievskii, *Tankovyi udar*, p. 41.

The Russians maintain that, of all of the operations of the Great Patriotic War, the Vistula-Oder Operation is one of the most significant for contemporary operations because it involved a high speed and surprise offensive (penetrating up to 600 km in seventeen days) against the weak points of an enemy defense, itself based on strongpoints with only a small operational reserve and with a plan to withdraw to rearward defenses on river lines. This operation also involved several classic examples of the use of mobile groups to complete the encirclement of the strongest enemy groupings. Table 4 shows how armies were grouped into *fronts* for this operation and the width of the breakthrough sector that commanders calculated that they could attack.

As we noted above, Soviet researchers are very selective in the material they "mine" for basic data. For example, when investigating the rates of advance, tank formations are studied more often than rifle (infantry) formations because they are more similar in armament and mobility to

Table 3. Changes in the Depth of the Rear Area
(kilometers)

Period*	*Front*	Army	Formation†	Overall
Prewar	up to 500	75–125	50–75	650–750
Defense	180–250	100–150	30	310–400
Operation preparation	150–250	50–100	15–20	215–370
During operations	200–300	150–200	---	350–500

*On basis of most important operations during GPW.
†Includes regimental rear area (8–12 km)
Source: N. A. Maliugin, *Sovershenstvovanie operativnogo tyla*, VIZh 6 (Jun 1985), p. 30, Table 2, Extract.

present-day formations. By examining the data in Table 5, we can gain some idea of the rate of advance Soviet military doctrine might expect to be possible in modern conventional battle following a breakthrough of NATO's main defensive belt. The role of the Tank Army in the last year of the Great Patriotic War was mainly exploitation.

Minor discrepancies exist in statistics of rates of advance, etc., between Soviet sources, but none are so great as to have any significant impact on the overall lessons to be drawn. The discrepancies are easily explained by slight differences in analysis.

The second group of relevant military norms are *normy raskhoda* (norms of expenditure of material resources). These norms are concerned with the accounting of supplies in units of mass or volume or as individual items in their expenditure by servicemen, weapon systems, subunits, units, formations, and armies. Again the norms are laid down by the Soviet Ministry of Defense on the basis of research and calculated data. For instance, the basic norm of consumption of fuel—diesel, petrol, oil and lubricants (POL)—is laid down in litres or kilograms for each vehicle, usually for 100 km of movement or for one hour of operation or of static running. When special conditions (difficult terrain, bad weather, etc.) prevail, a supplement is added to the basic norm. Norms of expenditure are laid down for ammunition in a *boievoi komplekt* (BK), unit of fire, and for fuel in *zapravki* (refills).

A BK is a given number of rounds for a particular weapon. For example, the BK for a modern D–30 122-mm gun-howitzer is 80 rounds per gun. For a T–62 tank it is approximately 40 rounds; for a PKM machinegun it is about 1,000 rounds. It has some relevance to the ammunition carrying capacity of the vehicle and to average daily expenditure rates in the Great Patriotic War. A "fill" for a given vehicle is the amount of fuel it carries in its main tanks. These are accounting figures. Expenditure rates are calculated in fractions or multiples of "BK" and "fill."

Table 4. Structuring of *Fronts* and Combined-Arms Armies (CAAs)
Vistula-Oder Operation

Fronts	1st Ech	2d Ech	Mobile Groups	Reserves	Armies	*Front* width (km)	Breakthrough sector (km)
1st Belorussian	47A	3SA	1GTA	7GCC	47A	14	4
	1A		2GTA		1A	53	-
	61A		2GCC		61A	30	4
	5SA				5SA	12	6
	8GA				8GA	30	7
	69A				69A	54	7
	33A				33A	36	6
Total Armies	7	1	2 TAs 1 Cav Corps	1 Cav Corps	7		
1st Ukrainian	6A	59A	3GTA	7GMC	6A	94	-
	3GA	21A	4TA	1GCC	3GA	12	2
	13A				13A	11	11
	52A				52A	10	10
	5GA				5GA	3	13
	60A				60A	110	3
Total Armies	6	2	2 TAs	2 Corps	6		
Grand Total	13	3	4 TAs 1 Cav Corps	3 Corps	13		

Source: VIZh 1 (Jan 1965), p. 76, Table 9.

Norms of expenditure for each type of ammunition and fuel are worked out well beforehand on the basis of the action or operation envisaged. For example the norms of fuel consumption for tanks in an offensive battle are calculated according to the planned depth of the operation taking into consideration terrain conditions, weather, and coefficients of maneuverability. As a rule norms of expenditure also take into account the availability of material resources. The relevance of the above tables and historical statistical data to establishing future requirements is obvious.

The third type of norms are *normy snabzheniia* (norms of supply). These are the amount of materiel resources laid down for supply to servicemen, subunits, units, or formations and designated for use in a specific period of time. Under this category are included the following: spare parts, types of

Table 5. Rates of Advance of Tank Armies in the GPW Third Period
(selected operations)

Campaign	Army	Depth of Adv (Km)	Maximum Rate (Km/24 hrs)
Lvov-Sandomir	1GTA	400	60
	3GTA	300	60
	4TA	350	55
Iassy-Kishinev	6TA	300	60
Vistula-Oder	1GTA	610	75
	2GTA	705	90
	3GTA	480	50
	4TA	400	60
East Prussian	5GTA	250	50
Berlin	1GTA	110	20
	2GTA	130	25
	3GTA	130	50
	4GTA	170	50

Source: Radzievskii, *Tankovyi udar*, p. 262, Appendix 3.

instruments, materiel stores, ammunition. POL and rations. They are closely linked to norms of expenditure.

Nowhere are norms more crucial in their application than in the artillery, where the requirement is to produce a tightly controlled and effective fire plan. This is very necessary with the vast resources of artillery firepower available to the Soviet gunner, and essential to the concept of "viability." Artillery is one of the prime means of reducing the enemy's effectiveness, and the supply of adequate ammunition will be one of the heaviest logistical burdens.

Tables 6 through 9 are examples of the basic historical data on which today's norms are established. Based on this detailed evaluation of military experience and amended by technical data of modern weapons, tables of norms for every military activity have been prepared for today's Soviet staff officer, from digging trenches and firing shells to destroying an enemy position. Table 10 gives examples of the standardized ammunition loadings used in calculations of supply, and the divisional holdings of ammunition in terms of BKs would look something like the summary shown in Table 11.

Table 12 is an example of a ready reference table telling a Soviet commander how many shells of which type he needs to shoot to neutralize (i.e., kill 30 percent) a specific type of target at a given range. The quantity is increased by 10 percent for each additional 1 km of range. Table 13 gives

Table 6. Amassing of Materiel Before the Vistula-Oder Operation

	Ammo "BK"		Fuel "Fills"			Rations/man (days)			
Fronts	Inf Wpns	Arty	Avn	Petrol	Diesel	Grain	Groats	Fat	Sugar
1 Belorussian	1.5/2.5	3.1/9.8	14.1	4.3	3.4	140	65	33	66
1 Ukrainian	1.5/2	3.5/4	9.4	5.1	4.6	21.7	20	28.8	36

Source: VIZh 1 (Jan 1965), p. 73, Table 5.

Table 7. Supplies Stockpiled before the Berlin Operation
April 1945

	Artillery Ammunition "BKs"					Fuel "Fills"		
Fronts	76 to 100-mm	122-mm	152 to 203-mm	AA Arty	Morts	Avn	Petrol	Diesel
1 Belorussian	2.9	3.0	3.0	3.0	4.25	8.7	5.8	5.5
2 Belorussian	1.8	1.25	2.2	2.8	1.2	6.8	3.1	5.2
1 Ukrainian	1.[illegible]5	2.7	2.95	2.75	2.0	6.5	4.7	5 0
Average	2.18	2.32	2.6	2.85	2.48	7.3	4.53	5.23

Source: VIZh 4 (Apr 1965), p. 84, Table 2.

the rates of fire that a Soviet commander can expect, enabling him to plan his barrages in support of the motor rifle and tank troops.

The above examples of statistical data from historical sources and modern artillery manuals have again been chosen out of the many more available to demonstrate how the historical experience and modern material based on measurement of exercises and experiments is complementary and continues to build up the total data base needed for an effective assessment of what is needed to ensure "viability." Another important factor in determining the viability of an army in battle is its ability to cope with losses. Here too, historical analysis provides the best, and perhaps the only reliable, research tool. This is very important information which the modern commander needs to know if he is to make some scientific assessment of his ability to survive contact with the enemy.

An analysis of the data provided by E. I. Smirnov in his *Voina i voennaia meditsina* for a number of operations shows that the medical casualties of Soviet armies and *fronts*, relative to their initial strengths,

Table 8. Ammunition Expenditure in Offensive Operations of Tank Armies

Operations	Armies	Ammo Expenditure (BK) Rifle	MG	82-mm Mor	120-mm Mor	76-mm Arty	76/85-mm Tank
Belgorod-Khar'kov	1TA	0.35	0.7	1.74	1.93	0.43	1.7
Korsun'-Shevchenkovskii	2TA	1.2	1.0	1.4	1.0	1.6	0.8
Lvov-Sandomir	4TA	0.8	1.0	1.9	2.5	1.0	0.9
Lublin-Brest	2TA	0.95	1.1	1.1	1.1	1.1	1.4
Vistula-Oder	1GTA	0.5	0.6	0.6	0.4	0.5	0.7
	2GTA	0.5	0.6	0.2	0.5	0.4	0.65
	3GTA	0.6	0.8	0.6	2.5	1.4	1.5
	4TA	0.54	1.25	0.57	1.11	1.22	0.59
Berlin	1GTA	0.38	0.98	1.26	3.7	1.64	1.9
	2GTA	0.7	0.8	0.8	2.1	1.55	1.9
	3GTA	0.64	0.62	1.3	1.7	0.85	1.06

Source: Radzievskii, *Tankovyi udar*, p. 231, Table 22.

Table 9. Fuel Consumption by Tank Armies in Offensive Operations

Operation	Armies	Diesel Tons	Diesel Fills	Petrol Tons	Petrol Fills	Aviation Fuel KB-70 Tons	Aviation Fuel KB-70 Fills	Selected Totals Tons	Selected Totals Fills
Orel	2TA	232	2.9	656	5.0	112	4.3		
	3GTA	1100	3.7	2224	9.6	190	6.4		
	4TA	458	2.5	1568	4.3	113	2.8		
Belgorod-Khar'kov	1TA	561	3.6	2071	9.8	329	6.8	2961	20.2
Kiev	3GTA	459	2.4	1014	3.6	101	3.5		
Korsun'-Shevchenkovskii	5GTA	500	2.2	850	2.4	39	2.4		
Proskurov-Chernovit	1TA	500	3.3	1090	5.0	75	3.6		
Lvov-Sandomir	1GTA	1720	7.5	3090	11.2	235	5.7	5045	24.4
	3GTA	1435	8.6	3077	10.2	303	7.7		
	4TA	960	7.0	2467	8.6	301	9.8		
Lublin-Brest	2TA	948	3.5	1915	5.3	152	4.2	3015	13.0
Vistula-Oder	1GTA	1175	3.9	2535	6.5	382	6.0		
	2GTA	885	3.0	2182	4.0	218	4.5	3285	11.5
	3GTA	1920	6.0	3519	7.6	392	6.7		
	4TA	1214	4.7	1739	6.7	249	4.1		
East Prussian	5GTA	857	3.4	1951	5.9	209	4.5		

Source: Radzievskii, *Tankovyi udar*, p. 232, Table 28.

Table 10. BK Weights for Motor Rifle Division

Ser	Weapon	Rounds/unit of fire	Weight/BK (metric tons)
1	120-mm mort	80	1.8245
2	122-mm D–30	80	3.19
3	122-mm 2S1	80*	3.19
4	152-mm D–20	60	4.65
5	152-mm 2S3	60	4.65
6	122-mm BM–21	160	11.907
7	82-mm mort	120	0.58

*122-mm 2S1 carries 0.5 BK (40 rounds) on board.
Source: Compiled from diverse Soviet manuals by Lt Col C. Blandy, RA, in "The Sustainability of the Soviet Army in Battle," SSRC SHAPE Technical Center Report STC–CR 65 (The Hague, September 1986; hereafter referred to as STC–CR 65), Vol 1, p 68.

Table 11. Breakdown of Divisional Ammunition Holdings of BK

Ser	Element	Mortars		Rocket Arty (BM-21)	Tube Arty
		82-mm	120-mm		
1	co/btry tpt	1.25	0.5	0.75	1.0
2	bn tpt		0.5	0.375	0.5
3	regt tpt	2.0	2.0		3.0
4	div tpt	2.0	2.0	1.0	1.0
Total div holdings		5.25	5.0	2.125	5.5

Source: STC–CR 65, Vol. I, p. 69.

decreased in a regular fashion as the Soviet superiority over the Germans increased (Table 14).[18] Soviet battlefield casualties (killed and injured) and permanent losses (killed, died from accident or disease, or so badly injured or sick as to need permanent evacuation) amounted, on average, to the equivalent of 20 and 10 percent respectively of the initial strength of the enemy defeated during the operation. Medical casualties (the sick), on the other hand, ran at a given percentage of Soviet strength. Exceptions to this rule allow the effect of terrain (Carpathian Operation of 1944) or the loss of surprise (first stage of the East Prussian Operation in January 1945) to be quantified for operational analysis.

Table 12. Average Ammunition Norms for Artillery and Mortar Neutralization

(up to 10-km range)

	Rifled Artillery											
	Guns*				How*		Gun/How*	Mortars*			Arty	
Designated Targets	85	100	122	130	122	152	152	120	160	240	med	hvy
Arty Btry-towed	280	240	220	200	220	180	180	200	230	100	400	170
Mor Tp-Towed	210	180	165	150	165	135	135	150	90	70	300	130
SP Btry-Armored	330	300	270	260	380	300	285	300	290	175	440	210
SP Btry-Unarmored	310	265	240	230	310	260	240	250	240	130	380	170
SP Tp-Unarmored	270	230	200	200	270	220	205	210	200	115	350	150
Tp/Pln-SP Mortars	400	360	320	310	430	330	310	320	300	170	540	230
Destruction-Nuc Delivery Means Launcher	350	320	260	240	260	200	200	---	140	110	270	200
Neutralization-Nuc Delivery Means Gun (rds/min)	12	10	8	7	8	6	6	---	6	5	7	6

*Milimeters

Source: STC–CR 65, Vol. II, p. 499.

Table 13. Maximum Permitted Rates of Fire
(Number of Shells)

	76-mm		85-mm		100-mm		122-mm		130-mm		152-mm*	
Duration†	full‡	red**	full	red	full	red	full	red	full	red	full	red
1	15	15	10	10	7	7	6	6	5	5	4	4
3	35	35	25	25	18	18	16	16	12	12	12	12
5	50	50	40	40	30	30	25	25	20	20	20	20
10	70	70	50	60	50	50	40	40	35	35	30	30
15	85	85	60	75	60	65	55	55	45	45	40	40
20	100	100	70	90	65	75	65	70	55	55	50	50
25	110	115	80	100	70	90	70	80	65	65	60	60
30	115	130	90	110	75	100	75	90	70	75	65	70
40	125	160	110	130	85	120	85	110	80	90	75	90
50	140	180	125	150	90	140	90	130	90	105	80	105
60	150	200	140	170	95	100	100	150	100	120	90	120
120	220	320	230	290	135	250	150	260	100	210	135	210
For each successive hour												
	70	100	80	100	40	80	50	80	35	70	45	70

*Howitzer
†Duration of fire in minutes.
‡Full charge.
**Reduced charge.
Source: STC–CR 65, Vol. II, p. 513

Table 14. Average Soviet Casualty and Loss Rates (1944–45)*
(selected operations)

Operation	Overall Superiority	Medical Casualties	Battlefield Casualties	Permanent Losses
Lvov-Sandomir	2.2:1	0.8	0.93	0.40
Iassy-Kishinev (4 armies)	2.6:1	1.0	1.1	0.45
Belorussian (11th Gds Army)	5:1	0.57	0.6	0.3
East Carpathian	2:1	0.90	0.90	0.40
Petsamo (14th Army)	3:1	0.57	0.61	0.27
Vistula-Oder	5.8:1	0.40	0.45	0.11
East Prussian (1st part)	3.7:1	0.50	0.50	0.23
Berlin	3.4:1	0.40	0.40	0.20
Morava-Ostrava	2.3:1	0.90	1.0	0.42
Manchurian (planned)	3.3:1	0.64	0.66	0.31

*Percentage of initial strength.
Source: Calculated by Maj. H. F. Stoeckli, from Smirnov, *Meditsina*, p. 92.

To illustrate this point let us consider the Lvov-Sandomir and the Vistula-Oder Operations, casualty details of which are given in Table 15. With Soviet superiorities of 1.3:1 and 4:1 in manpower, the overall battlefield casualties were 16 and 6 percent, relative to the Soviet strength, and relative to the Germans they represented 16 x 1.3 = 21 and 5 x 4 = 20 percent. In a similar fashion, the permanent Soviet losses represented the equivalent of 7 x 1.3 = 9 and 4 x 2 = 8 percent of the German's initial strength. In other words, the enemy's strength in relation to the attacker determines the level of viability of the attacking force, and this can be (and is) calculated beforehand with the anticipation of a high degree of accuracy.

Casualties in vehicles are as important to viability as casualties in men. Analysis of the viability of formations nowadays leans most heavily on the tank corps and tank army as being the examples most relevant to modern conditions of mechanization. Tables 16 and 17 give analysis of details both of loss and repair rates for armored fighting vehicles (AFV).

All the above examples are from contemporary Soviet studies and have been included here as examples of the breadth and depth of Soviet analysis designed to provide concrete values for equations to calculate what NATO considers to be a matter for subjective assessment. Once the data base has been established in detail, it is then possible to begin to apply the lessons of experimentation and experience to help establish procedures, tactics and to refine norms for the future battlefield. This procedure—for the collection of data, its evaluation and the application of the lessons learned—is also practiced in other areas of Soviet military planning as well as the tactical and operational.

For example, detailed analyses of the causes of mechanical breakdown in armored fighting vehicles, ships, and aircraft are done constantly by design bureaus. This makes it possible, when designing a new vehicle or weapon system, to predict with a considerable degree of accuracy the life expectancy of components. Therefore, the procurement of spare parts for the entire life expectancy of the vehicle can be and is planned at the same time as it is made. Equipment servicing can be planned at standard periods (e.g., every so many miles driven or hours flown) and components replaced irrespective of whether they have actually failed, based on the statistical analysis of the likelihood of their failure. This makes for an extremely stable procurement system and very predictable systems reliability in battle. Financial allocation for spare parts is automatically increased to keep pace with the annual rate of inflation.[19]

From the basic norms of performance, expenditure and supply based on research and the statistical data of past experience the Russians have developed mathematical modelling for the production of tactical calculations which staff officers and commanders can use to enable them to calculate the outcome of the impending action and thereby help them plan. The more that modern computers are introduced, the more they will probably be used to make these calculations more quickly and accurately. However, it must be remembered that computers are not yet as widespread in the Soviet Army as in some Western armies. Furthermore, the Russians hold that computers still remain vulnerable to electronic interference (e.g., from the electromagnetic

Table 15. Soviet and Enemy Losses (1944-45)
(selected operations)

Operation	Date	Superiority		Soviet Losses*		Enemy Losses*
		overall	in troops	battlefield	permanent	permanent
Lvov-Sandomir	13–30 Jul 44	2.2:1	1.3:1	16	7	66
Iassy-Kishinev (4 armies)	20–31 Aug 44	2.65:1	1.4:1	14	6	88
Belorussian (11th Gds Army)	23 Jun–6 Jul 44	5:1	3.5:1	8	4	
East Carpathian	8 Sep–28 Oct 44	2:1	1.5:1	47	20	20
Petsamo (14th Army)	7–29 Oct 44	3:1	1.8:1	12	6	55
Vistula-Oder	12 Jan–3 Feb 45	5.8:1	4:1	5	2	82
East Prussian (1st stage)	13 Jan–10 Feb 45	3.7:1	2:1	14	6	7
Berlin	16 Apr–8 May 45	3.4:1	2.5:1	9	4.5	90
Manchurian (planning)	9 Aug–2 Oct 45	3.3:1	1.2:1	(24)	(10.5)	100

*Percentage of initial strength.

Source: Calculated by Maj. H. F. Stoeckli from E. I. Smirnov, *Voennaia meditsina* (Moscow, 1979) and presented in STC-CR 65, Vol I, p 83.

pulse [EMP] generated by a thermo-nuclear explosion) or rough handling. Consequently, a whole series of means of tactical calculation are still being produced by *Voenizdat* in pamphlets and manuals in the form of equations, nomograms (nomographs) and calculation proformae. These, in line with the thrust of norms ensure a common and standard approach to a problem. They are easy and quick to use and available at the lowest subunit level. Additionally, they ease the thought process when under stress, just as battle drills do, a most important consideration in improving viability.

Table 16. Tank and Self-Propelled Gun Losses in Soviet Tank Armies
(selected operations, 1941–45)

			Reparable Losses	
Army	Operation	Length*	Enemy Action	Other†
1 GTA	Belgorod-Khar'kov	29	55.5	44.5
	Lvov-Sandomir	12	79.2	20.8
	East Pomeranian	8	60.0	40.0
2 GTA	Orel	9	70.3	29.7
	Vistula-Oder	16	70.6	29.4
3 GTA	Vistula-Oder	19	75.7	24.3
4 GTA	Orel	10	94.3	5.7
	Vistula-Oder	13	78.0	22.0
5 GTA	East Prussian	25	46.4	53.6
Average		16	70	30

*Length of operation in days.
†Breakdown or getting bogged down and stuck.
Source: Drawn from diverse Soviet sources by C. N. Donnelly, "Repair and Maintenance on the Battlefield: The Soviet View," SSRC Paper (A9), p. 16.

The general types of tactical c ation are based on the following parameters and are shown in Ta. 8. Direct calculations normally determine what can be achieved usin he available forces and weapons according to a designated plan. For example, having determined the number of available antitank weapons it is possible to predict how many tanks will be destroyed, i.e., direct calculations indicate the degree of effectiveness of the plan. Inverse calculations are produced in the planning stages when making an appreciation of the situation, so as to determine the amount of manpower, forces and weapons required to achieve the desired outcome of the operation.

Table 17. Loss and Repair Rates of Tanks and SP Guns in Soviet Tank Armies
(selected operations, 1941–45)

Army	Operation	Length*	Available†	Losses		Write Offs		Losses**	Write Offs**	Repaired**
				Number	Percent‡	Number	Percent‡			
1GTA	Belgorod-Khar'kov	29	562	1040	185	289	51.4	6.4	1.8	4.6
	Lvov-Sandomir	12	419	429	102.4	121	28.8	8.5	2.4	6.1
	East Pomeranian	8	584	149	24.6	49	8.4	3.1	1.0	2.1
2GTA	Orel	9	371	415	111.8	78	21.0	12.4	2.4	10.0
	Vistula-Oder	16	838	302	3.6	84	10.0	2.3	0.6	1.7
3GTA	Vistula-Oder	19	922	520	56.4	183	19.8	3.0	1.1	1.9
4GTA	Orel	10	735	551	75	253	34.3	7.4	3.4	4.0
	Vistula-Oder	13	750	423	56.4	118	15.7	4.3	1.2	3.1
5GTA	East Prussian	25	585	421	72	210	35.9	2.9	1.4	1.5
	Average	16	613	547	82	184	25	5.3††	1.7	3.6

*Time in days.
†Tanks and SP Guns available at start of operation.
‡Percent of initial holdings.
**Daily percentage of initial total.
††In the overall average loss rate of 5.3 percent, 0.6 percent of vehicles required major repair that could not be done on the battlefield during the operation and 3 percent were returned following light or medium repair.
Source: Donnelly, p. 17.

Table 18. Characteristics of Types of Tactical Calculation

Types of Calculation	Starting/Initial Data	Results
Direct	Number of troops, manpower strengths, availability of weapons, plus probable outcome of plan using troops and weapons.	Expected effectiveness of the plan using given troops and weapons.
Inverse	The expected result.	The necessary number of men and weapons to achieve the desired result.
Optimum	Amount of manpower and weapons, plus conditions of their use.	The most favorable variant of the plan using available manpower and weapons to ensure greatest effectiveness.

Source: A. R. Vainer, *Takticheskie raschety* (Moscow, 1982), p. 14.

Optimum calculations determine the very best variant of a plan. These calculations, nomograms and calculating proformae are grouped as shown below, with examples of the kind of subject they cover.

Group 1. Deals with "the duration of a march," "the time taken to get a column to the start line," "the time taken moving to a new concentration area," "the time taken to pass a given point or line," "the amount of fuel column will require."

Group 2. Addresses such subjects as "the expected time of meeting and distance of probable line of contact with the enemy when calculating for a meeting battle" and "the calculation of the required amount of men and weapons for the replenishment of subunits and the restoration of their battle worthiness."

Group 3. Deals with crossing water obstacles—times, ford and ferry capacities, etc.

Group 4. These are devoted to artillery and include "engagement of personnel and weapons," "duration of fire missions on one position," "time spent in changing gun positions" and "calculation

of fire capabilities." They would be used in conjunction with the kind of information given in Tables 12 and 13.

Group 5. Deals with engineers, mines and engineer fortifications: their effectiveness, the time and resources needed to set them up, etc.

Group 6. These are concerned with transport, logistics and cover; for example, "the logistic capability of a given number of aircraft," "the capacity of vehicle transport—how many loads can be carried in a set period of time," "rail transport calculations," and "establishing the traffic capacity of a route."

Tactical calculations establish the volume of fire needed to defeat the enemy (and therefore the volume of supplies required to sustain the Soviet force in action). Operational calculations establish the necessary correlation of forces for success and the impact of terrain, surprise and time of the type, course and speed of the operation. In both cases it is not only a ratio of force to force which is important but also of force to space. This is particularly true in terrain which is heavily featured—for example, by hills or by built up areas—and in view of the effectiveness of modern weapons, particularly antiarmor. Both these factors will have a particular impact on an European battlefield.

Consequently, with the development of tactics and operations during the 1970s and 1980s, Soviet concern grew for the viability of armored forces faced with overcoming a tactical defensive position. Debates were launched in the Soviet military press to discuss the following: the means of handling combined-arms units; coordinating armor with artillery; the role of initiative in battle; staff planning; and so on.[20] Stress was put on the overwhelming need for speed and surprise, emphasizing the points brought out in the operational-level analysis referred to in the preceding section.

Though the experience of 1944–45 was still held as being at the operational scale, developments in weapons and the mechanization of forces have rendered much of the low-level tactical experience of the GPW much less valid. It was no longer possible to rely solely on World War II experience to establish the viability of a tank or motor rifle battalion attacking a modern antitank defense. The painful experience of the Syrian T–62s and armored personnel carriers (BMP) on the Golan Heights and of the Israeli armor in Sinai in October 1973 had made this only too clear. Moreover, Soviet experience had always led them to put great faith in the total supremacy of the operational scale. No matter how bad or how good your tactics, if the operational plan is good then you win; if it is bad, you lose. The Yom Kippur War demonstrated that nowadays drastic tactical failure can lead to failure on a large scale even if the operational plan is good.

Consequently, the Russians put their considerable analytical skill to work on establishing new norms for ratios of force-to-force (correlation of forces) and force-to-space (tactical densities). This involved a careful study of the structure of NATO defenses, a comparative assessment of weapons'

effectiveness, mathematical modelling, field trails, and a very selective and judicious use of military historical experience, to establish what was necessary to achieve viability in a modern tactical battle. It is interesting that Soviet results are very similar to Western analysis wherever it is possible to cross-check. The Soviet analysis, therefore, is not only useful in this instance for an understanding of Soviet tactics and assessments of viability but should be equally useful to NATO commanders attempting to assess their own viability in the face of a Soviet defense, such as might be necessary during a NATO counterattack. This is illustrated in Table 19.

Table 19. Tank Survival Against Long-Range ATGW Defense
(percent survival)

	ATGW/km front			
Tanks/km front	5	10	15	20
15	50	2		
20	75	10	1	
25	92	30	5	
30	98	50	10	
40	100	75	35*	10

*That the value of 65 given in the original is probably a mistake or a "fudge" is suggested by a mathematical analysis of the data.
Source: Gen. Kardashevskii, *Voennyi vestnik*, 7 (1979) pp. 64–67.

To illustrate the meaning and the implications of Table 19, let us take the example of 20 tanks per km facing a defense 3 km in depth with 5 antitank guided weapons (ATGW) per km of frontage (i.e., on a 1 km x 3 km area). The model indicates that the tanks have a survival chance of 75 percent, or that 5 of them (25 percent) will be destroyed during the battle. This means that the average efficiency of an ATGW launcher is equal to 1 for a tank superiority of 4 to 1 (statistically, each ATGW destroys 1 tank, but 2 or more missiles will be required to achieve this score). If the number of antitank weapons is doubled and the same 20 tanks now face 10 ATGW, the model predicts a drastic change in the chance of the AFV's survival, which drops from 75 to 10 percent. This corresponds to the destruction of 18 tanks by the 10 ATGW, or an efficiency of 1.8 per weapon for a tank superiority of 2:1.

This model takes into account the principle according to which the combined efficiency of a given number of N weapons is higher than that of N individual weapons (the so-called "synergistic" effect). This means that doubling the density of ATGW against a given enemy, as illustrated above, more than doubles the overall efficiency.

Although we have no details of the mathematical model on which these conclusions are based, the data seem reasonable for tank superiorities of 2.5 to 4 because typical results obtained for short-ranged ATGW (under 2 km) by Western computer simulations show consistency with this model for tank superiority ratios of 3:1 to 4:1 over ATGW and serve to reinforce our confidence in the Soviet statistics.

The high efficiency (up to 1.8 kills per weapon) is a result of the initial surprise that the long-range ATGW can achieve and of the difficulty in destroying long-range ATGW at distances of 2 to 4 km, which enables them to fire several times before effective fire can be returned and thus to increase their overall performance. For antitank weapons with a range of less than 2 km, on the other hand, only the effect of surprise holds, tanks being able to return the fire quickly and accurately.

These calculations form the basis of Soviet command and control procedures. At every level from the highest to the lowest, Soviet officers are taught to make detailed mathematical calculations both before and during the campaign, operation and battle, calculations such as the following: the density of enemy forces and the ratio of force to space, i.e, the enemy capability to engage him (in sorties of aircraft per day, air defense weapons and rounds available, and enemy artillery capabilities), and his capability against the enemy (the number of hectares of enemy targets that he can engage and the ratio of force to force). On the basis of these calculations the commander of the battalion, division or *front* will be able to make his plans for battle. Here too, analysis of operations and battles of 1941–45 will be of assistance to him in determining the best options to adopt, but their role is more as a feature of his general military education in helping to develop his tactical and operational skill and feeling for the pulse of the battle.

It is on this kind of analysis that the Soviets also base their force structuring, the ratio of teeth to tail, tanks to motor rifle to artillery for different conditions of the battlefield. Here, statistical calculation and tactical example are blended by Soviet tacticians with details of current weapons technology and assessments of levels achieved in training.

The final factor in the "viability" equation is the ability of the commander to check the basic values of the equations he is using—to have ready means of evaluating the ability of his soldiers, units and formations. To this end, standard *norms* are set for the achievement of *every* military task, starting with the work of the humblest conscript. Every function which the soldier is trained to do is tested at regular intervals against an objective standard and a mark out of 5 is allocated: 5—excellent, 4—good, 3—satisfactory, 2—unsatisfactory, 1—poor. The ability of the officer commanding a subunit is also tested, but the real test of his competence is the level to which he can train his unit or subunit. If a given percentage of the unit's soldiers get "excellent" gradings, then the unit is known as an "excellent" unit.

As training procedures are standardized and all training done according to a set of regulation drills, the standard is reasonably uniform throughout the Soviet Army. Within formations the training is competitive and units are encouraged to strive for high marks. This reflects on commanders' career

prospects. Spot checks and inspections are instigated to prevent serious cheating. In this way, not only is a degree of enthusiasm and drive injected into the otherwise dull and repetitive training routine but the commander at any level can have some idea at which stage in their training program his men are, and how competent they are in what they have been trained to do.

The concept of limiting the requirement made of each soldier on the battlefield is important to the concept of sustainability and viability of a unit. Logical and original thought is the first casualty of battle, and literally thousands of years of experience shows that men in battle can accomplish only limited and simple tasks which they have learnt to do thoroughly. The Soviet training system drills the soldier, who may come from a wide variety of educational and ethnic backgrounds, in one primary skill and one or two related skills. There is no attempt, as in the British and U.S. Armies, to make him versatile.

This is seen as contributing to the resistance of the Soviet Army in battle to the effects of stress. It does mean, however, that organizational procedures and the very drills taught need to be correct for the kind of war that needs to be fought. However, the designing and perfecting of drills and procedures is one of the prime requirements of viability anyway, and correct procedures give the greatest sustainability in battle. Procedures, as may be expected, owe a great deal to military-historical experience.

An example of organizational procedure is the preservice training and conscription system, which has been amended over the years to achieve its present form. The conscripts in a unit (who comprise some 80 percent of personnel strength) are inducted at six-month intervals, so that no unit has more than 25 percent raw recruits. Almost every raw recruit will have had 140 hours of basic military training in his last years at school, so there will be very few complete beginners in the unit even at the beginning of a conscription period. The unit, therefore, will be functional at every stage in the training cycle.

The principle of teaching only one or two skills, but teaching them thoroughly, means that reservists will not forget their skills learnt during conscription and will still apply them when called back for active duty (or mobilized for war). The standardized design of Soviet weapons systems allows conscripts trained on, say, AK–47 or T–72M, to operate with relative ease, the AK–74 or T–55, should the older (or newer) kit be all that is available in time of emergency or war. This total integration of the elements of a military system produces such a cohesive whole that it is perhaps the most important factor in ensuring the viability and sustainability of the Soviet Army in war.

Taking the approach we have to the subject of viability has highlighted three areas where Soviet practices differ from those of NATO. First, the impact of having a doctrinal approach is very clear in the vivid difference between the two definitions of sustainability and viability. Second, and really the most important consequence of the first point, "viability" is not, for the Russian, a "subjective" evaluation as it is for the NATO commander—it is calculated in great detail. Not only are these calculations, based on experience and experiment, done throughout the battle, but this enables the

commander who knows the details of the enemy defense to establish his combat requirements *before the war starts* and to correlate that with his resources. It thus enables him to establish the resources he needs or to establish whether he will be able to accomplish his task given the resources he has. In other words, he does not have to guess (make a subjective estimate) as to whether he can "sustain" his battle, he will *know* on a scientific basis whether he can sustain his battle or not. Third, there is the Soviet use of military history to enhance their understanding of procedures, to help solve military problems, and to establish a statistical data base for future planning. This seems to us to be logical and sensible. We admit that it is flawed by an inability to take a "balanced view," and to discuss openly the problems of failure. However, the Russians are undoubtedly aware of the deficiencies of their approach and it seems to us that they take good care in this particular instance not to underestimate the enemy.

On the whole, we must confess, we are impressed by the Soviet use of military history in this way. While we are in no way critical of the NATO approach—the philosophy of "subjective assessment" has, in fact, stood at least the British Army in good stead in a very large number of colonial campaigns and limited wars over the years—we do think that there is room for emulating some aspects of this Soviet statistical approach if only in relation to armored warfare at the operational scale. It is, after all, only the rationalized exploitation of admittedly limited experience, but as more and more of the old soldiers of 1945 fade away, even limited experience is becoming a rare and precious commodity.

Notes

1. See, for example, *Voenno-istoricheskii zhurnal* (hereafter cited as VIZh) 4 (Apr 1982), p 3.

2. Col. Gen. A. A. Danilevich reviewing the book *M. V. Frunze—Military Theoretician* by Col. Gen. M. A. Gareev in VIZh 6 (Jun 1985), p 80.

3 VIZh 11 (Nov 1985), p 81.

4. Lt. Gen. V. A. Semenov, Chief of Staff, Odessa MD, "From the Experience of Military Historical work in the Red Banner Odessa Military District," VIZh 2 (Feb 1986), p 49.

5. There may be small cracks appearing in this previously solid block of ice. For example, see the comment of Col. V. M. Romanov at a conference in the Leningrad MD reported in VIZh 7 (Jul 1986), p 96.

6. "Proposal List No. 926-001—Sustainability" (SHAPE Technical Center, n d.).

7. As a general principle "pure research" is not encouraged in the USSR. However original, no doctoral thesis in science will be awarded in a civilian university if the aspirant has not related his work to experience, existing practices, past examples, etc., to demonstrate its potential applicability in some sphere.

8. S. I. Ozhegov, *Slovar' russkogo iazyka* (Moscow, 1973), s.v.

9. *Bol'shaia sovetskaia entsiklopediia* (hereafter cited as BSE), s. v

10. BSE, s.v.

11. *Slovar' osnovnykh voennykh terminov* (Moscow, 1965).

12. *Sovetskaia voennaia entsiklopediia* (Moscow, 1977), s v.

13. *Voennyi entsiklopedicheskii slovar'* (Moscow, 1983), s v.

14. VIZh 6 (Jun 1977), pp 14.

15. See Army Gen. E. F. Ivanovskii (Commander in Chief Soviet Ground Forces), *Voennyi vestnik* 1 (1986), p 3 for an authoritative statement of this.

16. BSE (1954), s.v.

17. *Sovetskaia voennaia entsiklopediia* (Moscow, 1978), s.v.

18. (Moscow, 1979).

19. For further details, see Dr. B. S. Butman, "Soviet Shipbuilding and Ship Repair" (Spectrum Associates, Inc , Arlington, Va., January 1986).

20 See, for example the author's "Tactical Problems Facing the Soviet Army: Recent Debates in the Soviet Military Press," *International Defense Review* 9 (1978), pp 1405–12 and "Soviet Tactics for Overcoming NATO Antitank Defence," *International Defense Review* 7 (1979), pp 1099–1105.

Commentary

Earl F. Ziemke

In keeping with the symposium's theme, this session is concerned with transformation in Soviet military affairs, in fact with three transformations. The first is the change in operational effectiveness that terminated the train of defeats the Soviet armed forces suffered in the summer campaigns of 1941 and 1942, enabled them to secure an almost unbroken string of victories over the German *Wehrmacht* after November 1942, and put the Soviet Union on the road to military superpower status. The second is the Soviet armed forces' transition from being the chief victim of the deep operation in its German form, the *Blitzkrieg*, to their adaptation and successful employment of it in accomplishing the German defeat. The third is the concerted Soviet effort to transmute history into practical knowledge and thereby to convert the war experience into guidance for future operations.

The recent return of conventional operations to a central position in Soviet and Western military thinking gives us a pertinent reason to determine what the transformations represent in terms of the nature of Soviet operational art. On that score the Soviet literature has a good deal to say, but Soviet military analysis, at least such of it as is made public, has the ability once attributed only to angels—to move from point to point without traversing the intervening space. The late Marshal Grechko, in his book on the Soviet armed forces, said that Soviet operational art "achieved a high degree of perfection in the Great Patriotic War"; and Soviet works, including Grechko's, routinely allude to a "rich fund of experience" and to "correct" solutions to problems.[1] The most specific indicators as to what such statements may mean appear to be the long-standing Soviet claims to having invented the deep operation and to having perfected the encirclement, and the more recent partial rehabilitation of the *Blitzkrieg* in Bagramian's volume on war and Ivanov's on the initial period in wars.[2] That could well be enough; however, the papers presented in this session appear to me to raise some other considerations that might be taken into account.

Dr. Hardesty's paper treats the second period of the Great Patriotic War, which coincides with the first transformation and is often referred to as the "period of the radical turn." In it, as Dr. Hardesty points out, the Soviet

forces seized and eventually took permanent possession of the initiative. Significantly, they did that with a relatively small qualitative change in their air doctrine. The advent of the air army was a marked advance by previous Soviet standards but not by any others. It centralized and elevated air command somewhat, but it was fundamentally a cut-down version of the German *Luftflotte*. The difference was that the *Luftflotte* was an autonomous and coequal operational air command attached to an army group while the air army was subordinated to a *front* and the *fronts* were, in the main, more nearly equivalent to German and American armies than to army groups. The air armies, the Soviet Air Force in fact, never had an operational function other than to provide tactical air support for the ground troops. And the word "tactical" was not stretched, as it was in Western practice, to include interdiction. According to an East German source, 90 percent of all Soviet combat flights in the war took place within thirty miles of the front line and 80 percent within six miles of the front line.[3] Consequently, one does not find in the Soviet record during the second and third periods instances such as occurred on the Eastern Front in 1941 or in Normandy in 1944, in which air power held sway over the battlefield and for hundreds of miles to the enemy's rear.

This does not mean, of course, that Soviet air power was ineffective. As Dr. Hardesty has made very clear, the Soviet Air Force's performance was probably as good as it could have been considering its strengths and limitations; and it contributed mightily to the Soviet victory. Hence, the Soviet Air Force can be said to have attained proficiency in problem solving and the assimilation of experience. On the other hand, it had not achieved parity in performance with the Western Allies' air forces and the *Luftwaffe* when the war ended.

Colonel Glantz has given us an overview and an analysis and evaluation of the second transformation, that in which the Soviet Army went from victim to practitioner of deep operations. As he states in the preface to his paper, he has concentrated on depicting this part of the past as the contemporary Soviet officer understands and applies it. Since the Great Patriotic War is now rarely a part of the active officer's personal experience, we can assume that the picture he has formed derives in large part from the historical literature. That being the case, I wonder whether the Soviet officer is not also struck by some apparent contradictions.

For instance, according to the histories, Soviet operational art perfected the encirclement, thereby creating in the Battle of Stalingrad "the Cannae of the twentieth century" and "enriching the whole modern art of war."[4] The decisive Soviet contribution is taken to be the five-stage encirclement that Colonel Glantz has described, specifically stages four and five, the outer encirclement and the exploitation. Might it not occur to a Soviet officer that as a component in operational maneuver stage four violates the principle of economy of effort? Might he not notice in contemplating the Stalingrad encirclement that while it totally destroyed a large enemy force, it did so by combining four days of maneuver with a two-and-a-half month battle of position and materiel more comparable to the Battle of Verdun in 1916 than to Cannae?

In Soviet histories the Soviet officer is also told that the encirclement was the main form of Soviet maneuver in the last two periods of the war. If he is a diligent reader, he can also learn more. During the months from November 1942 to February 1943, the *Stavka* initiated ten encirclement operations. Three were completed, Stalingrad and two lesser ones against the German 2d Army and the Italian 2d Army. Two were planned to equal Operation Uranus, the Stalingrad Operation, in magnitude. One, Operation Mars, failed. The other, Operation Saturn, was reduced to providing the Stalingrad outer encirclement. Of the remaining five, two did not materialize, and three gained ground but brought on severe reverses in early 1943.[5] During the climactic ten months of the "radical turn" in the war from February 1943 to January 1944, the *Stavka* did not authorize a single encirclement, and none were executed. For the period from January 1944 to the end of the war, the *Soviet Military Encyclopedia* lists nine encirclements completed; but only two were planned as such, Korsun'-Shevchenkovskii and the Prague encirclement, which was executed after the German surrender.

If the Soviet officer extends his reading to the immediate postwar literature, particularly to Stalin's 1951 military biography, he will find it said in one place that the Soviet forces "mastered" the encirclement, "this most complex form . . . of operational maneuver . . . to perfection." Two paragraphs farther on he will read that "in modern offensive operations in the overwhelming majority of cases . . . the decisive place belongs to the frontal blow as the radical method of developing success far within the enemy's lines," and that "impotence . . . with regard to this highly important problem" was the Germans' fatal weakness.[6] Reading those statements may remind him that Marshal Grechko published an identical assessment in 1975.[7]

Which brings us to the third transformation, the conversion of war experience into guidance for the future. Both Colonel Glantz's and Mr. Donnelly's papers address it. Colonel Glantz has traced Soviet doctrine and practice with respect to deep operations from the Tukhachevskii era to the present. Mr. Donnelly has described the Soviet effort to quantify their World War II experience. In each instance the progression is toward greater effectiveness, but it seems to me the courses pursued diverge markedly. That with which Colonel Glantz's paper is concerned leads toward increasing sophistication and complexity in operational maneuver. On the other hand, the use of World War II data to calculate norms and, perhaps more significantly, the norms themselves and the general emphasis on an incremental, piecework approach to planning and command that Mr. Donnelly has discussed would appear to conform most logically to a doctrine based on the frontal blow, that is, on mass rather than maneuver as the chief element in the deep operation. The final transformation then would seem to have two objectives: to enhance Soviet operational art as art and to renovate and systematize the operational form that in the past proved best adapted to Soviet capabilities.

Notes

1. A. A. Grechko, *The Armed Forces of the Soviet State* (Washington, 1977; trans and reprint from Moscow, 1975), p 73.

2. I. Kh. Bagramian, ed, *Istoriia voin i voennogo iskusstva* (Moscow, 1970), p 122; S. P. Ivanov, ed, *Nachal'nyi period voiny* (Moscow, 1974), p 224.

3. Olaf Gröhler, *Geschichte des Luftkrieges 1910 bis 1980* (Berlin, 1981), p 347.

4. Bagramian, p 205; P. N. Pospelov, ed, *Velikaia otechestvennaia voina Sovetskogo soiuza, 1941–1945* (Moscow, 1970), p 174.

5. See Institut voennoi istorii ministerstva oborony SSSR, *Istoriia Vtoroi mirovoi voiny, 1939–1945* (Moscow, 1982), maps 2, 10, 11.

6. K. E. Voroshilov, *Stalin and the Armed Forces of the USSR* (Moscow, 1951), pp 129ff.

7. Grechko, p 261.

Session IV

Emergence of a Military Superpower: Purpose and Results

Introductory Remarks

Lt. Gen. Raymond B. Furlong, USAF, Retired

My presence here can only be justified as a special pleader for the continuing professional education of our officers. More precisely, bringing our officers to understand that the complexity of operational employment pales in comparison with the serious intellectual problems in diplomacy and warfare, which are served by their operations. Officers who wish to serve well must prepare to address this serious intellectual problem, and we look to history to help us with that.

An example I would have officers follow was set by the officer for whom this Hall was named, Gen. Muir Stephen Fairchild, the subject of a useful article.* General Fairchild recognized the serious intellectual problems presented by conceptualizing employment options for an untried military capability. As he put it, with a nonexistent historical background the likelihood for faulty employment of air forces is good. Through his personal multidisciplinary pursuit of professional education, he became, in Haywood S. Hansell, Jr.'s, words, the "Philosopher of Air Power."

Clausewitz described the officer Fairchild became and others should aspire to be. When he asked what sort of mind is likely to display the qualities of military genius, he concluded that experience and observation will both tell us that it is the inquiring rather than the creative mind, the comprehensive rather than the specialized approach.

I ask of military history that it foster the recognition of warfare as a serious intellectual problem and develop in our officers a level of knowledge and understanding which will serve them well in unknown circumstances. We do not seek answers, we seek understanding and perspective. Measured against these criteria, this symposium has done well. From Professor John L. H. Keep onward, it has offered new insights into the origins of the Soviet military and new understandings of the influence of the past on the present.

Previous comments provided an emphasis on Soviet military history and the important role that history plays in individual professional

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*Kenneth Schaffel, "Muir S. Fairchild: Philosopher of Air Power," *Aerospace Historian* 33, No. 3 (Fall/September 1986), pp. 165—71. Ed.

development. The library of the Soviet Military Thought Series* testifies to this. Our service has neither the library nor the readers. We are a nonintellectual, if not an antiintellectual service. We are focused on today, with little dedication to broad-scale preparation for the serious intellectual issues that lie ahead. We are a service of doers, not readers. I suggest that these are not mutually exclusive attributes and that success in the world requires that we read more. I ask that historians assist us in developing these readers.

Prior sessions have presented a broad historical sweep of Soviet forces through the Great Patriotic War. We will now consider contemporary issues and yet another transformation of forces as the Soviets emerged into a military superpower.

*A series of publications from Soviet military literature translated and published by the United States Air Force as the Soviet Military Thought Series. The series is discussed and the volumes in the series are listed on page 369 in the Appendix. Ed.

The Contribution of Air Power to Soviet Strategic Objectives

Air Vice-Marshal R. A. Mason, RAF

In June 1945 the frontline strength of the Soviet Air Force was approximately 20,000 aircraft. In the last year of the Great Patriotic War it had been possible to concentrate 6,000 aircraft on the Belorussian *Front* alone to support offensives on the ground. Two years later the United States Joint Chiefs of Staff observed that "Soviet Russia possesses ground and tactical air forces greatly superior in numbers to those any combination of probable opponents could hope to bring to bear against her in the early stages of war."[1] There was, however, consolation to be sought elsewhere:

> *On the other hand . . . the United States has a capability of undertaking soon after the beginning of a war an offensive strategic air effort against vital Russian industrial complexes and against Russian population centers. If this effort, adequately expanded, did not achieve victory, it would destroy elements of Soviet industrial and military power to such an extent that the application of this and other forms of military force should accomplish the desired end.*[2]

Forty years later the contribution of air power to Soviet strategic objectives has been dramatically transformed. It is still a formidable tactical component in a combined-arms offensive posture and strategy, but now much, much more: in the defense of the Motherland; as a threat to Western Europe and even to North America as an increasing element in the Soviet Union's own strategic nuclear triad; as the threat to Western seapower; as an instrument of power projection far beyond Soviet frontiers; in support of allies and supplicants worldwide; and as a constraint on Western activities in support of its own friends in the Third World. Soviet air power has in each respect come to influence the international military balance, and not only supported Soviet strategic objectives but actually made some objectives feasible which were unthinkable in 1947.

Defense of the Motherland

If in 1947 the Western allies viewed the extent of Soviet ground and tactical air force strength with some concern, it is probable that the view westwards from Moscow did not inspire confidence. Until the Kremlin's archives are opened to the West, or until the Soviet Union introduces its own Freedom of Information Act, no one can be certain of Stalin's objectives in the immediate postwar years. His military procurement priorities do, however, offer circumstantial evidence about at least one of his concerns. He had the unpalatable memories of Barbarossa: almost 2,000 aircraft lost within 24 hours, over 5,000 in 14 weeks[3] and the Soviet Union on the brink of defeat. Just how far he was the captive of his ideology is difficult to assess, but if he did believe in the inevitability of East-West conflict and did believe the United States to be an implacable enemy, he must have been extremely uneasy at the apparent capability of U.S. B–29s to reach his heartland with atomic weapons and the obvious willingness of the United States, after Hiroshima and Nagasaki, to use them if necessary. It is most unlikely that he failed to reach the same conclusions as the JCS about the relative air strength of East and West. Indeed, he could see more clearly than the Western analysts the many weaknesses of the Soviet air forces.

The majority of his aircraft were short-range and single-engine, with wooden airframes and piston engines, and were built to provide clear weather daylight close support to his armies. There was little industrial expertise in aircraft metallurgy or modern multiengine design and construction. Military electronics and gas turbine technology were virtually nonexistent. There was no national radar early warning system and inadequate provision for and coordination of surface-to-air defenses. Western air forces, on the other hand, had mounted the strategic bomber offensives in Europe and the Pacific, developed long-range escort fighters, and gained extensive experience in electronic warfare. Fortuitously, the Anglo-American bomber offensive had forced the relocation of many German industries farther east in the path of the rapidly advancing Soviet armies. British intelligence sources subsequently estimated that four-fifths of all German aircraft production fell into Soviet hands in 1945 and that subsequently, 300,000 highly skilled airframe designers, project engineers, chemists, optical and electronic research staff and fuel specialists were removed to the Soviet Union, along with Me–262 and Me–163 aircraft, and operational and experimental radar guided surface-to-air and air-to-air missiles.[4]

By April 1946 the German examples had been used to stimulate the production of the Yak–15 and MiG–9, and Stalin had instructed Yakovlev and Mikoyan to build fifteen of each to participate in that year's Red Square commemorative parade on November 7. However, bad weather deprived Stalin of his first postwar opportunity to impress potential enemies with the apparent strength of Soviet airpower; there would be others.

From those beginnings have followed the construction of the modern Soviet air defense systems. In 1948, command of the troops of the National Air Defense was removed from the Soviet Army artillery. A net of early

warning radars, ground control units, antiaircraft defenses and interceptor bases with communication links were constructed. The era of the MiG–15 was followed by that of the MiG–21 and the Sukhoi all-weather interceptors, accompanied by the first generation of surface-to-air missiles. The impact of the destruction of Gary Powers' U–2 in 1960 has been well documented. It provided the Soviet Union with a major diplomatic victory and forced a major revision of Western strategic air operations. The demise of the manned bomber was, not for the first or last time confidently forecast, but the dramatic evidence of the vulnerability of the high flying manned aircraft to SAMs led to the adoption of low-level attack profiles which curtailed the range of existing bombers and strongly influenced the British decision not to replace the RAF V Force. With hindsight, the ascendant of the defense over the offense can be seen as only one more swing in the military history pendulum, accelerating Western development of standoff weapons and more sophisticated electronic aids to defense suppression. But at the time it seemed that the strategic objective of securing the homeland against air attack was well on the way to achievement. The further development of the Foxbat family, later versions of SAMs, improved radars, and ultimately the entry into service of the Il–76 Mainstay AWACS have brought that achievement even closer. The tragic incidents involving Korean airliners in 1978 and 1984 suggest that the defensive infrastructure may not be as strong as its individual components. Nevertheless, the costs of the sequential updates to the B–52, the extensive resource investment in the B–1 program and the U.S. allocation of high priority to stealth technology are all byproducts of the construction by the Soviet Union of a comprehensive air defense system. The transformation from the circumstances of 1947 is such that it is difficult to envisage any kind of conflict in which air attack on the Soviet Union would by itself be used to counter a Soviet offensive in the European theater.

The Threat to Western Europe

Since 1947, the Soviet Union has adopted an offensive military posture in Europe based on combined-arms doctrine to be discharged by fast moving ground forces preceded by and accompanied by offensive air power. Scenarios postulating the exact political objectives differ widely, and have done so for forty years. The options available to the Soviets have, however, widened considerably in direct proportion to the increase in capability of the air assets which could be brought to bear.

Between 1947 and the early 1960s the numbers of close support aircraft in the Soviet inventory dwindled by at least 50 percent,[5] partly because of the emphasis on fighter construction, partly because of the withdrawal of late World War II types, and partly because of Khrushchev's increasing reliance on short- and medium-range surface-to-surface theater conventional and nuclear missiles. However, the air display at Duomodedovo in 1967 marked a significant move in the opposite direction: the appearance of the "third generation" of tactical aircraft epitomized by the emergence of the

MiG–23/27 Flogger series and the rebuilt Su–17 from the earlier, much shorter ranged Su–7. In the next decade the all-weather Su–24 medium bomber tripled the combat range and payload of its predecessors. Short-range close air support was enhanced by the creation of the Mi–8 and Mi–24 helicopter regiments and the progressive introduction of integrated battlefield surface-to-air defenses released increasing numbers of air superiority aircraft for offensive missions. The whole was increasingly enshrouded in, and complemented by, a comprehensive electronic warfare order of battle. Finally, in 1970, the first sightings of Tu–26 Backfire aircraft were reported and shortly afterwards they began to enter service with the Long Range Aviation and the Soviet Naval Air Force. The cumulative impact of this increased range, payload, all-weather, and standoff capabilities of Soviet theater air power can be readily measured, both in terms of the countering of Western resource allocation, and in operational complexity.

In 1967, when NATO formally adopted the doctrine of flexible and appropriate military response to any Soviet incursion, tactical nuclear weapons were not abrogated, but an unspecified period of conventional defense assumed greater significance in assumptions about war fighting strategy. With hindsight the decision could not have been more timely for Soviet Air Force commanders. The basic situation identified by the JCS had not changed: NATO in-position forces were numerically outnumbered by Warsaw Pact divisions and were numerically inferior also in armor, artillery, and tactical aircraft. To counter that inferiority, NATO had to capitalize on technological and man-for-man superiority; had to acquire timely warning of an impending attack; had to reinforce a threatened or beleaguered area swiftly from both within the European theater and from outside it; and had to preserve as both a deterrent and as a weapon of last resort theater nuclear delivery systems. During the 1970s all those prerequisites were increasingly threatened by the growth of Soviet offensive air power.

A Western technological edge has been retained, although opinions vary about the extent to which the gap has narrowed and continues to narrow. Despite the steady increase in output of technologically qualified young Russians from schools and colleges, the demands of modern aircraft systems may still fully stretch the capacity of Soviet conscript groundcrews. The influence of a political system which rewards conformity and is suspicious of initiative constrains tactical innovation and inhibits the operational evolution demanded by the capabilities of new aircraft, weapons and electronic combat environment. For almost twenty years senior Soviet Air Force commanders have been exhorting their subordinates to display more imagination and initiative; their complaints are just as forceful now as they were when they first began, and apparently just as necessary. These and other considerations obviously could limit the practical impact of the expansion of offensive Soviet theater air power. Indeed, several recent studies have given grounds for moderating more extreme threat assessments. Nevertheless, as late as 1967 the NATO allies could confidently plan to reinforce a threatened area without being overly concerned about disruption from the air, except in close proximity to the conflict region itself. Now, all major ports, airfields, railheads, communication lines and headquarters in

Western Europe are within range of Soviet offensive aircraft. The reorganization of the Soviet air forces earlier in this decade has created a structure admirably suited to the direction of light and medium bomber assets at theater level and to the heavy, long-range regiments wherever they should be required east or west. This is a structure able in theory at least to exploit the inherent flexibility of long-range air power.

Aerial Preparation

Not only is reinforcement threatened, but also the contribution of the West's own tactical air forces: to provide early and heavy direct support to land forces; to disrupt the momentum of a Soviet offensive and to contest air superiority. The West's tactical air forces must also be able to survive the Soviet's own "aerial preparation," which could be expected to precede the major push on land. Not often do military analysts in East and West publicly offer similar views on the likely progress of a war in Europe; there is however a disquieting uniformity about the likely contribution of Warsaw Pact air power:

> *A Warsaw Pact air operation would take place on three separate fronts in Western Europe with Pact forces attempting to clear two or three separate air corridors per front. Each corridor is intended to be an area 25–30 mi. wide and 100–150 mi. deep. The plans call for rendering NATO air defense missiles and aircraft virtually ineffective in each corridor, allowing nearly free movement by Warsaw Pact aircraft. Presence of the corridor would allow Pact aircraft to slip through NATO air defense belts, then spread out and attack relatively unprotected rear areas.*
>
> *Radar and communications systems would be attacked by a combination of electronic countermeasures, chaff and physical attack . . . by a combination of standard ordnance and the Soviets increasing inventory of AS-12 antiradiation missiles.*[6]

In the *Soviet Military Encyclopedia* just such an operation is defined, in abstract, as "aerial preparation." It is not an "independent" operation in the Western sense, but clearly linked to an imminent ground force offensive:

> *Aerial preparation involves making simultaneous or consecutive strikes by* frontal *(tactical) aviation units and formations against objectives located at tactical and close operational depth. Such objectives can include those which cannot be destroyed by missiles and artillery, those capable of changing location just before strikes are made against them, and those requiring powerful aviation ammunition for their destruction. . . . Long-range (strategic) aviation can also take part in aerial preparation. Nuclear strike resources, aircraft at the nearest airfields, control posts, tanks and artillery in areas of concentration and in fire positions, strongpoints, centers of resistance, and water crossings are destroyed primarily by aviation during aerial preparation.*[7]

The specific target arrays associated with NATO air and nuclear resources were spelled out by a Polish writer in December 1981:

> *NATO war plans, the author observes, envisage the deployment of powerful groupings of armed forces in the European theater of military operations. These groupings include a considerable amount of aviation of various types as well as missiles and nuclear weapons, which even in peacetime are constantly maintained at a high level of combat readiness. . . . The experience of the most recent wars has shown that the air forces have always substantially affected the course of the combat action of their own troops. Consequently the problems of combatting air forces have been given much attention, and deserve still more, because a breaking up or serious weakening of the enemy's air force and nuclear missile groupings leads to a fast decline of his capabilities. By ensuring supremacy in the air, it creates favourable conditions for the action of troops taking part in the operations in the TVD*.*[8]

After itemizing the specific target arrays in such an operation, the author seeks to remove any remaining doubts in the minds of his readers:

> *Enemy air force and missile groupings should first be routed in those areas where the principle tasks of the war are being implemented, i.e., in the main TVDs where the strongest groupings of ground forces and air forces are deployed. The Western European TVD is one of them. Therefore it can be stated that in no other theater will the course of the operation depend so much on the situation in the air, on the skillful use of own air force, and on the breakup of enemy air forces. This is so because he who seizes initiative in the air will dictate his conditions.*[9]

The impact of that threat awareness on Western defense resource allocation is a matter of record. It has driven investment in an air defense infrastructure involving new radar stations, extensive airfield protection, high priority to new generations of interceptor and air superiority fighters, electronic counter measures and airborne early warning systems. Despite the increasing complexity of the Warsaw Pact's own defensive systems, the pact has continued the development of aircraft and weapons able to launch the counter-air operations essential to dislocate and destroy hostile air strength at its source. Static defensive focal points such as command headquarters, master radar stations, major air bases, supply depots, railheads and harbors have become predictable and vulnerable targets for Soviet offensive aircraft, quite apart from any associated vulnerability to missile attack. The acquisition of mobility by dispersal and duplication has increased costs and the attendant logistic and manpower requirements. The aggregate is a considerable increased burden for the Western alliance to sustain the credibility of its strategic posture adopted in 1967 with consequent, palpable strains on the alliance itself in debates about resource and manpower allo-

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*TVD—*teatr voennykh deistvii*, theater of military operations. For a map and brief description, see *Air Force Magazine* (Mar 1989), pp 82-83 Ed.

cation. Air power is now an essential ingredient in Warsaw Pact strategy, whereas in 1947 it was the Western alliance's ace in the hole.

Soviet Air Power in the Triad

As early as 1943 at Teheran, Stalin was reported by Gen. "Hap" Arnold to have asked a number of "very intelligent questions . . . about our [U.S.] long-range bombers."[10] Immediately after the war Soviet copies were made of the B–29 and over 1,000 "Tu–4s" entered regimental service, theoretically capable of reaching the United States on one-way missions carrying atomic weapons. In the 1950s air displays were used to give an impression of a mighty Soviet strategic bomber fleet and indeed some two dozen airfields were built as bomber bases in northern Russia from Murmansk to Siberia, supported by a dedicated transport organization. The U.S. response was the creation of NORAD with its visible components of the DEW line, the Cheyenne Mountain complex, and the generation of F–102 and F–106 interceptors. In the event, the threat failed to materialize, partly because of Soviet airframe and engine shortcomings and partly because of Khrushchev's preference for the intercontinental missile. In the United Kingdom the Defense White Paper of 1957 concluded that there was no further need for a manned interceptor for the RAF, and the Fighter Command was reduced to a handful of squadrons. In North America resources were freed for other defense commitments. In the last decade the threat has returned, with predictable consequences for U.S. defense expenditures. Western analysts have not always agreed about the intercontinental capability of Backfire, and the arrival of Blackjack into regimental service is still awaited; but there is nothing ephemeral about Bear–H and its AS–5 air launched cruise missiles which has now been operating within missile launch range of the United States for several months. Not only does the USSR now have a viable, albeit small, manned bomber element in its own strategic nuclear tread, it has a weapons platform capable of employment in a conventional mode below the nuclear threshold. Such a capability represents not only a further optional military instrument for the USSR but potentially a most valuable arms control bargaining chip.

Power Over the Oceans

Whatever the disagreements over the Backfire's potential as an intercontinental weapons platform, and whatever the range limitations of the Tu–16 Badger, there are few remaining doubts about the transformation brought about in Soviet naval air power by these two aircraft, and others. Much has been written about the reemergence of the Soviet Navy into blue water in the last generation, and especially about the personal leadership of Admiral Gorshkov. His fleets, however, still have to negotiate some difficult egress points, and then face very formidable allied surface and submarine fleets. But narrow waters are no barrier to aircraft, particularly long-range,

land-based aircraft armed with modern standoff sea-skimming antiship missiles. Soviet maritime exercises demonstrate quite clearly that both allied reinforcement convoys and carrier task groups would be targets for mass attack by Soviet naval aircraft, possibly supported by similar types from the aviation armies of the Soviet Union. The whole could be supported by experienced maritime reconnaissance crews well practiced in long-range flights down the Atlantic and across the Western Pacific. In 1946, Soviet maritime aircraft confined their activities to coastal areas in support of either shipping or amphibious operations. Now, no Western plans for operations in the North Atlantic, Northwest Pacific or Mediterranean can discount the possibility of long-range air attack. Again, it is very easy to exaggerate the practical extent of that threat in actual conflict. At the lowest estimate there is a new constraint on Western maritime operations and a new flexibility available to the USSR for longer range, over-the-oceans power projection.

The most visible sign of that extended reach takes the form of the USSR's own carriers, progressively increasing in scale from the *Moskva* in the late 1960s to the imminent arrival of the *Kremlin* and her conventional aircraft. There is nothing new to say about the strength and limitations of the existing carriers. The combat radius of antisubmarine and submarine protection operations has been extended, the threat to Western maritime reconnaissance aircraft has been increased, and presumably a Forger with standoff missiles would present a further constraint in low intensity confrontation. Altogether, Soviet maritime aviation expansion has matched that of the surface and submarine fleets, not yet challenging Western naval supremacy but adding a further complication to Western naval strategy and giving further substance to Soviet superpower pretensions.

Long-Range Power Projection

In 1967, in a prescient and widely quoted leading article in the aftermath of the Arab debacle in the June war, the *Economist* of London observed the following:

> *The combination of an offensive ideology with a defensive strategy is apt to produce such diplomatic defeats. To avoid more Cubas and Sinais the Russians will either have to resist the temptation to take on commitments in the Third World (which includes encouraging "wars of liberation"), or else acquire the military capacity this sort of policy calls for. This means building aircraft carriers and acquiring staging posts for airborne troops. It will be a bad omen for east-west relations if there are signs that they have chosen the second way out of their dilemma.*[11]

We now know that the decisions had already been taken and were being implemented. It is instructive to compare the pattern of superpower involvement in the Third World before and after 1967. Britain had defeated communist insurgency in Malaya without concern for Soviet intervention. In the Suez crisis of 1956, when a Soviet sympathizer was brought to his knees in Cairo, it was United States' economic and diplomatic pressure

which forced Britain and France to withdraw, not Khrushchev's nuclear threats. In 1958 British and American forces intervened in Lebanon and Jordan and in 1961 British assistance to Kuwait was provided without Soviet military response. It is probable that Soviet impotence on those occasions was at least a factor in giving greater priority to the instruments of power projection, rather than the more widely quoted Cuban crisis. Concepts, design, development, and production of both carriers and heavy lift transports had to have begun before 1962 to bring them into service by 1968. Their impact on Soviet foreign policy became plain in the following decade.

In October 1973, over 1,000 resupply flights were made to Cairo and Damascus. On October 23, reports that the USSR was preparing to airlift some or all of her seven airborne divisions to intervene directly in the fighting between Egypt and Israel prompted President Nixon to proclaim a Defense Condition 3 alert and to bring the 82d Airborne Division in North Carolina to an advanced state of readiness. In subsequent years airlifts were mounted to support the communist MPLA forces in Angola and the Marxist government in Ethiopia in its border war against Somalia. In 1979, 5,000 troops of the Soviet's 105th Airborne Division were airlifted to Kabul from Kergona, reportedly landing at the rate of one aircraft every ten minutes. More recently, bases at Da Nang and Cam Ranh Bay have been established and supported by regular VTA and Aeroflot flights. The USSR now has air base access in Syria, Libya, Cuba, Guinea, Angola, Ethiopia, South Yemen and Vietnam. The acquisition of the An–124 Condor offers a payload capability of 125,000 kg over a range of 3,400 km. The fact that it flies in Aeroflot colors is irrelevant when military and civil transport are centralized and coordinated. For example, Aeroflot now participates heavily in the twice yearly roulement of conscripts between the USSR and Eastern Europe without interruption of the airlines' scheduled flights. In 1981 it was estimated that the United States would require six days to lift a 16,500-man marine amphibious brigade to the Persian Gulf, excluding heavy equipment, whereas VTA and Aeroflot could move 20,000 troops in little over two days.[12] Such considerations underlay the United States' decision to establish the Rapid Deployment Force and enhance MAC's own long-range, heavy-lift capacity. Even allowing for a pessimistic threat assessment, with best case Soviet operations and worst case Western response, the basic fact remains that analysts differ only on the exact scale of the Soviet intervention capability; not whether it exists or not. That situation may be compared with the importance attributed to airlift in Sokolovskii's survey of *Military Strategy* in 1962. In 34 pages of summary and acknowledgement of the value of all branches of the Soviet armed services in the Great Patriotic War, transport operations receive a few critical lines:

> *A weak aspect of the Soviet Air Force was the absence of a special transport command, although one was formed during the war. This had a negative effect on the use of airborne troops, as well as on the organization of the air supply of rapidly advancing forces, especially in the closing stages of strategic operations.*[13]

Closely associated with, but distant from, the Soviet ability to project military power swiftly by air far beyond her frontiers is the more permanent influence achieved by her supply of aircraft and weapons to supplicants and surrogates. Such supplies can produce international embarrassment and expose gross technological inferiority, as in the Bekaa Valley in 1982 and more recently in Libya. On the other hand, the Soviet-supplied MiG–21s and SAMs in North Vietnam exacted a heavy toll as, initially, did Soviet-contributed air defenses over the Sinai in 1973. Indeed in Libya in 1986, the presence of Soviet-supplied aircraft and radars forced the United States to complement the weight of the 6th Fleet with F–111s drawn from bases in the United Kingdom. The longer term political implications of that necessity may yet be unresolved.

Strategic Objectives: Means and Ends

It will not have escaped notice that while examining different aspects of Soviet air power I have studiously avoided any analysis of Soviet strategic objectives themselves. Partly because, to my knowledge, there is no authoritative Soviet exposition of them, and partly because Western schools of thought disagree about either their existence or whether they comprise more than pragmatic responses to external stimuli. If one were to draw up a list of suppositions, they would probably cover the following spectrum:

> A geopolitical defensive preoccupation bred by centuries of territorial invasion from east and west.
>
> An ideological belief in an inevitable conflict, however resolved, between Marxist-Leninist and capitalist systems.
>
> A desire to establish the Soviet Union as a superpower capable of projecting traditional great power interests worldwide.
>
> A more traditionally prosaic mercantile motivation to enhance the Soviet international economic position by exercising direct influence on specific raw materials, including oil, gold and other strategically important metals. In this context the Middle East and Southern Africa are of particular significance to the Soviet economy.
>
> Consequent objectives of removing the United States' presence in and commitment to Western Europe, and more generally of isolating the United States from its allies and sympathizers worldwide.

In seeking to achieve those objectives, the Soviet Union's choice of instrument is limited. It does not possess the economic strength to influence friends by commercial and industrial largesse. Diplomatic heavy handedness

and manifest subordination of allies' interests to its own have repeatedly eroded its credibility, after apparently establishing a favorable regional position. Its ideological example is increasingly perceived to be bankrupt, even among nations who seek to change their own political and social structures. Its foreign policy, more than that of any other state, depends upon the exercise of direct or indirect military influence to sustain it. Thus any increase in military strength has a disproportionate impact on that influence and therein lies the significance of the transformation of Soviet air power which I have sought to illustrate.

I am well aware that I have highlighted only one product of the Soviet investment in military power over the last forty years. Twenty years ago the Soviet Union's strategic missile forces scarcely existed; it did not possess the largest submarine force and it did not possess a blue water surface fleet. The combined impact will be comprehensively examined by Dr. Thompson.

I am also aware that I have not defined the internal components determining the precise, likely impact of Soviet air power in any kind of conflict. I have referred to apparent weaknesses in pilot initiative, but if operational effectiveness is to depend on massed attack, or close coordination with surface-to-air defenses, pilot initiative is not an unqualified advantage. It is, however, probable that Soviet ground crew limitations may impinge upon sortie generation in a sustained conflict and that a traditional penchant for simple maintainability may be incompatible with the avionic and weapons systems associated with contemporary combat aircraft. If so, western technological superiority may be maintained for a longer period than the more pessimistic threat assessments have feared. To complete a net assessment of the many individual elements, from abstract morale through numbers to the ability to replace the appropriate microprocessor in the required timescale would comprise the subject matter for a separate paper. I do not intend to try conclusions with either the threat minimizers or the threat maximizers; the exact distance travelled by Soviet air power is of far less significance than the many directions it has taken.

It has neutralized the military advantages enjoyed by the West forty years ago, forced the diversion of Western resources and manpower into expensive countermeasures, imposed unprecedented constraints on Western freedom of action in the Third World and, beneath the superpower nuclear stalemate, facilitated the spread of a countervailing influence far beyond Soviet frontiers. It would be reassuring to believe that economic pressures within the Soviet Union will persuade the new leadership to reduce military expenditure. But as the 1986 British Statement on the Defense Estimates explains, the entry into regimental service continues of new interceptors, air superiority fighters, in-flight refuelling tankers, airborne early warning aircraft, new helicopters, heavy-lift transports, intercontinental bombers and aircraft carriers.[14] As a distinguished British analyst recently observed, "This sort of impressive defense output does not happen in a fit of absentmindedness."[15] The transformation of Soviet air power, and its contribution to Soviet strategic objectives, however we may define them, is far from complete.

Notes

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3. Statement by A. S. Shcherbakov, cited by Alexander Boyd, *The Soviet Air Force* (London, 1977), p 111.
4. Asher Lee, *The Soviet Air Force* (London, 1961), pp 72, 80.
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6. NATO Seminar (Bonn, Jul 1984), as reported by Michael Feazel, "Warsaw Pact Improving Radar Jamming Abilities," *Aviation Week and Space Technology* (Jul 16, 1984), p 70.
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9. Ibid.
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11. "Bears Can't Fly," *The Economist* (Jun 24, 1967), p 1325.
12. James H. Hansen, "Soviet Projection Forces—Their Status and Outlook," *Armed Forces Journal International* (Oct 1981), pp 81–82.
13. V. D. Sokolovskii, *Military Strategy, Soviet Doctrine and Concepts* (London, 1963), p 158.
14. Cmnd 9763–1, London HMSO 1986, pp 59, 61, 64.
15. Edwina Moreton, "Comrade Colossus: The Impact of Soviet Military Industry on the Soviet Economy," *The Soviet State: The Domestic Roots of Soviet Foreign Policy*, ed Curtis Keeble (London, 1985), p 128.

From Strategic Defense to Deterrence: The Evolution of Soviet Nuclear Strategy Since 1962

John M. Thompson

The study of Soviet military affairs is a treacherous field. Among Western specialists a wide range of interpretations exists, partly because Soviet military thought is elusive and changeable. Moreover, some Western studies appear to have been conceived, researched, and written in a kind of military or strategic or technical "isolation ward." The authors subject to microscopic scrutiny a topic relating to the Soviet armed forces and their employment as if it had no relation to history, Soviet society, or the outside world. This contextual alienation, in my view, leads to some bizarre and misleading conclusions, and I can only underscore my all-out support for the dictum of Ken Booth: "Strategic studies divorced from area studies is largely thinking in a void."[1]

A final problem in the study of Soviet military affairs is the extremely limited evidence available. To be sure, this is true to some extent for research on the strategy, doctrine, tactics, and technology of any nation, but Soviet secretiveness, the absence of contact between Westerners and Soviet military strategists, and our relative lack of knowledge about Soviet strategic planning and about the interface between top political and senior military leaders greatly compound the difficulty in the Soviet case.

For this essay I have relied heavily on Western secondary accounts, but I have also tried to take into consideration the three major forms of direct evidence that I deem most pertinent: statements of Soviet politicians at the highest level (Politburo), the speeches and writings of senior Soviet military officers such as Marshal Ogarkov, and Soviet force structure. Nevertheless, my findings are far more speculative than I would wish.

Before setting forth a brief overview of the development of Soviet nuclear strategy in the past twenty years, let me define the key terms. When I speak about "offensive strategy" I am referring to a strategy that relies primarily on nuclear weapons designed to strike an enemy's forces or territory outside the Soviet homeland (even though the employment and purpose of such weapons is to defend the Soviet Union). "Defensive strategy" refers to that based on weapons designed to destroy an enemy's missiles or aircraft that are attacking the Soviet Union; it includes measures

such as civil defense designed to enhance the survivability of Soviet society, if attacked. I believe that Soviet military thought employs these terms in this same sense.

The Weight of History

Because I believe strongly that historical experience has powerfully shaped Soviet strategic views, I begin with history. Four events in the first half of the twentieth century have exerted, in my opinion, important, perhaps decisive, influence on Soviet thinking about their own security. Two clusters of occurrences strongly inclined Soviet leaders and writers to be primarily concerned with defensive strategy. One was the invasion of Russia during World War I by the forces of the Central Powers and then in 1918–20 by Allied, American and Japanese contingents; and twenty years later the massive and nearly fatal Soviet struggle with Hitler and the *Wehrmacht*.

A second set of events that disposed Soviet rulers to value the defense was the growing power of Japan. Soviet fears, beginning in the late 1920s, reinforced by the Japanese occupation of Manchuria, and climaxed by the undeclared war with the Japanese in the Far East in the late 1930s, led to the realization that the Soviet Union must always be concerned about, and prepared to fight on, two fronts: Asian and European. Although the defeat of Japan in the Second World War briefly ended that threat, the growing American presence in the Pacific and the split with China in the 1960s vividly and frighteningly resurrected a two-front nightmare for Soviet planners. In miniscule form, contemporary Soviet security concerns with Poland on one flank and Afghanistan on another dramatize this continuing concern.

On the other side of the ledger, two groups of twentieth-century events have impelled Soviet leaders to place high priority on offensive power. One set, as Peter Vigor has ably shown in a recent book, was the dazzling success in World War II of the German *Blitzkreig* in Poland and France and its near success against the USSR, coupled with the rapid and skillful Soviet invasion and conquest of Manchuria in the summer of 1945.[2]

A second sequence of events that influenced Soviet leaders to think offensively was development of nuclear weapons, first atomic and then hydrogen bombs. The awesome power of these instruments of destruction, particularly if used in a surprise attack, seemed at first to promise quick victory in any future conflict. Marshal Sokolovskii's basic treatise on strategy, published in the early 1960s, asserted:

> *From the point of view of the means of armed combat, a third world war will be first of all a nuclear rocket war. The mass use of nuclear, particularly thermonuclear, weapons will impart to the war an unprecedented destructive and devastating nature. . . . The basic method of waging war will be massed nuclear rocket attacks inflicted for the purpose of destroying the aggressor's means of nuclear attack . . . and for achieving victory within the shortest period of time. . . . Since modern means of combat make it possible to achieve exceptionally great strategic*

results in the briefest time, the initial period of the war will be of decisive importance . . . the main problem is the development of . . . methods of frustrating the aggressive designs of the enemy by the timely infliction of a shattering attack upon him.[3]

Such calculations could not, however, override the powerful orientation toward the defense provided by the "lessons" of recent history. The result was that, in the two decades following the end of World War II, Soviet strategic policy wavered between the offense and the defense, incorporating elements of both emphases. Under Stalin between 1945 and 1953, partly because of various international and domestic constraints, Soviet policy followed a contradictory course, with Stalin erecting an extended defensive zone in Eastern Europe while maintaining a large army in the west and acquiescing in Communist expansionism in Korea.

Nikita Khrushchev, once he had consolidated his position in power, accelerated the buildup of Soviet nuclear forces and permitted initiation of a prolonged and substantial enlargement of the Soviet Navy. At the same time he tempered this offensive emphasis with renunciation of the inevitability of a systems war (a basic Leninist precept), with reduction of the ranks of the Soviet Army, and with a cautious policy toward an Eisenhower-led United States. In 1962, however, apparently alarmed by the superiority of United States forces, Khrushchev embarked on a dangerous offensive gamble, the effort to sneak medium-range missiles into Cuba.

Soviet Strategy, 1962–1969

Unfortunately, extensive evidence on the impact within the Soviet Union of the Soviet backdown in the Cuban missile crisis is not available. A tantalizing glimpse of Soviet attitudes is given, however, in the memoirs of former Ambassador to the USSR, Charles "Chip" Bohlen, who reports that Soviet Deputy Foreign Minister Kuznetsov told President Kennedy's adviser John McCloy: "You Americans will never be able to do this to us again."[4] In every respect, the Cuban affair must have been a frightening experience for the top Soviet military and political leaders. Confronted by overwhelming American conventional forces in the region and fully aware of the Soviet Union's marked inferiority to the United States in intercontinental missiles, Khrushchev and his colleagues undoubtedly felt defenseless and exposed.

Whatever their reaction, it is clear that shortly after the Cuban missile crisis Soviet national security policy changed. The government accelerated the tempo of the buildup of Soviet military forces, a drive that lasted into the mid-1970s. Although Khrushchev advanced negotiations toward a partial test ban treaty and refused to let defense demands skew the Soviet budget, he managed before his ouster in the fall of 1964 to speed up SS–7 and SS–8 missile deployment programs, apparently approved full-scale development of the SS–9 and SS–X–10 heavy ICBMs, probably agreed to a stepup in construction and deployment of new submarine-based systems and greatly accelerated work on the lightweight SS–11 missile.[5]

In this rapid buildup, emphasis was placed fairly equally on offensive weapons and on defenses, including ground, antiaircraft, antimissile, and civil defense, but strategic defense soon began to have a special attraction for Soviet policymakers. It had two major advantages: responding to the historic concern to protect Mother Russia, it reduced the risk of American attack, as well as the possibility of nuclear blackmail by the United States, while Soviet missile forces were being built up; it also greatly increased the prospects of Soviet society surviving should the United States start a nuclear conflict.

The first public references in the West to Soviet development of an antiballistic missile (ABM) occurred in October 1960. By the fall of 1961, Khrushchev was reporting Soviet progress in an interview with C. L. Sulzberger of *The New York Times*, to be followed in July 1962 by his well-known boast that Soviet defense forces "could hit a fly in space."[6] A preliminary ABM system called GRIFFON was deployed around Leningrad in 1962–63 but soon dismantled. In the fall of 1964, a more advanced system, GALOSH, was introduced, and strategic defense was touted in a major article by Gen. N. Talenskii, a former editor of the journal *Voennaia mysl'* (Military Thought):

> *Antiballistic missiles are intended exclusively for the destruction of the opponent's missiles and are not intended for the destruction of any objects on the opponent's territory. . . . Thus, antiballistic missile systems are defensive weapons in the full sense: by their technical nature, they come into operation only when missiles of the attacking side enter into flight; that is, when an act of aggression has begun.*

Talenskii then argued that ABM systems would not be destabilizing because they would be in the hands of the "peace-loving" Soviet Union, which would of course use them to "deter a potential aggressor, ensure security, and maintain the stability of world peace." He concluded:

> *Antiballistic missile systems permit ensuring the defense of one's country independent of the intentions and actions of a partner. The system of defense based on deterrence has its value, but in those conditions the security of a given country from a nuclear attack is based exclusively on the realization of nuclear wars' danger by the opposing side, and this is a highly unsteady and unstable factor. . . .*
>
> *Only that side which considers using its means of attack for aggressive purposes is interested in inhibiting the creation and improvement of antiballistic missile defense systems. For a peace-loving state, antiballistic missile systems are only a means of strengthening its security.*[7]

Obviously strategic defense was, from the Soviet point of view, preferable to deterrence. The government soon stressed defensive measures, including upgrading the PVO (antiaircraft) forces and civil defense as well as deployment of the GALOSH ABM system around Leningrad and Moscow. Although Soviet leaders did not abandon the offense, for which

intercontinental missiles and conventional forces continued to be enlarged and strengthened, they clearly favored, for a brief period in the mid-1960s, a defense-dominated strategy and even attempted to persuade the United States to think along similar lines. At a press conference held in England in February 1967, Prime Minister Kosygin put it this way:

> *Which weapons should be regarded as a tension factor—offensive or defensive weapons? I think that a defensive system, which prevents attack, is not a cause of the arms race but represents a factor preventing the death of people. Some persons reason thus: Which is cheaper, to have offensive weapons that can destroy cities and entire states or to have defensive weapons that can prevent this destruction? At present the theory is current in some places that one should develop whichever system is cheaper. Such "theoreticians" argue also about how much it costs to kill a person, $500,000 or $100,000. An antimissile system may cost more than an offensive one, but it is intended not for killing people but for saving human lives.*[8]

Several months later, during a summit meeting at Glassboro, New Jersey, with President Lyndon Johnson, Kosygin defended Soviet ABM systems, reportedly declaring, "How can you expect me to tell the Russian people they can't defend themselves against your rockets?"[9] According to another account, he told the American president at one point that "giving up *defensive* weapons was the most absurd proposition" he had ever heard.[10] The most Kosygin would concede was that discussion of limitations on defensive systems could be considered only if restraints on offensive weapons were also included. As a Soviet colleague wryly commented during my research visit to Moscow in 1986, Kosygin presented his case in almost exactly the same terms that President Reagan has used in trying to win Comrade Gorbachev to the Strategic Defense Initiative (SDI).

That the Soviet effort to develop strategic defenses had high priority is attested by the estimate that the Soviet Union spent four or five billion dollars on ABM systems between 1960 and 1967.[11] Yet before long, doubts about reliance on a policy of strategic defense began to surface. During 1967 several prominent military leaders and commentators took opposing stands on the utility of ABM systems, with Marshals Malinovskii, Chuikov, Krylov, and Grechko expressing skepticism and Marshal Batitskii, Commander of Air Defense Forces, Gen. Ivan Zavialov, and Gen. P. A. Kurochkin backing the ability of strategic defenses to protect the country.[12] This debate over ABM effectiveness continued through the first half of 1968.[13]

Moreover, as early as February 1967, Soviet officials, in response to American initiatives, had expressed interest in negotiations to limit strategic arms as long as both offensive and defensive systems were discussed.[14] Although at first the Soviet Union took no clear position on restricting or abolishing antiballistic missiles, by late 1968 it had stopped the GALOSH deployment, though it was only two-thirds completed, and in the fall of 1969, when the strategic arms limitations talks began—after a year's delay because of the Soviet invasion of Czechoslovakia in August 1968—the Soviet delegation soon denounced defensive weapons and proposed their limitation.

The Great About-Face of 1968–1969

What happened between the end of 1967 and the beginning of 1969 to cause this complete reversal of Soviet strategic thinking? What had cut off so abruptly and definitely the growing Soviet emphasis on strategic defense? An unequivocal answer is impossible because of a paucity of evidence, but the multicausal explanation suggested below fits the facts that are known and was not challenged or contradicted by Soviet colleagues when I tried it out on them in February 1986. They clearly felt it was reasonable speculation concerning a question to which they also did not know the answer.

Five reasons led, in my view, to Soviet abandonment of strategic defense. First, it is fairly obvious that in tests and other assessments the GALOSH system of antiballistic missiles around Leningrad and Moscow was judged not to be very effective. Moreover, it must have been clear to Soviet intelligence sources in 1968 that the United States was forging ahead on the technology to deploy multiple independently targeted reentry vehicles, which would further reduce the ability of strategic defenses to protect the Soviet Union.

A second and related argument against building up strategic defenses was that the United States was already considerably more advanced in the technology required to develop a refined and effective ABM system and that this American lead would only grow if a high-tempo defensive arms race erupted. Although political support for an ABM program was shaky, the decision of the Nixon administration in the spring of 1969 to develop the SENTINEL system of defenses probably alarmed the Soviet leaders.

Third, as the GALOSH system was developed and deployed, Soviet policymakers found that it was enormously expensive. In particular, Soviet writers have argued subsequently, the cost-effective advantages of offensive weapons over defensive weapons are evident.[15] So much for Comrade Kosygin's calculations for the benefit of the British press! (This, of course, remains a main Soviet argument against the SDI.)

A fourth reason for turning away from defensive strategy centered on strategic considerations. Because of the rapid buildup of Soviet ICBMs and the beginning deployment of efficient ballistic missile nuclear submarines, Soviet planners could look forward to a time in the 1970s when the huge American lead in nuclear delivery systems would disappear and the Soviet Union would probably attain a rough parity with the United States in offensive strategic weapons. This, as we will shortly see, would permit a change in strategic thinking that would make defense less important and that would emphasize counterforce retaliation, or deterrence.

At the same time, however, it was important to restrain any rapid expansion of American offensive capabilities if the Soviet Union were indeed to be able to catch up. Thus, Soviet officials concluded that a defensive buildup might trigger further offensive increases at just the wrong moment. As a retired naval officer and staff member of the USA-Canada Institute commented in *Krasnaia zvezda* in July 1972:

> *It is well known that strategic offensive and defensive armaments are closely interlinked. The development of one inevitably leads to the*

> *development of the other and vice versa. The arms race is thereby constantly being spurred on. The further development and improvement of ABM defense would inevitably give an impetus to the development of new types of offensive weapons capable of overcoming ABM systems. This would in turn lead to the development of more sophisticated systems for providing defense from offensive weapons, etc.*[16]

Whichever of these arguments against strategic defense was dominant, taken together they led Soviet officials to turn their backs on such a policy in 1969, a rejection the Soviet Union has steadfastly adhered to since.

Early in the SALT negotiations that preceded the ABM treaty of 1972, Soviet opposition to ballistic missile defenses was voiced and justified. In November 1969, Vladimir Semenov, head of the Soviet delegation, declared that "although initially it had seemed that ABM would serve humane goals and that the only problem seemed to be a technical one, it was later found that ABM systems could stimulate the arms race and could be destabilizing by casting doubts on the inevitability of effective retaliation by missile forces of the side attacked."[17] Semenov added that if one side felt relatively invulnerable to a retaliatory strike because it had deployed an ABM system, it might be tempted to use strategic arms against the other side. In subsequent discussions, the Soviet side made clear it was even willing to consider a complete ban on ABM defenses in a Soviet-American treaty provided another way could be found to protect the Soviet Union against a third-country attack. At the same time, Soviet negotiators insisted that limitations on strategic defenses had to be linked to cutbacks in offensive weapons.

Later in the SALT talks, the USSR argued for prohibitions against any sort of national deployment of strategic defenses; it also favored qualitative and quantitative restrictions on future development of ABM systems. Although the final terms of the 1972 treaty permitted each side to have two ABM sites in principle (later reduced to one), it was clear that the Soviet Union had fully abandoned reliance on a strategy related to antiballistic missile defense and was operating on the basis of mutual deterrence.[18] Reviewing the significance of the ABM treaty at the time SALT II was signed in June 1979, the prominent Soviet commentator, Alexander Bovin, summarized the position:

> *This [earlier] agreement introduced into the nuclear arms race for the first time some elements, albeit minimal, of restraint, certainty, and predictability. . . . So in as far as the destabilizing significance of antimissile defense systems was understood, both the Soviet Union and the United States virtually gave up deploying them. . . . Thus since 1972 . . . each side must reckon with the fact that he who decides on a first strike will have a counterstrike delivered against him which will be unacceptable in its consequences. In other words, it is precisely the preservation of a retaliatory strike potential which is regarded as the best guarantee of security.*[19]

After the ABM treaty was signed, the Soviet government continued research into missile defense. It has also periodically upgraded its antiaircraft

capabilities and forces, measures it still pursues today, but it has never gone back to defense as a primary strategy.[20]

Soviet Views on the Role of Offensive Forces

In the past decade and a half Soviet strategists, having abandoned reliance on strategic defense, have worked out two sets of views concerning the offense. One relates to fighting a continental war and seems to apply both to China and to NATO. This strategy assumes, in my opinion, that nuclear forces will not be used, for their use would rapidly escalate conflict into an all-out nuclear war. I believe that Soviet strategy for a conventional war is important and has significant implications for NATO, but its analysis lies beyond the limited scope of this paper. The second cluster of Soviet strategic views relates to prevention of nuclear war and to its conduct, should it break out as a result of a sudden attack by the "imperialist camp" led by the United States, as an outgrowth of the escalation of a continental or regional conflict, or by accident and inadvertence.

In Western discourse and writing on Soviet nuclear strategy two issues have engendered a good deal of confusion: Soviet thinking concerning prevention of nuclear war, or what we call "deterrence," and Soviet attitudes toward "winning" a nuclear war. In elucidating Soviet offensive strategy at the nuclear level, I want to make absolutely clear my conclusions on these often muddied issues.

First, Soviet leaders, in my view, have no intention of initiating a nuclear war. This is not because they are benevolent, well-intentioned, and philanthropic but because they are fully aware that however successful their first blows might be, the United States and its allies would possess sufficient intact retaliatory power to destroy the Soviet Union as a functioning society. As the leading Soviet military thinker of recent times, Marshal Ogarkov, concluded in 1983:

> *Given the modern development and spread of nuclear weapons in the world, a defender will always retain that quantity of nuclear means which are capable of inflicting "unacceptable damage"—as former U.S. Defense Secretary R. McNamara once put it—on an aggressor in a retaliatory strike. . . . In present day conditions, therefore, only suicidal persons can gamble on a nuclear first strike.*[21]

If the USSR were in a position to strike without fear of retribution, the leadership might indeed be tempted to try to establish a worldwide system of socialist states through nuclear blackmail. But this is not the case, and Soviet authorities are well aware of the actual state of affairs—which is why the West must continue to maintain a secure second-strike capability at all times.

Since the mid-1950s Soviet political and military leaders have stated frequently and consistently that they intend to do everything possible to avoid nuclear war. This was, of course, only common sense when the USSR

was much weaker than the United States in nuclear armaments, but it remained the Soviet position even after the mid-1970s when Soviet nuclear forces approached parity with those of the West. Leonid Brezhnev explained Soviet strategy authoritatively in a speech made at Tula in January 1977:

> *Of course, comrades, we are improving our defenses. It cannot be otherwise. . . . But the allegations that the Soviet Union is going beyond what is sufficient for defense, that it is striving for superiority in armaments with the aim of delivering a "first strike," are absurd and utterly unfounded. . . . Our efforts are aimed at preventing both first and second strikes and at preventing nuclear war altogether. . . . The Soviet Union's defense potential should be sufficient to deter anyone from disturbing our peaceful life. Not a course aimed at superiority in armaments but a course aimed at their reduction, at lessening nuclear confrontation—that is our policy.*[22]

The "Tula line," as it is sometimes called, was reiterated at the 1986 celebration of V-E Day in Moscow, when the Soviet Chief of Staff, Marshal S. F. Akhromeev, declared:

> *In our time a fundamentally new approach to the problem of the security of states and peoples is necessary. The nuclear epoch has radically changed the content of the policy of peaceful coexistence. There can be no victors in a nuclear war, the succession of periods of peacetime and wartime has come to an end, the cycle "war, peaceful interlude, followed by another war" ended with the nuclear bombing of Hiroshima and Nagasaki.*[23]

In accord with these views, the Soviet Union began in the late 1970s to talk of the significance of vowing not to be the first to use nuclear weapons, and in 1982 the Soviet government formally took the no-first-use pledge.

If the huge Soviet rocket force and the burgeoning undersea nuclear capability of the Soviet Union are not for launching an attack on the West, what then are they for? Soviet strategic thought, particularly after abandonment of strategic defense, views these weapons as a form of deterrence. The concept is quite like ours but the word itself cannot be used in Soviet parlance for two reasons. First, a proclaimed policy of deterrence would seem to be exposing the Soviet state and people to possible attack and annihilation. To admit that Soviet policy rests on the threat of retaliatory destruction would be to acknowledge that the Communist Party is unable to protect the welfare of the masses and defend socialism. Secondly, deterrence cannot be openly recognized because it places Soviet security in the hands of the enemy; the safety of the nation rests on the willingness of the "imperialists" not to attack the USSR.

Soviet dislike of deterrence based on vulnerability was clearly expressed in the mid-1960s by General Talenskii:

> *When the security of a state is based only on mutual deterrence, it is directly dependent on the good will and designs of the other side, which is a highly subjective and indefinite factor. . . . It would hardly be in the*

> *interests of any peace loving state to forgo the creation of its own effective systems of defense . . . and make its security dependent only on deterrence, that is, on whether the other side will refrain from attacking.*[24]

What then is the basic concept behind Soviet offensive strategy? It is, as Gary Guertner has argued, "deterrence through denial, that is, seeking to deny the opponent the prospect of military victory."[25] In the event of war, Soviet forces are to deliver such large-scale retaliation that the enemy will suffer huge losses, will have no chance or even vague hope of ever winning, and will therefore be persuaded not to attack. The Soviet blow will be massive, designed to strike at the enemy's military forces and centers of control and communication. At the same time, and as one of several indications that the Soviet plan is to try to conduct a nuclear struggle if attacked, Soviet command and control centers have been diversified and hardened.[26]

As noted earlier, Soviet views of the offense largely exclude the possibility of graduated responses and limited war. They also predispose Soviet planners toward preemptive retaliation, although probably a decision of when to launch a counterblow would be determined ad hoc and would depend on the political and military circumstances that surround any crisis that threatens nuclear war. As Benjamin Lambeth has summed up the situation:

> *Soviet doctrinal pronouncements running back to the 1960s have regularly featured injunctions to break up, frustrate, or nip in the bud any enemy attempt at nuclear surprise by dealing him a crushing rebuff in due time . . . [but doctrine] in no way provides explicit rules for action in such a situation. . . . Soviet leaders would have to weigh the risks of preemption against the costs of inaction in the face of grave uncertainty.*[27]

Whatever Soviet leaders might decide, present Soviet military routines make it unlikely that they could react quickly to sudden danger. Soviet forces are at a lower level of alert than American units, with only a small number of ballistic missile submarines on patrol and both missiles and strategic aircraft apparently less prepared to respond instantly than is the case with United States' weapons. This certainly suggests that Soviet authorities do not expect a surprise attack from the West, not even the accidental outbreak of nuclear war, but rather a threat of conflict only after the buildup of a prolonged crisis.

To make Soviet policy—deterrence through denial—credible, it is necessary to build major counterforce armaments and to get ready to wage nuclear war. This does not mean that Soviet strategists desire or are planning such a war. But this policy has unfortunately led to "worst-case scenarios" such as the typical contention of Amoretta M. Hoeber and Joseph D. Douglass, Jr., that the Soviet Union's principal strategic goal is to fight and win a nuclear war.[28] In fact, Soviet plans to survive by destroying enemy concentrations are an effort to *prevent* an attack from outside and thus serve as a policy of last resort. Such a course of action would be undertaken with great reluctance, as an alleged Soviet "hawk," Col. E. Rybkin, made in 1973: "Nuclear weapons will cause very serious destruction and an unprecedented number of vic-

tims. . . . A nuclear war on the part of socialism can only be a *forced* continuation of politics and a retaliatory defensive step against the aggressors."[29]

Exactly what Soviet strategists calculate they might achieve in such a war of desperation is unfortunately unclear. The subject is little discussed in materials available to the West, which makes only vague references to the triumph of socialism or the persistence of Soviet society. How would nuclear war be fought? And against whom—only the United States? Both Western Europe and the United States? China also, to prevent a stab in the back from that direction? These issues are simply not addressed in Soviet statements and writings, which leaves us quite in the dark, undoubtedly as intended.[30]

Another reason for their maintaining a powerful offensive capability is that Soviet leaders are determined to match American strength in order to avoid another humiliation like the Cuban affair and to block any American attempt at nuclear blackmail. As Yuri Andropov declared on January 25, 1984, while he was in power: "The American leadership has not renounced its intention to conduct talks with us from a position of strength, from a position of threats and pressure. We resolutely reject such an approach. In general, moreover, attempts to conduct 'power diplomacy' with us are futile."[31]

Yet another function served by Soviet war-preparedness doctrine is to keep up morale and provide a clear purpose for Soviet defensive and military measures. If war were candidly admitted to be suicidal in all aspects, what, for the average soldier and citizen, would be the point of compulsory military service and the billions of rubles devoted to war preparation? This point was made strongly in a series of articles that appeared in 1966 and 1967, of which one by Col. I. Grudinin is typical. Attacking the defeatism of earlier writers such as Talenskii, he criticized "those who deny any possibility of victory in a global nuclear missile conflict." He declared such attitudes "harmful because they shake our people's faith in our chances for achieving victory over the aggressor and their awareness of the need to be ready at any moment for an armed conflict in which nuclear missile weapons will be used."[32]

Needless to say, the hope of victory, should war be forced on the Soviet Union, does not mean that Soviet military authorities wish for war. As several writers have noted, Soviet authorities are to some extent simply following the classical adage: "if you wish peace, prepare for war." Moreover, it is evident that if they do not build up forces to conduct nuclear war, should such a war develop, the Soviet leaders will have abdicated their political and military responsibilities. Of considerable interest is their parallel effort to adapt and apply new technology, and perhaps altered doctrine, to conventional war fighting—but that is a different topic.

Soviet Reaction to President Reagan's Strategic Defense Initiative

If Soviet strategic thinking indeed evolved along the lines traced in this paper, Soviet leaders could only react with astonishment and fear to President Reagan's announcement in March 1983 of his plan to develop strategic de-

fenses and to subsequent American efforts to launch this plan. In the first place, as we have seen, Soviet strategists had already embraced—and then discarded—strategic defense. It had been rejected for many of the same reasons that opponents soon advanced against the SDI: too expensive, of uncertain effectiveness, and likely to trigger a new spiral of offensive arms competition.

Because they did not believe in strategic defense, Soviet leaders apparently suspected at first that Reagan's plan was primarily a "bargaining chip." When it became clear at the November 1985 Geneva summit that the President was not really interested in negotiating away the SDI, Gorbachev and his colleagues could only conclude that the United States was developing this program as part of a first-strike strategy. Once the defenses were sufficiently perfected to limit significantly the damage that Soviet retaliation could inflict, the American side would be in a position either to launch an attack or to blackmail the Soviet Union.

This line of analysis had been initiated almost immediately after the announcement of the SDI, with Minister of Defense and Politburo member, Marshal D. F. Ustinov, asserting on April 7, 1983:

> *Recently the U. S. President announced the beginning of the development of large-scale and highly effective antimissile defense. But in fact this would be not a defensive measure but an offensive one, aimed at the acquisition of a first nuclear strike potential by the United States. It is designed to deprive the Soviet Union of the ability to deliver a retaliatory strike and to disarm the USSR in the face of the American nuclear threat.*[33]

This remains the Soviet position today. Soviet leaders conclude that if the United States were to strike first, the SDI would not have to be "leak proof" to blunt a much weakened Soviet retaliatory blow. The result would be to thwart the Soviet strategy of "deterrence by denial" and to permit the United States to embark on a nuclear war with a reasonably good chance of meaningful victory.

A second powerful Soviet concern is that the SDI will accelerate the arms race in offensive weapons. According to international relations specialist Oleg Bykov:

> *It is quite clear that this kind of "defense" cannot contribute to curtailing the arms race; on the contrary, it would raise the arms race to an immeasurably higher level. What would happen would not be a simple addition of space-based weapons to nuclear ones, but a powerful acceleration of the entire interconnected process of creating offensive and defensive weapons. The dynamics and qualitative characteristics of the arms race would fundamentally change. The marked intensification in the American side's aspiration to move into the lead . . . would inevitably call forth a timely and commensurate response, the aim of which would be to prevent the military strategic balance from being upset. However, this would mean that the system of action and counteraction, which is complicated in any case, would become even more complex. Uncertainty and unpredictability would rise sharply. There would be an intensified risk of fatal conflict as a result of accident, miscalculation, or faulty computer systems.*[34]

President Reagan's offer to share the findings of SDI research with the Soviet Union was brushed aside as naive and insulting. The responsible leaders of the Soviet state could hardly be expected to entrust the safety and security of their whole society to the word of the leading "imperialist"—who in any case would be out of office well before the program had been developed.

In light of these considerations, Soviet strategists view "Star Wars" as an extremely hostile act designed either to obliterate the Soviet Union or to force it into political submission. If the shoe were on the other foot, would the United States not feel the same way?

My impression from talks during February 1986 with Soviet scientific workers in the USA/Canada Institute and with Soviet journalists was that the Soviet Union recognizes that deployment of the SDI system, if developed, is at least a decade away. My contacts saw no reason for panic. Instead Soviet thinking seemed to be pointing toward a three-stage policy to cope with the SDI. First, Soviet negotiators will continue to probe and test the American position in hopes of ascertaining finally that the program can be bargained over. Second, the Soviet government is prepared to wait a bit, perhaps into the middle of 1987, to see whether the U. S. public and the Congress, in an atmosphere of mounting concern over budget deficits, would in fact fund the program at the levels it required. Marking time for a while might also permit examination of the preliminary research on the SDI, thereby providing a clearer indication of how feasible strategic defense might be. Third, the Soviet Union will continue its own research into strategic defense in order to be in a position to take advantage of any unexpected technological breakthrough that might occur. At the same time it can begin to plan the expansion of offensive weapons (cruise missiles, short-burn booster rockets) and the development of counter-defensive measures (decoys, ground lasers, space mines, antisatellite missiles) that would be required to overcome the SDI, should it turn out to be both feasible and fundable.[35] Soviet commentators have consistently argued, quite correctly I believe, that such measures would be a great deal cheaper than development, deployment, and maintenance of the SDI itself, and that they could be designed and put into place much more quickly.

At the same time it should be noted that several people in Moscow told me that if President Reagan had not announced the SDI, Comrade Gorbachev would have had to invent it. They felt that the Soviet leader was skillfully using the technological threat behind "Star Wars" to goad the sluggish Soviet bureaucracy toward the sorts of economic and technological changes the Soviet system must make if it is to keep pace in the modern world. But few were sanguine about Gorbachev's chances of succeeding—at least not at the pace he desired and that the situation requires.

Conclusion

This rapid overview of the history of Soviet strategic policy since 1962 has argued that although Soviet leaders never ceased to amass offensive missiles, for a brief period in the mid-1960s they moved toward reliance on strategic defense, perhaps in part because of their feelings of helplessness

during the Cuban missile crisis. This predilection was reflected in the writings of Soviet strategists, in public statements by Prime Minister Kosygin, and in Soviet efforts to deploy defensive ABMs around Leningrad and Moscow. Some time between late 1967 and early 1969, Soviet authorities abandoned a policy of strategic defense and quickly evolved a position of deterrence through denying victory in nuclear war to an aggressor, which remains their fundamental strategic posture today.

Why the Soviet leadership rejected strategic defense is not certain, but they were apparently swayed by a combination of reasons: the high cost of the system, its unreliability, fear of its stimulating a new escalation of the arms race, and probably most importantly, concern that American technology would soon outpace their own efforts to develop strategic defenses. The first three considerations are, of course, questions frequently raised today about President Reagan's Strategic Defense Initiative.

After 1969, Soviet strategic thought switched from a defensive to an offensive emphasis, but it is important to note that the offensive nuclear weapons on which Soviet strategy relies are not to be employed to start war but only to mount a counter-offensive blow. Soviet strategists state that this strike at the enemy's forces and centers of command and communications will occur only when an attack on the USSR is imminent or under way. Not surprisingly, however, Soviet statements and writings leave vague the exact conditions and circumstances that would prompt such a retaliatory blow.

As arms control negotiations proceed in the wake of the Iceland summit, hopes have been raised among peoples throughout the world that the danger of nuclear war can be averted. At whatever level weapons are finally stabilized, it seems likely that the Soviet side will continue to eschew defense and rely on some form of deterrence to protect Soviet society.

Notes

1. Ken Booth, *Strategy and Ethnocentrism* (New York, 1979), p 147.
2. P. H. Vigor, *Soviet Blitzkrieg Theory* (New York, 1983).
3. V. D. Sokolovskii, ed, *Soviet Military Strategy*, 3d ed (New York, 1975), p 210.
4. Charles Bohlen, *Witness to History, 1929–1969* (New York, 1973), p 496.
5. Benjamin S. Lambeth, "The Soviet Strategic Challenge: Doctrine, Programs and Policies in Perspective" (Ph.D. diss., Harvard Univ., 1985), pp 178–80.
6. Michael J. Deane, *Strategic Defense in Soviet Strategy* (Coral Gables, Fla., 1980), pp 26–27.
7. Quoted from *Mezhdunarodnaia zhizn'* 10 (Oct 1964), pp 28–34, in Deane, pp 28–32.
8. From *Pravda*, Feb 11, 1967, pp 1, 3 in *Current Digest of the Soviet Press* (hereafter cited as *CDSP*) XIX, No 6 (Mar 1, 1967), p 3. See Raymond L. Garthoff, "BMD and East-West Relations," in *Ballistic Missile Defense*, eds Ashton B. Carter and David N. Schwartz (Washington, 1984), p 296 for a discussion of the journalistic mistranslation of Kosygin's remarks.
9. John Newhouse, *Cold Dawn: The Story of SALT* (New York, 1973), p 94. Secretary of State Rusk's recollection in an interview with Newhouse.
10. Henry Kissinger, *White House Years* (Boston, 1980), p 208.
11. Deane, p 48.
12. Edward L. Warner, III, *The Military in Contemporary Soviet Politics* (New York, 1977), p 152. See also Garthoff, "BMD and East-West Relations," pp 297–99.
13. Garthoff, p 299.
14. Ibid, p 297.
15. Deane, pp 59–61.
16. Quoted in Deane, p 70.
17. According to Garthoff, a participant in the talks. Garthoff, "BMD and East-West Relations," p 302.
18. Raymond L. Garthoff, *Detente and Confrontation: American-Soviet Relations from Nixon to Reagan* (Washington, 1985), pp 142–56.
19. Quoted in Garthoff, "BMD and East-West Relations," pp 306–7.
20. For a review of current Soviet activity in strategic defense, see *Soviet Military Power*, 5th ed (Washington, 1986), pp 41–51.
21. Quoted by Mary C. FitzGerald, *Marshal Ogarkov on Modern War*, Professional Paper 443 (Mar 1986), Center for Naval Analyses, Alexandria, Va., pp 8–9.
22. From *Pravda* (Jan 19, 1977), pp 1–2 in *CDSP* XXIX, No 3 (Feb 16, 1977), p 3.
23. From *Izvestiia* (May 9, 1986) in FBIS, JPRS-TAC-86-044 (Jun 5, 1986), p 3.
24. In John Erickson, ed, *The Military-Technical Revolution* (New York, 1966), pp 225, 228.
25. Gary L. Guertner, "Offensive Doctrine in a Defense-Dominant World," *Air University Review* (Nov–Dec 1985), p 3.
26. Lambeth, p 64.
27. Lambeth, p 71. See also p 117.
28. In their book, *Soviet Strategy for Nuclear War* (Stanford, 1979), p 5.
29. Quoted from *Voina i politika v sovremennyi epokhu* (Moscow, 1973), p 27 in Lambeth, pp 100–1.
30. See discussion of this point in Helmut Sonnenfeldt and William Hyland, *Soviet Perspectives on Security*, Adelphi Papers 150 (London, 1979), p 20.
31. From *Pravda* (Jan 25, 1984), p 1 in *CDSP* XXXVI, No 4, p 3.
32. Quoted from *Krasnaia zvezda* (Jul 21, 1966) in Lambeth p 144.
33. From *Pravda* (Apr 7, 1983), p 4 in *CDSP* XXXV, No 14 (May 4, 1983), p 7. See also Stephen M. Meyer, "Soviet Strategic Programmes and the U.S. SDI," *Survival* XXVII, No 6 (Nov–Dec 1985), p 277.
34. O. Bykov, "General Security is an Imperative of the Times," *Mirovaia ekonomika i mezhdunarodnye otnoshenia* 3 (Mar 1986) in FBIS, JPRS-TAC-86-044 (Jun 5, 1986), p 50.

35. For a discussion of possible Soviet responses against SDI, see Nikita Zholker in *The New Times* 15 (Apr 21, 1986), p 31 in FBIS, JPRS-TAC-86-043 (May 30, 1986), p 11.

Commentary

Ambassador Lynn M. Hansen

I am grateful for the opportunity to return to the Academy, an institution with which I have ties and for which I possess a great fondness. Let me say a quick word to our young scholars and cadets in the audience, and to historians, about the importance of language. As I was a teacher of language at the Academy, let me plug it one more time. If you want to be a serious student of history, learn another language. If you want to know about Soviet history, Russian history, learn Russian. To do anything else is like smelling roses through a blanket.

Now, I say this because I believe it is very important, particularly as you deal with Soviet affairs, to understand the precision of language and the importance of language. I don't think this has been fully understood until recently. Early translations of Soviet military materials from Russian into English were often rather poor, and I think this has now been understood and is being corrected. In this connection, those people in the Air Force who put out the Soviet Military Thought Series have made a contribution of immeasurable value.

I am not a military historian. I am a user of the knowledge which is produced by a forum such as this symposium. I believe it is important that we not only investigate our subject for its intrinsic academic value and interest, but also that somehow we apply the knowledge we gain to our concrete undertakings. In my view, this could not be more important than in the area of Arms Control. We must understand exactly what we are talking about and the subject with which we are attempting to deal. I believe it is important that in the future we attempt to understand the Soviet Union better and better as we manage our relationships, both in the military and political sphere. The competition is not about to go away, but perhaps there are opportunities for us to manage those relationships in productive ways. And to my Soviet friend in this audience, I would encourage him to go back with a message to his people to open up archival resources to Western scholars. We need to understand each other better.

Finally, I would like to begin my brief comments with a quote from a person often mentioned in this symposium, Lt. Gen. P. A. Zhilin, who edited

a book published in 1986, *The History of the Art of War.*[*] The art of war, you must understand, is that which we often refer to as doctrine. The first sentence of this book begins with a very important message to its readers, and I think equally so to us: "MARXISM/LENINISM teaches that without a thorough knowledge of history one cannot correctly understand the present or foresee the future." Now, the same basic point about the importance of history has been made several times during this symposium.

A few years ago, after I had written several articles about the Soviet Air Force, my friend John Erickson sent me an article written by R. A. (Tony) Mason, which Erickson referred to as "the RAF view of the Soviet Air Force."[†] I have not forgotten this, and I understood what John Erickson was telling me. So, the task of commenting on Tony Mason's paper is a rather formidable one; nevertheless, I would like to make a few comments on his paper. I've had some unusual experiences in my lifetime, one of which was at a meeting in Moscow where I was confronted with a view of history totally alien to my own understanding. I was told that the United States had dropped the atomic bomb on Hiroshima and Nagasaki, not as a means to end World War II, but rather as a political sign to the Soviet Union. This point was also made to some extent in Tony's paper when he talked about the unease of the Soviets concerning the capability of U.S. B–29s and their capability of reaching the Soviet Union with atomic weapons. He may have understated the case. However, I am not one of those people who believes in Soviet paranoia. I simply reject this. I believe that Soviet leaders are very sophisticated, that they understand, that they do their analysis, and that they do their homework. I simply don't believe in Soviet paranoia and do not offer this as an excuse for any Soviet behavior. In my view, it is true that after the initial years following World War II fear played a basic and significant role in Soviet defense decisions. Mason has written of the ascendancy of the defense over the offense, and I think this is one manifestation of that fear. I think it is important to understand this as we deal with Soviet military developments over the past four decades.

Preoccupation with defense of course, does not change the basic fact that the way Soviet military art manifests itself is in an offensive posture. It is armed, equipped, trained and postured in offensive ways. But this has not changed, in my view, the basic fact that what every Soviet official will tell you is their military doctrine is defensive, and there I think we need to develop some precision, because we have a false cognate. Soviet military doctrine is not the same as U.S. military doctrine. One might think of it in terms of their security policy, a policy that includes military considerations which they call defensive. Their actual doctrine, however, has a large offensive cast to it.

Another thing about which Mason has talked is the swings in the military history pendulum, something worthy of study and intensive analysis. I

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[*] *Istoriia voennogo iskusstva* (Moscow). Ed.

[†] Air Vice-Marshal Mason was Director of Defence Studies RAF and RAF Staff College, 1977–1985. Ed.

think this is a job on which military historians and others might spend considerable time. I happen to be among those who believe there have been action and reaction cycles within the military power relationships between the Soviet Union and the United States. However, this has not been capricious in my view, but rather is the result of a fair amount of historical analysis and a fair amount of detailed study by the Soviets.

I have had the experience myself of witnessing some of these things. It is interesting to note, and this is very much in line with what Tony Mason is saying, that if one goes back prior to the 1960s, there was within the Soviet Air Force a dependence fundamentally on the MiG–15, MiG–17 air frames. Then, in the 1960s one began to see the emergence of the MiG–21, Su–7, and Yak aircraft of various types. And then, ten years later there was almost a total recycling, reequipping of the Soviet armed forces with what has been referred to as "third generation aircraft." By that I mean the Su–17, the MiG–23, MiG–27 and others such as the MiG–25. Now just a mere ten years later, we have virtually another total reequipping of the Soviet Air Force with the MiG–29, Su–27, the MiG–31 and a range of other aircraft. This is impressive and gives us a clear understanding of the importance that they have placed in air power itself.

I do want to differ with Tony Mason in one critical area. I myself am suspicious of what he called in his presentation "the suspiciousness of the Soviet Union's attitude toward initiative." This, too, is a favorite subject of many analysts. I believe there is initiative in the Soviet armed forces. I just think we don't understand it. I think it has a different complexity and a different character than we have in our own, and I would be very interested sometime in getting somebody who had been in a course like our fellow in "Top Gun," and those who go through the Soviet air training. Because I saw in the "Top Gun" movie the idea that there are basic choices made by an American pilot in combat. He trains to make those selections; he does not invent them. I believe this is precisely the way that the Soviets exercise initiative in combat, not by inventing on-the-spot innovation, but by making the right choice. This is the same idea expressed by Mr. Donnelly in his paper.

I recently spent about a hundred hours alone in a little room with a Soviet general from the General Staff discussing Soviet Army operations in the greatest detail. He convinced me that Soviet officers at the battalion, the regimental, and the division levels certainly have initiative and exercise it. I find, as I said before, no reason to believe the same thing does not happen in the Soviet Air Force.

Tony Mason talked in his paper about the importance of air power within the combined-arms framework. He states that the exact distance travelled by Soviet air power is of less significance than the many directions it has taken. I think I would want to add a gloss to that statement by saying that the speed with which they have travelled this distance is perhaps more impressive than the many directions, and I look forward to seeing what the next ten-year cycle brings in the 1990s by way of Soviet aircraft and technology.

I want to return for a moment to the question of history in the context of the Soviet armed forces, particularly as related to the air force. In 1976 a book was published, which I believe is the most important book ever to

be published about the Soviet Air Force. It is by a man named Timokhovich, at that time a colonel, a writer from the General Staff, now a general, who wrote a book entitled *The Operational Art of the Soviet Air Force in World War II.*[*] How many people see such a basic volume and say, "World War II? That is not important. Let's not bother with this. That is history." This is not history; this is reality; this is today. In this book Colonel Timokhovich goes through an entire analysis of World War II: what the Soviet Air Force did right and wrong; the questions of tactical air supremacy; operational air supremacy; strategic air supremacy; the role of the offense; the role of the defense. All of these things are carefully analyzed, not only in the context of World War II, but also in the Spanish Civil War, where they learned a number of lessons. This is not history in a narrow sense, this is analysis of the *principles* which the air force employs in its application of technology to modern problems. I mentioned "principles," not "tactics," and I believe it is an incredibly important book which I hope the U. S. Air Force soon gets on the street so that we can all look at it again and again.[†]

In the first part of Dr. Thompson's paper he wrote something which he didn't report to you but with which in reading I have to disagree. He indicated that there was some confusion and uncertainty which characterizes military thinking and decision making in the Soviet Union. In my own view, we could use in our system a little of the same type of confusion and uncertainty. If some historian wanted to dig out all the facts related to the development and procurement of a certain piece of military hardware in the United States, and here I think of the history of the development of the U.S. Army's armored fighting vehicle, one could see in fact there is a fair amount of uncertainty and confusion in our system.

Now, very few people here have mentioned the role of the General Staff in Soviet military affairs. Their evaluation of history is that it is critical and significant in the studies which they conduct, both with regard to their own modern role in the conduct of military operations and in application and testing applications. It is very difficult to overstate their positive appreciation of history. I don't want to suggest to you that the Soviets have not made blunders. That would be very foolish of me. But I am saying that their system for dealing with military issues is a great deal different than that of the United States, and within the Soviet system the importance of military history cannot be overemphasized.

I also want to challenge Dr. Thompson in a statement he made about the availability of evidence on Soviet military affairs. I think there is more literature on Soviet military affairs than for any other modern nation state. I would mention several periodicals as vital for anyone who is really inter-

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[*]Col. I. V. Timokhovich (Professor and Doctor of Historical Sciences), *Operativnoe iskusstvo Sovetskii VVS Velikogo otechestvennoi voiny* (Moscow, 1976). An expanded and revised edition appeared under the title, *V nebe voiny, 1941–1945* (Moscow, 1986). Ed.

[†]The U. S. Air Force is giving serious consideration to publication of this volume in its Soviet Military Thought Series. Ed.

ested in the subject, including *Military Thought*, the classified journal of the General Staff, *The Military History Journal*, and a third, very important one, *The Naval Digest.** Now, each of these journals in its own way is an expression of a phenomenon of which we hardly seem aware in this country, the phenomenon which the Soviets call "military science." I suggest this military science is rigorous in its essence and its applications. Unfortunately, we are not nearly as rigorous in our attempts to try to understand it. While it may not be flawless in its application, it does represent the driving force behind doctrine, military art, strategy, operational art and tactics. I don't have any statistics, but if I were able to tell you the number of Soviet officers who have the equivalent of Ph.D. degrees in military science or military history, it would be both surprising and astonishing. In this country what university would make military science a legitimate academic subject? I am tempted to ask how many American historians have degrees in military history, but I won't. I think that history is the foundation of Soviet military science and, therefore, the great instructor of all things military in the Soviet Union.

Not only have the Soviets analyzed everything that they did in the Great Patriotic War, the First World War, and Tsarist times, but they also looked very carefully at what we did in Vietnam. They have looked very carefully at what has happened in the Middle East and the Falklands. This for them, as Mr. Vigor has pointed out, is history, and the General Staff Academy plays an important and key role in this, as do the other academies, as they analyze and study war. This is true also of their activities in Afghanistan. I repeat myself, but history is an extraordinarily important part of Soviet military science.

I am tempted to talk a little about Admiral Gorshkov's book simply because it is a book about history and a book resulting from an internal debate during which, in my view, Gorshkov was trying to move ahead of where the rest of the military establishment was, something which did not end with Gorshkov's book.† Indeed, the General Staff did not like his book and it did not win rave reviews. The debate continued, and it took place on the pages of *The Naval Digest*, which I mentioned to you earlier. In my own view, and I have friends who disagree with me, the ultimate word was not spoken by Gorshkov, but by Admiral Chernavin. In fact, there is only one strategy in the Soviet Union, not naval strategy, not air strategy, just simply strategy. And we know where Chernavin is today.‡

Until President Reagan's announcement of the Strategic Defense Initiative (SDI), the Soviets did not frequently use the word "deterrence," and when they did it was usually to describe "Western concepts." Since SDI, the word bounces off Soviet lips with a facility which rivals that of

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*_Voennaia mysl'_, _Voenno-istoricheskii zhurnal_, and _Morskoi sbornik_, respectively. Ed.

†S. G. Gorshkov, _The Sea Power of the State_ (Annapolis, Md., 1979), as translated from _Morskaia moshch gosudarstva_, 2d rev ed (Moscow, 1976). The first Russian edition appeared in 1976. Ed.

‡Admiral of the Fleet V. N. Chernavin, Commander in Chief of the Soviet Navy since December 1985. Ed.

former Defense Secretary McNamara's Pentagon "whiz kids." There is a lot of talk in the Soviet Union today about deterrence, but it is new and it is only in reaction to the President's SDI.

Returning for a moment to what I have said about Soviet military science, I believe it is a science. The only Russian word I know for deterrence within their framework is *oborona* or defense. That is the only word I am aware of that ever meant anything to the Soviets. For the Soviets there was never a choice in my view between offense and defense; there was never a choice between deterrence and something else. Simply put, deterrence in our context, in our framework, did not make Soviet military sense. It was not moral; it was not ideologically acceptable. The idea that the vanguard of world communism could accept mutual vulnerability is incredible. The importance of defense in the Soviet military vocabulary has not diminished, and there I do take exception with Dr. Thompson. The continued upgrading of Soviet strategic defense in all its aspects is, I believe, ample evidence. Whether or not current ABM systems, including the most recent upgrade of the GALOSH system, are effective is secondary to the fact that such upgrading continues to take place. Furthermore, they have developed systems such as the SA–10 and the SA–12, which are assessed to have some limited capability against ballistic systems.

It is true that there was a great preoccupation with strategic defense earlier than the 1960s, recalling Penkovskii's special collection* and Sokolovskii's first edition of military strategy.† There was a preoccupation with the idea of defense in the strategic sense, but I reject that there was ever a separation of a defensive strategy and an offensive strategy. In fact, I go so far as to reject the idea of nuclear strategy. I think there is only strategy, and within this idea of strategy there are various components, but they fit hand in glove with one another, and sometimes these kind of concepts of strategy confuse us as we try to apply our frame of reference to that of the Soviet Union. For those who want to read, go back and read Sokolovskii's book on military strategy. Pay attention to what he says about the Marxist dialectic of defense and offense. And then go read what Ogarkov wrote in 1982 in his book, *Always in Readiness to Defend the Fatherland*,‡ where he virtually repeats Sokolovskii word for word. No rejection of the defense at all. In fact, what they say is that the Marxist dialectic says that no matter what offensive weapon is created, a defensive weapon will also be created.

I have had the interesting experience of debating one Mr. Velikov,** who is widely known as one of the public personalities from the Academy of Science, who deals with Soviet SDI concerns and their own defense

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*O. V. Penkovskii, *The Penkovskiy Papers*, trans P. Deriabin (Garden City, N. Y., 1965). Ed.

†V. D. Sokolovskii, *Soviet Military Strategy*, ed Harriet Fast Scott, 3d ed (New York, 1975). The first edition appeared as *Voennaia strategiia* (Moscow, 1962). Ed.

‡N. V. Ogarkov, *Vsegda v gotovnosti k zashchite Otechestva* (Moscow, 1982). Ed.

**E. P. Velikhov, a physicist and member of the Academy of Sciences since 1974 (*Who's Who in the Soviet Union*, ed Borys Lewytzkyj, Munich, 1984, p. 350). Ed.

research. At lunch one day we were talking about strategic defense and he more or less suggested to me that we ought to somehow get them to dismantle GALOSH as part of some arms control agreement. When I mentioned this later, he attacked me rather viciously, and even to the point of giving a newspaper interview in which he accused me of being a bad representative of my country because I had stated in public something he had told me in private. The point I am trying to make is that the commitment to defense, in my view, is no less today than it has been at any time in history.

I will say again what I have said before. In my own view, which does not have to be more authoritative than anyone else's, it is nonsense to refer to defense as a strategy within the Soviet framework. There is only one military strategy, and defense has been and will always continue to be, a component of that military strategy. This approach is consistent with Soviet military science. It is consistent with Marxism-Leninism, and as far as I can see there can be no other way.

The problem the Soviets encounter with SDI is not the problem of defense. They view it as having immense potential as an offensive system. Because they view it within the context of their framework, they don't make the distinction between the offense and defense that we tend to make. They see only strategy. You have to listen carefully to what they say. They never argue against the morality or the legitimacy of the strategic defense; indeed, they cannot. Their arguments are based upon the idea of space-strike weapons which pose for them immense defensive problems, not to speak of economic, political and other burdens.

Again, and I am not growing tired of saying this, within the Soviets' own framework, there cannot be a defense strategy, only a military strategy. There I think I would comment and be rather critical of something Dr. Thompson said with regard to the ideas of deterrence. I think he has turned it upside-down in that what he is hearing from Soviet interlocutors is a traditional U.S. view of deterrence, not one accepted by the Soviet Union.

This brings me to some last comments on Soviet military science, for which you can obviously note that I have great respect. Within the general scope of Marxist-Leninist doctrine, there are a number of immutable laws. These are constantly being reaffirmed by military spokesmen, whether it be Marshal Akhromeev or Marshal Ogarkov or someone else. The political figures in the Soviet Union do not change their basic ways. To do so would be their undoing. I think Mr. Khrushchev learned that. There are political statements made for a variety of different reasons. I don't want to challenge those statements, I work and function in a political atmosphere in which political statements are important and take on a weight of their own. But it is extremely important in my view to understand that within Soviet military science the political and the military are so intricately linked with each other that it is almost impossible to separate them.

I have tried to say three or four times that the idea of discarding strategic defense is not demonstrable in my view. It is unscientific to say so, un-Marxist, and basically out of the question. If you want to look for other real evidence, it was mentioned here that I have spent some time with the Air Force's Foreign Technology Division. What I did there was unique. I ran a

little section which translated Russian physics books into English, using a computer. One of the things that came out of the physics books was theories on particle beam propagation and on the utility of particle beams in such things as strategic defense. Those very books and those very theories became handbooks for our own physicists in our own laboratories as we developed and investigated the idea of particle beams within the context of SDI. Demonstrable, visible evidence of Soviet concern for strategic defense exists, not to mention a small but noteworthy statement by Marshal Grechko upon the signing of the ABM treaty which I do not have at my fingertips, the essence of which was basically, "Yes, we subscribe to this idea, but it does not preclude defense built upon more sophisticated technological principles." Don't hold me to that quote, but the idea is right.

In my business I participate in many contacts with Soviets. I enjoy it. I respect the people with whom I deal. I grew to like my Soviet counterpart in Stockholm, as we sat for hours across a very small table and discussed issues. I am aware of, and know personally, members of the Institute for the Study of the United States and Canada, and they are bright, well-read, articulate citizens and representatives of their country. They serve their country well and we can respect that, but they are also experts on the United States and Canada. They are also professional propagandists. They are a part of a particular political apparatus of the Soviet Union, the expertise of which is growing; there is no doubt about that. Their efforts are aimed at enhancing the security of the Soviet Union by influencing Western publics and parliaments to do less in providing for Western defense.

At the heart of all the political and military endeavors undertaken by Soviet authorities lie the basic principles of Marxism-Leninism. In particular, these principles undergird Soviet analysis of Soviet military history, which forms the foundation of Soviet military science upon which most military developments are based.

I want to close my comments on the papers by availing myself of a quote which Air Vice-Marshal Mason also used when he summed up the accomplishments of the Soviet Air Force in recent years, and apply that quote across the board to everything that the Soviet Union has done in the military sphere: "This sort of impressive defense output does not happen in a fit of absent-mindedness."* It is not chaotic, it is not a result of confusion; it is a result of a cautious, almost boring, but scientific approach to questions of things that are military. And at the root of it all, is History.

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*Edwina Moreton, "Comrade Colossus: The Impact of Soviet Military Industry on the Soviet Economy," in *The Soviet State: The Domestic Roots of Soviet Foreign Policy*, ed Curtis Keeble (London, 1985), p. 128. Ed.

Concluding Session

Introductory Remarks

Robert F. Byrnes

I would like to begin by supporting Ambassador Hansen's comments concerning foreign language instruction, particularly for those young enough to begin again the study of another language. It is impossible to understand another society without understanding its language. One of our professors of English helped make the State of Indiana the most advanced state in the United States with regard to instruction in foreign languages. His argument was that "It is one thing to read about love and Byron, Keats, Shelley and Shakespeare; it is another thing to be in love, or to have been in love. If you are, or have been, in love you can understand love." If you know another language you can understand another person and you can understand that cultures are different. I would like to say on the other hand that in this same university I picked up a catalog some time ago, of the School for Health, Physical Education and Recreation. It contains a statement, of which I think this is an exact quotation: "The School of Health, Physical Education and Recreation does not require knowledge of foreign languages for its advanced degrees; however, it does urge every candidate for an advanced degree to acquire the effective command of the English language. . . ." So, we have a long way to go, not only in foreign languages but in also our understanding of Russia and Russian military history, and the role that it plays in Russia and the Soviet Union and in the world at large.

Before I go on, I would like to thank the Air Force Academy for inviting me, because I learned so much in the last two days, and for inviting all of the rest of us, because I think we all shared a very exciting and stimulating conference on a subject concerning which some of us are not well informed. The arrangements have been excellent, in fact, I wish our university operated with the same efficiency that this institution does. I also would like to say that I wish that I taught at an institution where the professors are always addressed as "Sir." A few weeks here, and I think my character would change considerably. I would like to thank everyone involved for a very splendid conference, one which I hope will be a foundation on which further study of Russian and Soviet military history will be built.

The Department of History has done very well also in arranging the weather, which has been almost as stimulating as the conference has been. But as I looked at the clouds after lunch this afternoon, I was reminded of the Soviet joke about Brezhnev, who was assigned to Hell after he died. He

negotiated with Satan about his location there. Satan gave him several illustrations of the very splendid facilities in which he might spend the rest of eternity, all very attractive. Brezhnev chose one of these only to be pitched into a vat of boiling oil, where he was being forever tormented by little devils with forked tails and pitchforks. He complained about it, saying: "This is not what I thought I was getting." The explanation he received was that "You received the In-tourist view." Well, I think we have had the "In-tourist" view of the Colorado weather, and I am afraid it is in the process of breaking down.

I hope that those of you who are engaged in the subject of military history, especially in Russian and Soviet military history, in the Western world in particular, will try to overtake and surpass the Soviets in the quality as well as the quantity of their production. Military history is a growing enterprise in the Soviet Union. It is a neglected aspect of history in the United States. We cannot hope to understand Russia—which is very difficult to understand in any case—unless we have an appropriate knowledge of Russian and Soviet military history

Secondly, while Professor Rzheshevsky and General Collins are here, I hope that they, Colonel Reddel and others will begin to talk about joint research operations, particularly on the Second World War. An enormous gap exists between the Soviet operational studies Colonel Glantz mentioned recently and the books about which Professor Rzheshevsky has spoken. The Soviet operational studies are frequently very active and accurate studies; the others do not even have the intention of being objective as we understand objectivity in the United States. So I think that the more we and the Russians, and when I say "we" I mean everybody in the Western world, are together on this enormously important subject, the more we will approach a common definition of the truth and begin better to understand each other.

The other item I wish to mention has to do with the incorporation of military history into the general field of history as it is studied and taught in the United States. Jack Thompson and others have devoted the last twenty or thirty years to trying to increase the attention devoted to what we call "the non-Western world" in American education, because until recently we received an Anglo-Saxon vision of the world. That is now beginning to change. We are now beginning at the same time to introduce something about the role of women in history, particularly in American history. However, we have totally neglected military history, which is enormously important in the history of every country. So, I hope that those of us who are not specialists in military history will renew our efforts to incorporate this kind of history into our understanding of history as a whole.

The last point I would like to make is one that I believe we all share: I hope and pray that this conference in studies of Russian and Soviet military history, and of Russian history in general, will bring about a world in which the splendid graduates of the Air Force Academy and of other academies like this in the United States, and of academies in the Soviet Union and other countries of the world, will be able to devote their lives to expanding the liberties of the world and to defending the peace, and never have to engage in war.

Comments

Ernst Klink

Talking about history is talking about historians. In view of the lectures given during the course of this symposium I want to talk only about the task of the historian—his methods, his questions and his answers. Moreover, to me this seems to be a useful supplement to the very instructive papers. In the end, perhaps you will find that the number of open questions has increased more quickly than the answers which could be given. This seems to me to be a legitimate result of such a symposium. I will focus on the presentations concerned with the Second World War in a wider sense, because this, and especially the war in the East, is my special field of interest.

At least two of the papers, those presented by Col. Glantz and Mr. Donnelly, give me the impression of belonging to military science rather than to military history. Both use some selected historical phenomena of the German-Soviet war, 1941 through 1945, as a basis for an analysis of the development of Soviet military doctrine or the structure of contemporary military planning in the Soviet Union. To both of them the sources seem to be sufficient, in spite of the "tendentious nature of Soviet military history and its frankly irritating narrowr·indedness." Much of their basic material is taken from Soviet publications. I wish to express some suspicion concerning this and will discuss it more later.

To carry out this type of studies in West Germany we have a special Office for Military Studies and Exercises, which does not belong to the historical community. We have largely abandoned applied history, that is, the use of military history to obtain principles for future application. Military history in our view is part of general history and is subject to scholarly methods. One of them is that historical phenomena have to be considered critically in their entirety, that is, together with all the factors by which they are conditioned. And the historical facts of a case are usually so diversified, and never identical, that they do not easily fit into theoretical models. I admit that our concept of military history as the history of the military in its social, economic and political environment has turned too far from researching military operations, but the pendulum seems about to swing back a little. Of course, in the narrower sense of operational history military science has its own high value. In any event, our research in military history is no longer

concerned with hero worship; likewise, the question of the use of history for the education of officers is only a secondary problem.

Military history as an institution within the Soviet Army, with clear, fixed functions in the Soviet Union and toward the outside world, has been described very ably by Mr. Vigor. It is not only history or part of military science, but it is also a vehicle for the continuous justification of a political ideology. It depends on periodic, varying instructions, which do not clearly differentiate between history and propaganda, or, to use a more modern definition, psychological warfare. Soviet military historiography pretends to be objective in the sense of measuring actual developments with the yardstick of certain assumed logical and unalterable social developments. At the same time it must be strictly partial to Marxism-Leninism, which in reality means to the instructions of the ruling Communist Party, obviously including the special branch of military statistics.

The futility of a search for demonstrably true facts amongst a maze of alleged laws of development, as the prerequisites of a reliable and enlightening historiography, has been demonstrated impressively by Mr. Vigor. I think we can agree with everything he says about the function of military history inside the Soviet system and its effectiveness. It has to render homage to Soviet achievements and to the heroism of the masses, as a principle, in order to motivate today's soldiers, and it usually has to belittle the achievements of other nations, especially the Western nations. At the same time it must disguise much about Soviet strength and performance in order not to allow Western historians, politicians and military professionals to arrive at any accurate conclusions about its strength and true intentions.

One of the main contentions of Soviet military history about the Second World War is that it was the Soviet Army and the Soviet Air Force that were primarily responsible for the defeat of the *Wehrmacht*. This thesis is also advocated by East German historians. One of them wrote an article on German aircraft losses in Russia in which he tried to insinuate by means of a maze of loss tables and statistics that the *Luftwaffe* lost most of its planes in the East. Most of his figures were from original documents in West German military archives, but he assembled them in such a way that it is difficult to find the truth. Above all, he omitted the decisive column, which gave the average monthly loss ratio from June 1941 to December 1944 between Eastern and Western theaters of war, that is, 1,000 planes lost against the Western allies and 500 lost against the Russians. If he had published this figure, it would have defeated his own cause.

But let us remain a while with statistics, tables and parameters as an "indubitable" basis for a realistic evaluation. To prove that the German attack of June 22, 1941 on the Soviet Union could succeed only because it was a strategic surprise, and because the Soviet Army was not at all prepared to defend the borders, Col. Patuchov, Candidate of Historical Sciences, in Number 59 of the *International Military Review* (Moscow, 1985), which commemorated the fortieth anniversary of the Soviet victory, presented a table comparing German strength in tanks, guns and planes with Soviet strength on June 22, 1941. It is really like comparing apples with tomatoes.

On the Soviet side only the modern tanks such as the T–34 and KV are counted; on the German side all armored vehicles, including Czech P–35 and P–38 and outdated German types I, II and III tanks, are counted. As to the air forces, only 1,500 modern Soviet planes are confronted with 5,000 German planes, which actually includes all Finnish, Rumanian, Hungarian, Italian, liaison and courier planes. Actually only 1,945 German planes were operational frontline aircraft, while along the western border the Soviets possessed about 9,000 in all.

In this connection I would like to make some further remarks about the problem of the surprise attack. In Western historiography this problem seems, apart from some ignorance of the subject, to be settled as follows: only the Soviet fighting troops and their staffs, up to army level, were taken by tactical surprise, while higher headquarters in Moscow were certainly not surprised strategically. Stalin had been warned repeatedly from London, Washington, and Stockholm, and through other diplomatic channels, of German preparations for an offensive and later of an imminent German attack. Comintern espionage and contact with confidants in Berlin, as well as Soviet air reconnaissance, furnished additional information. The Germans allowed Soviet planes to fly around unmolested, because the Soviets permitted the German reconnaissance planes to violate their air space. So there could not possibly be a strategic surprise. The German High Command, as early as April 1941, no longer believed in effective surprise and quick success, because of their knowledge of Soviet troop movements and other preparations. Halder, Chief of the General Staff of the German Army, was afraid of a Soviet preemptive strike, as can be learned from an entry in his diary, April 7, 1941. It seems that of the Soviet field commanders, Col. Gen. Kirponos, Commander in Chief of the Southwestern *Front*, trusted his own judgment more than the information he received from Moscow. And it was the defense in his sector, especially by the 5th Army, that delayed the advance of the German Army Group *Süd* long enough to thwart Hitler's and Halder's operational plans, which were identical for the first phase. Further proof that surprise was not ubiquitous is the fact that on the morning of June 22, 1941 Col. Gen. F. I. Kuznetsov ordered two of his mechanized Corps to attack the 41st Tank Corps (*Panzergruppe 4*), which they did on June 23. They must have been ready for operation.

Another example of the dubious value of comparisons contained in Soviet historiography is the book, published as *Memoirs of Marshal Zhukov*. It not only grossly exaggerates the strength of the German troops in Russia early in November 1942, but it also inflates German and Rumanian strength around Stalingrad to make the ingenious performance of the *Stavka*, as a planning braintrust, more visible and to make the success against the Germans appear greater. Stalingrad was not a "Cannae" for the German *Wehrmacht*. The battle was of course a disaster for the 6th German Army, for the Rumanians, and for the Hungarian Army, but it did not decide the war, as can be seen in the fact that the Soviet Army needed an additional twenty-seven months on the "road to Berlin." It is also not true that the German staffs or the troops in Stalingrad were surprised by the offensive of the Soviet *fronts*—which Zhukov esteems highly as proof of Soviet art of

war. On the contrary, Army Group B and the 6th Army were well informed by intelligence and air reconnaissance about Soviet deployment, with the exception of the Soviet tank corps. They expected a Soviet offensive against which they took defensive measures as far as it was possible. The German blunder lay in the fact that the Army High Command until late October believed the main Soviet thrust to be directed further north against Smolensk. They assumed that, since this was the most delicate sector of the German front, the Russians would act like the German General Staff and attack this weak point. A breakthrough there would really signify a shattering defeat of strategic significance.

Continuing with the evaluation of Soviet historical descriptions and strength tables and their usefulness for promoting the progress of the Soviet art of war, one should note that they usually exclude certain elements essential for the historical assessment of operations and their results as far as the German side is concerned. Here, for example, I think of the supply situation and of the fact that the supply routes and depots could not, in the last years of the war, be palpably interfered with by the Germans, but I also think of the eminent role of American supplies of trucks and foodstuffs, shoes and clothing. I found that in Soviet statistics the American trucks are usually not mentioned. Instead, the numbers of American planes and tanks are given in connection with the enormous Soviet production figures of the same weapons in order to make American aid appear insignificant. Indeed, it was still insignificant when the Germans were stopped before Moscow, but the trucks were indispensable later on to carry out deep penetration movements, especially when one compares the 427,000 American trucks with the much lower Soviet truck production figures. Rarely is the enemy situation mentioned, except when it comes to high enemy losses. But to assess the successes of Soviet operations from July 1943 to May 1945, one should consider a number of factors: against what a conglomerate of armies and smaller units they were achieved; what the real strength, or rather the weakness, of the German Army and its brothers-in-arms, as well as their air forces on the Eastern Front was at that time; and how poorly the Germans were equipped. Special consideration should be given to Soviet partisan activities, which greatly weakened the German front by cutting roads and railroad lines, by surprise attacks against military and civil personnel behind the lines and by preventing continuous supply, as well as furnishing intelligence about all echelons of the German Army to the Soviet troop staffs.

Toward the end of his painstaking and instructive paper, Colonel Glantz mentions the fact that airborne troops now are incorporated into Soviet armies as their vertical dimension. The historian's question, of course, would be whether they will be also used. We know that the Soviet Army was the first to maintain parachute and airborne troops long before World War II. But with the exception of the cauldron near Smolensk in early 1942, and some smaller operations later on in the south and against the Japanese, they were never employed in major operations.

I want to provide only a short annotation concerning the role of the Cossacks during the German-Russian War of 1941–1945, adding to the

paper of Dr. Bruce Menning. The flying force, a cavalry unit capable of independent operations, was used not only in the Soviet Army, but it was revived also by the Germans. They were considered reliable, and their long experience in "small wars" up to the twentieth century made them in German eyes especially fit for fighting partisans. The first units of the Cossack Corps were recruited just at the time when the last German Cavalry Division was dissolved. The historical problem of these and a lot of other military units of Russian birth seems to be a forgotten one in Soviet historiography.

Perhaps one should add that the development of the Soviet deep penetration operation cannot be considered without taking a look at the share contributed by the air armies. I thank my colleague, Dr. Horst Boog, for his assistance in all matters in this paper relating to air force matters. Dr. Hardesty gives us a concise summary of those parts of his book, *The Red Phoenix*, that deal with the question of how, after the initial setbacks in 1941, the Soviet Air Force was reorganized in 1942–1943 to support effectively the ground troops tactically and how it forged the means to gain air supremacy over the *Luftwaffe*. His information is mainly derived from Soviet publications which, in this case, seem to have offered sufficiently sound material to delineate the development of Soviet tactical air power. As a precondition of the successful reorganization, he is certainly correct in mentioning the loosening of the Communist Party's grip to allow more freedom for military professionalism, while later the party gave further impetus. The question is whether Stalin's appeal to patriotism was not a stronger incentive than the party's leadership.

Dr. Hardesty is absolutely right in calling the evacuation of the aircraft industry behind the Urals a key factor in the rebirth of the Soviet Air Force and an herculean achievement. The Germans had neglected this possibility because they expected a short war in which the potential developed later would not count. This was their biggest blunder. They also abstained from bombing the aircraft factories because they intended to use them themselves after the occupation of the country. Further proof is required to demonstrate that the industries transferred were really so essential for the production boom, or whether the Soviets had, long before, clandestinely built up large industries in Siberia which were later activated.

That the tactical character of the Soviet Air Force had something to do with Russian geography is evident. The Germans, therefore, employed the *Luftwaffe* along the same line and, at first, purposely neglected strategic air war. Of course this was also because of the insufficient range of their bombers. But back to the Soviets. Was their need for tactical air support the only reason not to be overly concerned with long-range bombers and escort fighters? The Soviets were among the first to maintain a strategic bomber force before World War II. Why didn't they use it in the war? Certainly, as the Germans could observe in the first years of the war, because of the insufficient training of the Soviet bomber crews. Or were they no longer aware of the possibilities of strategic air warfare? When we consider the scarcity of lines of transportation in the vast Russian territory, as well as the location of German supply depots and the transfer of German armament

factories to the east, Soviet long-range bombers, had they been employed strategically and not only tactically, could have interrupted German supply lines and done much damage to the German war effort. Maybe fighting the German supply lines was thought to be better executed by the partisans. German commanders were frequently surprised that the Soviet Air Force did not attack German lines of retreat or retreat movements.

Marxist-Leninist historians have another version for the Soviet neglect of strategic air war. This is the moral disdain of the Soviets toward the indiscriminate nature which strategic air warfare could not help assuming. One certainly should take this argument for what it is: propaganda. Because, on the other hand, Marxist-Leninist historians also deplore the fact that the French dissolved their two strategic air corps after the fall of the People's Front Government and thus could not and did not conduct strategic bombing against Germany. Only what helps the Soviets is good. In any event, one has the impression that the Soviets developed a huge tactical air force in excess of actual tactical needs, and one would like to know more about the reasons why the Soviets used even their long-range aircraft almost entirely tactically.

Dr. Hardesty clearly describes the reorganization of the Soviet Air Force under the able leadership of Marshal Novikov, of whom, unfortunately, not very much is known. The new air armies allowed for greater mobility and concentration of force, and the revival of the offensive air doctrine together with the advent of modern fighters, better tactics and ground attack planes were the prerequisites of air supremacy and thus of the operational freedom of the ground forces. Over preoccupation with tactical air war obviously retarded jet and strategic bomber development, so that, as Dr. Hardesty says, the strengths of the war became burdensome legacies in the nuclear age, at least in its first years. Air Vice-Marshal Mason starts out from this situation in his paper to demonstrate the marked progress made by the Soviets since then in air strategy. In spite of, and even after the reorganization, the German pilots, almost to the end of the war, believed themselves to be superior to the mass of Russian pilots in tactics and training, but numbers finally counted more. It stands to reason that also the reorganization of the rear area, including maintenance and the parallel formation of tank armies, contributed substantially to later tactical and strategic success.

One very important lesson Dr. Hardesty's paper teaches us, and which turned out to be a vital element of Soviet recovery during the war, was the Russian capacity for pragmatic improvisations under stress. In its prewar estimates of Soviet strength, the *Luftwaffe* expressly dealt with that ability, but belittled it fatally.

This phenomenon seems to be characteristic of all Russian armies since the beginning of the nineteenth century. Improvisation, the soldier's bravery, his modesty, and obedience were emphasized as well by the Prussian General von Scharnhorst in 1811, as in 1941 by the Department of Foreign Armies East in the General Staff of the German Army and, as we have heard, by Brig. Gen. Lajoie in our own time. Another phenomenon is the fighting people behind the front of every invader, which causes not only high losses but also barbarity in warfare. As we see, the problems of mass mobilization, overcoming great distances, and other problems are not

unfamiliar in Russian and Soviet military history. They always were mastered. I am not sure that this mastery during World War II can be called the "Art of War," for I fear we are in the wrong century for such a characterization.

Comments

Jean-Christophe Romer

Summarizing such rich contributions is not an easy task. During these two days, we have had the widest possible vision of over a hundred years of military affairs in Imperial and Soviet Russia. This has given us the possibility of appreciating not only the changes but also the continuity in Soviet-Russian military thought. Because everything, or nearly everything, has already been said, summing up the ideas of the symposium will be difficult. If I do not mention everyone's name, be sure that all the papers have been taken into consideration.

If I had to sum up these two days in one sentence, I would say that history is the beginning and also the way of telling it, which is far from being the same thing, especially in the Soviet Union. Thus, my first point is to analyze the function of history in the USSR. The second point originates from C. Donnelly's paper, where he said that "there are very few new ideas employed in wars," demonstrating the continuity in Soviet military thought.

History is not and has never been innocent. This is particularly obvious in the Soviet Union. It is obvious because history as well as military affairs are social sciences and thus deeply linked with the general political "line." P. Vigor correlated the creation of the first *Voenno-istoricheskii zhurnal* in 1939 with the publishing of the *History of the CPSU* (commonly called the *Kratkii kurs*, or *Short Course*) and thus with establishing a Stalinist vision of the history of the USSR. He correlated the rebirth of the journal, in 1959, with the zenith of Khrushchev's power. This is both true and relevant. Such examples of history used to legitimate power are numerous in the Soviet Union, as in many other countries. I would like to mention two other examples.

With regard to the specific role of Marshal Novikov during World War II, V. Hardesty mentioned the "relative professional freedom to develop new fighter tactics" in the middle period of the war. This very relative "freedom" corresponds to a similar situation in Soviet society as a whole, when the leading role of the CPSU declined in favor of the traditional Russian nationalism promoted by Stalin himself as a more efficient slogan to mobilize the Soviet people. This situation lasted up to 1946.

But 1946 shows a break with those years. It is a year when Stalin decided to return to party orthodoxy in the whole country. This change began with Zhdanov's speech against literature, music and philosophy. The *Zhdanovshchina* also affected other fields of social life such as economics or in 1947, international relations. It is also true that this general campaign of ideological rectification affected military affairs.

From April 1946, the main "heroes" of the Great Patriotic War: Zhukov, Novikov, Rokossovskii, Tolbukhin, and Golovanov were ousted from Moscow. At the same time, using the pretext of an anti-Clausewitz campaign, a general campaign against German military thought—including Engels!—was enlarged. Stalin set forth the only permitted military line. His ideas were limited to the opposition between the manufacturing period of wars and the motorized period, and then to the opposition between permanent- and temporary-acting factors in wars. Those were the only two subjects of military thought about which it was permissible to write in the Soviet Union, since it was unbelievable to contradict the one who considered himself as the most brilliant strategist history ever knew and who liked being compared to Kutuzov. After Stalin's death, Soviet strategic thought followed the fluctuations and hesitations of political life until Khrushchev assumed complete power in 1957. All this means that, because military affairs, including military history, are closely correlated with political life, they have specific political functions.

As has been established by most speakers, the Great Patriotic War is the most frequent theme used by Soviet military historians; then comes the Civil War and the Patriotic War of 1812. The reason why these three events are the favorite subjects of history is, as stated by P. Vigor, to prove that the Russian-Soviet armies are invincible. But we can add to this two other reasons, two other functions.

The first one is to prove that Russia as well as the Soviet Union have always been victims of invasions from the West. Curiously, the Mongolian invasion is hardly ever mentioned. The presentation by the USSR of itself as a victim corresponds both to an internal and an external necessity. From an internal point of view it has been used, from Lenin to Gorbachev, as an argument to justify the slogans of vigilance and of the necessity to be on the alert (*bditel'nost'* and *boevaia gotovnost'*). If there was no external threat, how could it be possible to reconcile the "peace-loving" rhetoric and the militarization of society? From the external point of view, it is used as the main propaganda toward the Western world to prove that the Soviet government has always had a "peace-loving" policy and that the true threat comes from the "imperialist world."

The second function of military history as a whole is mainly internal. It is often used as a way to express new priorities and new developments in the art of war, especially in operational art. In a society where it is difficult, if not impossible or prohibited to say things directly and openly, history is a privileged tool, used to send messages to Soviet soldiers who should translate it immediately into contemporary language. This function leads me to the second point I wanted to develop: "there are very few new ideas employed in wars."

I do not intend to present a complete list of those constant or permanent ideas in the Russian-Soviet art of war. You probably noticed that some of the same ideas, the same words, appeared in nearly all the speeches we have heard. I shall mention the most significant of them. From a general point of view, those ideas, of course, do not appear or reappear at the same time. This makes me believe that Soviet military thought is cumulative and selective; whatever the technological changes in weaponry, we find nearly the same concepts throughout. We could say that Russia, and then the USSR, capitalized a certain number of theories that are permanently adaptable to new circumstances, whether they be political or technological And if the Soviets have shown a rather weak capability for innovation in ideas, perhaps it is because they do not really need it.

The most permanent factor in Soviet military history is of course its geography! J. Kipp and W. Pintner insisted on the importance of the means of communication inside the Russian Empire and especially on the specific military role of the railways. I think this is a good opportunity to recall that without Russian railways perhaps the theories of Sir Halford McKinder would never have developed.

Also, as noted by W. Pintner, from Imperial Russia comes the idea of the necessity of a mass army, as opposed to a smaller, more technical one. This idea has always been reasserted in the Soviet Union, especially after the introduction of nuclear weapons. Soviet military thinkers have always fought against the idea that, because of nuclear weapons, mass armies are no longer necessary. On this point, they regularly criticized Western theories on smaller professional armies, especially in the mid-1950s and 1960s. For the Soviets, and it remains true today, man will never be replaced by technology.

After the 1917 Revolution, more precisely in the mid-1930s, there appeared another constant idea which is regularly mentioned, used and readapted to modern circumstances: the theory of deep operations with massive use of tanks! Such an idea has been developed here by most speakers whose papers were devoted to the post-1920s. The point is, should this idea be considered as a specifically Soviet idea or as European? Indeed, the British consider that it was first developed by Liddell Hart. The French consider that a young tank colonel, Charles de Gaulle, first proposed it, after discussions he had with a young Tsarist officer, Tukhachevskii, when they both were prisoners in Ingolstadt Fortress during World War I. In fact, Hitler first put it into practice in 1939. As for the Soviet Union, this idea came to be used from the middle period of World War II and then disappeared from Soviet writings about operational art up to the 1960s. From that time on, it has been regularly mentioned and can be considered the origin of what we call today the Operational Maneuver Group, all of which has been perfectly recalled by J. Kipp, C. Donnelly and D. Glantz.

Nevertheless, among the subjects mentioned during these two days, one has perhaps been underestimated, since only two papers mentioned it. It is the consequence of the appearance of nuclear weapons, or better to say, of the atomic bomb, which sounds more historical in Soviet military thought. And if we consider that the period from the end of World War II up to the

1960s is already history, I think it deserves to be widely studied. The interesting thing about nuclear weapons, and I come back to the persistence of Soviet military thought, is that they did not fundamentally change the concepts in force or rather did not add really new ones. The idea of an annihilating strike (*sokrushitel'nyi otpor*) is often considered as the typically "Sokolovskian" concept. But you can find such a concept long before Sokolovskii. From an operational point of view, Stalin mentioned it in 1934, in his speech before the Seventeenth Congress of the CPSU. We can find it again in 1949, the apogee year of the cult of the personality. But from a strategic point of view and correlated with atomic weapons, it appeared occasionally in 1952 and regularly after 1954. Such examples of constancy in Soviet military concepts are numerous. But I shall stop with examples and go to my conclusion.

I began by saying that history is not and has never been innocent. This symposium was devoted to Russian and Soviet military history. We listened with great interest to speeches about Imperial Russia, about the years of Revolution, which are perhaps the only atypical years in Russian-Soviet military history from the point of view of continuity. We also talked about World War II and about more recent years. But in fact have we talked about anything other than about today's Soviet military thought?

Comments

Malcolm Mackintosh

I would like to say first of all that we have heard fascinating accounts of the traditions and background of the Russian attitude to warfare at this symposium, also a defense of the kind of forces which the Russians have built up from the Tsarist period into modern times. There seems to be general agreement, as far as I can understand, that Russian military needs have been dominated by geography, history, and in one form or another, ideology. The country's lack of natural defenses, long periods of foreign occupation, particularly from the east, and the convictions of their emerging rulers as the various Russian states came into existence all played a role. Their need to rely on the masses in defense, together with a sense of inferiority about the superiorities of the potential opponent, did much to create and to consolidate the military practices of Russia as described by many speakers and commentators at this symposium. These practices also involved a history of absolutism in the government of Russia and an apparent need for rigorous mathematical analysis in military matters. Many of these principles also appeared in the conduct of operations in the Second World War, and I would like to concentrate my remarks on World War II and also to add one other historical element which I think emerged from it.

I put the operations of World War II under the general heading of "the capacity to adapt and a resourcefulness based on battle experience." In order to do this, I would like to recall my own impressions when I was in the Balkans with the Soviet Army toward the end of the World War II. This is also based on some published Soviet and German material about a hypothetical, regimental-sized operation by the Soviet Army in mid-1944 in the Balkans which was in a sense my parish in that period of the war.

What I would like to do is to take a rifle regiment from one of the armies, the 37th Army of the 3d Ukrainian *Front* in the summer and early fall of 1944 and see how it conducted a defensive operation in the Iassy-Kishinev Operation of that period. So, let's look at our rifle regiment. At about that time it was composed of between 1,200 and 1,500 men organized into three rifle battalions, each with three rifle companies, a machinegun company, a mortar company and one artillery battery. The regiment also had a signal company, sometimes two antitank companies with 57-mm guns, one

mortar company with one or two 82-mm mortars, a self-propelled gun troop, an artillery battery and an antiaircraft machinegun troop. Normally, one of the rifle companies in each battalion was especially trained for street fighting. Some platoons were trained for reconnaissance, and sometimes one in the regiment could be mounted if horses were available. The regiment had, in addition, one engineering platoon and a chemical defense element which worked closely with the engineers. All the ammunition and other supply trucks were horsedrawn as were the field kitchens. If the regiment was fortunate, it had a detachment of medical NCOs who normally carried out the medical treatment of officers and men in the absence of army doctors who were rarely allocated to units or formations below division level.

As part of the divisional corps or army preparation for this offensive operation, our Soviet rifle regiment moved from the rear area into a frontline position at night in complete silence, after three or four days and nights of battlefield reconnaissance carried out by reconnaissance units of the same size as the previous unit to hold that part of the line. In order to deceive the enemy's intelligence, reconnaissance was never carried out by the unit about to attack, in case a soldier was taken prisoner and revealed the identification of his unit, details of the new battle plan, or indeed information on the larger formations concerned. Moreover, as few orders as possible were written down for the same reason. Oral commands and instructions were given whenever possible. On taking up the attack position, great attention was paid by the regiment to camouflage and to limiting liaison with neighboring detachments as much as possible. Visits by staff officers from them or from higher headquarters were kept to a minimum. No further reconnaissance was carried out. The regiment relied on the intelligence provided by the previous unit, but in certain geographical environments, infiltration into the enemy's lines was often attempted.

During the night before the attack, the regiment fanned out into three, four, or five mixed battle groups. In front there would be a vanguard battalion or company, including special units for mine clearing and for dealing with barbed wire entanglements. In the immediate rear was the main strike force, formed exclusively of infantry, armed with rifles, grenades, handguns and light machineguns of the unit, supported by one or two battalions, or ad hoc groups, also with infantry which followed the main force or carried out flank or other diversionary attacks on the enemy position. In the rear, with the regimental command posts and supply vehicles, there was a force of tanks provided by the rifle division to which the regiment was subordinated, or a neighboring armored formation assigned to that particular operation. There were also self-propelled guns and the medium or heavy artillery of the army or of the *front*.

I hesitate here to use the following sentence, but in fact, in normal attacks of this kind, no air support was available to support the opening phases of the assault. The air force was used later on. The attack that I am specifically recalling was in summer, began at about four-thirty in the morning, perhaps five, and was preceded by a very short artillery bombardment, usually in order to achieve surprise. The task of the rifle regiment was to break through the enemy's position frontally by mass

infantry attacks supported by artillery but not by tanks. The regimental commander had the option of using all his infantry groups in the main thrust if it was going well, or to launch flank and diversionary attacks to complete the breakthrough. A high level of casualties in this phase of the operation was both expected and accepted; second echelon infantry were ready and could be called out by the commander or the chief of staff, who always took over if the commander was killed or disabled. In most cases the Russians used captured German field telephones or radios, which most Soviet Army units had acquired by 1944. There was a minor problem in that some of the German field telephones used the letters of the Latin alphabet, which was not normally known to the Russian-speaking Soviet Army officers or men. When the breakthrough by the infantry had been achieved, the divisional commander sent the tanks and self-propelled artillery to punch a hole in the enemy's second and third lines of defense and to prepare the way for tactical, operational encirclement of the main enemy force. The surviving infantry covered the armored forces' advance on the flanks while reinforcements rode on the backs of tanks, and other vehicles moved forward to spread the captured zone. Their task was to seek likely areas of weakness in the enemy's in-depth defenses so that an encirclement operation could be accomplished as soon as possible. They also had to be ready to take defensive positions and to beat off enemy counterattacks, including attacks by tanks.

By late 1944 the Germans had become used to these tactics. Heavily outnumbered as they usually were, they were frequently unable to hold their frontline positions and had to face a powerful force of tanks and self-propelled artillery driving through their lines, disorganizing their command and control structures or widening gaps already created by the infantry. German tactics involved using their heaviest artillery and air power to try to shatter the Soviet tank force during a pause for regrouping; this sometimes succeeded. The Soviet Army's response was to call in their air force to attack these heavy gun sites. As previously mentioned in this symposium, this did not always succeed, due to a lack of coordination between the army and air force, for which obsessive secrecy and poor field communications were often the reasons. However, the tank force usually spread out within the main German defenses supported by the rifle regiment. Surviving infantry, self-propelled guns and other artillery broke through into the rear area of the enemy's defense lines and let other Soviet Army forces advance from another flank.

Heavily attacked by the Soviet Air Force, the Germans usually retreated in good order to prepared positions, whereafter our regiment was to await further orders. Unless casualties had reached 50 to 55 percent or more, it was likely that the regiment would join in the pursuit or perhaps attempt further assault operations.

From the point of view of military history, perhaps the most important conclusions from this picture of the Soviet Army's regimental attack in 1944 are, first of all, the priority given by the Soviet Army at that time, to secrecy, concealment, and deception, especially in reconnaissance. Second, you have the relatively limited amount of artillery and air support given to

our rifle regiment going into attack. Third, there is the responsibility of the infantry, almost on its own, to achieve the initial breakthrough. Fourth, we have the role of the tanks and self-propelled guns as a mobile group and the importance of disruption and disorganization of the enemy's command and control and of rear areas. In this regard, may I suggest it was a forerunner of the contemporary operational maneuver concept. Fifth, unlike much publicized material on the Soviet Army's tactics, and this is really why I raised this, much tactical freedom was given to the local commander, the regimental commander, once the battle was under way. For example, he could sometimes decide to launch a flank attack or to concentrate on the main thrust. And finally, everything led to the ultimate encirclement of the enemy at all levels, leading to the final destruction of the main forces opposing the Soviet Army in this sector.

In conclusion, as we are encouraged to suggest some subjects which military historians in the West, particularly in the United States, might care to look at as possible subjects, I believe that some of these factors in Soviet war-fighting practices warrant further attention. I am particularly interested in one aspect of this, in addition to the main strategy and tactics of the Soviet Army at that time. This is the element of the adaptability and the resourcefulness of the field commander in action, both at lower and higher levels. It might be that there is a much more up-to-date example of what I have been trying to describe, for example, in Soviet tactics in Afghanistan, which, I understand, changed considerably following the entry of Soviet troops into that country in December 1979.

Comments

Oleg Rzheshevsky

To begin with, I have several words to say about how Soviet scholarship sees the history of its country. From ancient times, the peoples who populated the territory of the Soviet Union have played an important role in world history. In Trans-Caucasia, in Middle Asia, to the north of the Black Sea and in the general area of the Dnepr River, powerful ancient governments appeared and attained mature development. In the Middle Ages, the fate of Europe was in many ways connected to the fate of the Russian state, which shielded European civilization from the hordes of Genghis Khan. The history of the Russian state at that time was the history of a people's struggle for its national independence. Its most difficult phases were during the period of the Mongolian invasions of the thirteenth century, which wreaked horrible destruction, not only on Russian lands, but also upon the peoples of Middle Asia and the Caucasus.

Russia overcame the unpleasant conditions under which she was forced to develop in the period of the Mongolian invasion and also the double isolation from European and eastern nations. In the seventeenth century we can place her in the ranks of great powers, as an enormous, multinational state, including the Trans-Caucasus and Middle Asia, in addition to the territory populated by the Russian, Ukrainian, and White Russian peoples. The role of Russia as a powerful nation clearly appeared at the beginning of the nineteenth century, when the Russian people by means of their struggle during the Patriotic War of 1812 smashed the plan of Napoleon who was attempting to create a world empire.

During the First World War, which was carried out for a redistribution of possessions and spheres of influence by two groups of imperialist powers, Russia, having accepted the blows of the German Army in the east, rendered priceless assistance to her Entente allies. At that same time, Russia was an autocratic country with serfdom and national oppression, in which, until the last days of the Tsarist Empire, the highly developed forms of the new capitalism were mixed with the remnants of feudal order. This was a country in which the backwardness and deprivation of the people joined with the great achievements of its cultures; just wars in defense of one's homeland and the independence of peoples of other countries joined

with unjust, aggressive wars; the toiling masses who possessed no rights joined with a powerful revolutionary energy which was languishing in their hearts.

In 1917, the victory of the Great October Socialist Revolution in Russia, the main event of the twentieth century, changed in a fundamental manner the course of the development of all mankind. Lenin's Decree on Peace was the first decree of Soviet power that proclaimed a new principle of international relations—a main line of foreign policy which the Soviet government subsequently followed. This same Decree on Peace simultaneously determined and established the defensive character of Soviet military doctrine which was again confirmed at the Twenty-seventh Congress of the Communist Party of the Soviet Union.[1]

Imperialism answered with war. Foreign military intervention and the Civil War (1918–1922) were the first aggressions of the capitalist world against the young Soviet government, in the course of which the people by armed force defended their freedom and independence and their right to a new way of life.

In 1941, the war thrust upon the Soviet Union by Fascist Germany was the second and most powerful armed action of the shock forces of world imperialism against socialism, one of the most severe experiences that our Motherland ever endured. The Great Patriotic War of the Soviet Union against the German-Fascist aggressors decided not only the fate of the Soviet government, but also the future of all the world's civilizations. This is an indisputable historical fact—that from the first shots of the war, all its long 1,418 days, the Soviet people struggled not only for the freedom of their own country, but also for the independence of all other peoples who were under the yoke of the aggressors. In so doing, the Soviet people saw it as their patriotic and international duty. The Soviet armed forces made the main contribution to the victory over the aggressors. On the Soviet-German front, approximately two-thirds of the personnel and of the combat equipment of the German-Fascist Army was destroyed.

Over 20 million Soviet lives were lost in the war; thousands of cities and villages were destroyed; nearly 30 percent of the nation's wealth was lost. Great losses occurred not only in the course of freeing Soviet soil from the aggressors, but also during the freeing of the peoples of Europe and Asia from the Fascist-militarist yoke. The Soviet armed forces completely or partially liberated thirteen countries and 2.2 million square kilometers of territory with a population of nearly 147 million people. The loss of Soviet troops, counting only the dead, was more than one million. During the liberation of Rumania, 69,000 died; Poland, 600,000; Yugoslavia and its Eastern regions, 8,000; Czechoslovakia, 140,000; Hungary, over 140,000; Norway (the province of Finmark), 2,000; Austria (its eastern regions), 26,000; China (in its northeastern provinces), 8,000; Korea (to the 38th parallel), 1,500.[2] In the Berlin Operation alone, from April 16 through May 8, 1945, Soviet troops lost more than 102,000 men.[3]

In the West, the liberating mission of the Soviet armed forces is frequently presented as some kind of "forced export of revolution." Nothing could be further from the truth. V. I. Lenin wrote: "Revolutions are not

made according to orders, [they] do not coincide with this or any other moment; rather they ripen in the process of historical development and burst out at that moment, conditioned by a complex of a whole series of internal and external reasons."[4] It is well known that in a series of countries on whose territory Soviet troops were located (Austria, Denmark, Norway, and Iran) even until the present day bourgeois order rules. Apparently, in these countries the internal prerequisites which would have secured their revolutions did not exist. At the same time, in Albania, and Vietnam, where there were no Soviet troops, revolutions did occur. In the postwar period, there are more than enough such examples. At the same time, the Soviet Union is a consistent enemy of the export of counterrevolution. However, we consider the use of armed forces in these matters, for securing the safety of Soviet borders and for assistance to our allies, to be an exceptional measure in a critical situation, when all other paths to stop direct or indirect imperialist aggression are fully exhausted, as was the case in Hungary in 1956, in Czechoslovakia in 1968 and in Afghanistan in 1979. The victory over the Fascist-militarist block in the Second World War was gained with the efforts of many countries and peoples united in an anti-Hitler coalition, in which the leading role belonged to three great powers, the United Kingdom, the Soviet Union and the United States of America.

In the Soviet Union we evaluate according to merit, not belittling and not keeping silent about the contribution of the main allies and of all peoples contributing to the general victory. The General Secretary of the Central Committee of the Communist Party of the Soviet Union, M. S. Gorbachev, on the fortieth anniversary of the victory said:

> *In noting Victory Day we recognize the military valor of the soldiers of the Allied Armies—those of the USA, the United Kingdom, of France . . . the Soviet people have not forgotten and never will forget about the major contribution which was rendered in the struggle with the common enemy by the peoples of the countries of the anti-Hitler coalition, by the fighters of peoples liberation armies, partisans and undergrounds, participants in the anti-Fascist uprisings and opposition movements.*[5]

This immutable and objective evaluation is expressed in all the major works of Soviet historians, including the multivolume *History of the Second World War, 1939–1945*,* where economic, political and especially military aspects of a given problem are completely and complexly discussed.

Just what are the theoretical perspectives of Soviet historians and what are the fundamental directions of their activities? We view military history as a part of historical science, which studies wars and armed forces of the past, and also the experience of military activity by masses, classes and parties. Military history includes the following: the history of wars and military art, the history of the construction of armed forces, the history of military weaponry, and the history of military thought. Its special branches

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**Istoriia Vtoroi mirovoi voiny, 1939–1945*, 12 vols (Moscow, 1973–1982). Ed.

are military historiography, military-historical source study, military study of early texts, military archaeology and military statistics. The leading branches are the history of wars and of military art. Marxist-Leninist study of war and the army is the methodological basis of Soviet military-historical research. It promotes the formation of the world outlook and the historical knowledge of our people and has great meaning in the affairs of combat training, in the education of the personnel of the armed forces in a spirit of patriotism and internationalism.[6]

The leading institution in our country which is occupied with the study of military history is the Institute of Military History of the Ministry of Defense of the USSR, created in 1966 (Lt. Gen. P. A. Zhilin,* its Chief until 1987, was a member-correspondent of the Academy of Sciences of the USSR). The Institute is a part of the Department of History of the Academy of Sciences. Several institutes have military history sections which work with the Institute of Military History.

In recent years, a series of major new works dedicated to the history of wars and military art have been published in the USSR. The Commission on the Publishing of Diplomatic Documents, attached to the Foreign Ministry of the USSR, has published collected documents under the title, *The Soviet Union at International Conferences in the period of the Great Patriotic War, 1941–1945*, in six volumes (Moscow, 1974–1984),† as well as documents and materials of Anglo-Soviet, Franco-Soviet, and Soviet-American relations during the Great Patriotic War in six volumes, (Moscow, 1984).‡ As noted earlier, the twelve-volume work, *History of the Second World War, 1939–1945* (Moscow, 1973–1982), was developed and published by the Institute of Military History of the Ministry of Defense of the USSR, by the Institute of Marxism-Leninism of the Central Committee of the CPSU, by the Institute of General History, and by the Institute of History of the USSR of the Academy of Sciences of the USSR. A subsequent work is *The Second World War: Results and Lessons* (Moscow, 1985).** The translation and publication of the referenced twelve-volume work is being completed in Hungary, the German Democratic Republic (GDR), Bulgaria, Poland, Czechoslovakia and partially in Japan. The single-volume work prepared by the Institute of Marxism-Leninism, *The Great Patriotic War of the Soviet Union, 1941–1945: A Short History* (3d edition), was also published.††

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*Deceased 1987. Ed.

†A. A. Gromyko, et al, eds, *Sovetskii Soiuz na mezhdunarodnykh konferentsiiakh perioda Velikoi otechestvennoi voiny, 1941–1945*. Ed.

‡A. A. Gromyko, et al, eds, *Sovetsko-amerikanskie otnosheniia vo vremia Velikoi otechestvennoi voiny, 1941–1945. Dokumenty i materialy*. 2 vols; *Sovetsko-angliiskie otnosheniia vo vremia Velikoi otechestvennoi voiny, 1941–1945. Dokumenty i materialy*. 2 vols; *Sovetsko-frantsuzskie otnosheniia vo vremia Velikoi otechestvennoi voiny, 1941–1945. Dokumenty i materialy*. 2 vols. Ed.

**S. L. Sokolov, *Vtoraia mirovaia voina. Itogi i uroki*. Ed.

††B. S. Tel'pukhovskii, et al, *Velikaia otechestvennaia voina Sovetskogo Soiuza, 1941–1945* (Moscow, 1984). Ed.

As a result of the joint efforts of historians of the eight countries of socialist cooperation (Bulgaria, GDR, Hungary, Mongolia, Poland, Rumania, the USSR and Czechoslovakia) an international, scientific-popular work, *The Second World War: A Short History*, has been prepared and published. The demand for such works and their recognition has been exceptionally great. The Soviet Union is a "reading nation." The quantity of book titles published on the history of the Great Patriotic War and Second World War, including memoirs, has reached 25,000 and continues to grow. The level of their popularity is witnessed by the fact that the memoirs of Marshal of the Soviet Union G. K. Zhukov have already been published in eight million copies, a figure which falls far short of satisfying the demand and orders of book stores. Many of the indicated works have been translated into English and other languages.

Considerable attention to theoretical and other problems of the history of wars and military art is given in such basic works as *The Soviet Military Encyclopedia*,[7] the *Military-Encyclopedic Dictionary*,[8] and the *Encyclopedia of the Great Patriotic War, 1941–1945*.[9] A new textbook for military academies has been published on the history of military art,[10] as well as a series of works on the Civil War, the First World War, on wars of the prerevolutionary period and many others. The works of Russian historians of the past are also being republished, including a new publication of the multivolume works of S. M. Solov'ev and V. O. Kliuchevskii.

We are striving to acquaint our readers with foreign military experience, with the history of individual countries of the military period, with the perspectives of Western historians and memoir writers of these events. In the USSR, over 150 books by Western historians and memoir writers have been translated and published on the Second World War. Among them, the memoirs of Charles de Gaulle, the British *Grand Strategy*; such official works by American historians as *The Command Decisions*, and *High Command*, by F. Pogue; the works of M. Matloff, S. Morison, C. MacDonald; the memoirs of Omar Bradley, Douglas MacArthur, David Eisenhower, and others; from Hitlerite generals, those of F. Halder, K. Tippelskirch, H. Guderian; books of the English historian L. Mosley on the causes of the Second World War; and the West German historian K. Rheinhardt on the Battle of Moscow, etc. Their circulation is also typical, with the fourth volume of Grand Strategy by the well-known English historian M. Howard published in 1980 with a circulation of 100,000 copies; the memoirs of Eisenhower in 65,000 copies; and the book by B. Liddell Hart about the Second World war in 50,000 copies.

Soviet historians naturally consider historical experience from the position of the present, with the threats and hopes of the nuclear era which demand new political and military thought. The responsibility of the historian and even more of the military historian is exceptionally great. The classical formula of Clausewitz that war is the continuation of policy by other means is irrelevant insofar as nuclear war is concerned. Political aims in nuclear war cannot be achieved by any side. In world history there is much that separates countries as well as at the same time much that unites them. Soviet historians perceive one of the most important tasks to be the

disclosure, in events of the past, of that which unites the national interests of countries and peoples, of that which promotes closer ties and the normalization of relations between governments, and subsequently of staving off military confrontation so ruinous in the nuclear era.

Look at our publications and you will see what we say concerning the study of the history of the United States and the considerable attention given the position of Russia and her "armed neutrality" on the high seas during the period of the war of the United States for its independence. A characteristic evaluation of the American War of Independence was given by V. I. Lenin, which places it among the number of "great, truly liberating, truly revolutionary wars."[11] At the center of attention of this awareness of international relations of the period of the Second World War, the history of the anti-Hitler coalition serves as an example of the cooperation of governments with different social systems with the goals of united efforts for the defeat of aggressors, and exposes the possibilities and the limits of this cooperation which are so necessary to know today. It is precisely this concept that is traced in part in the four-volume work, *The History of the USA*, which was prepared by scholars of the Institute of World History of the Academy of Sciences of the USSR in the years 1984–1987.[12]

We greet and actively support the development of scientific contacts between military historians of our two countries, to which a concrete path was laid in large degree in 1971, by the initiative of the military-historical service of the U.S. Army, which at that time was led by Brig. Gen. James Collins. During September 20–22, 1986, a symposium of Soviet and American historians took place in Moscow, dedicated to the early period of the history of the anti-Hitler coalition. Also, contacts between Soviet and British military historians are growing, in which development the University of Edinburgh has made a major contribution, especially by Director of Defence Studies John Erickson. In our view a highly fruitful major joint publication was the preparation of documents on the foreign policy of Russia and the United States published in 1980.[13]

It is thought that these contacts will develop in a proper and mutually beneficial direction. For this very reason, this symposium is important. Many papers and presentations in the discussions gave witness to striving for objective research in Russian and Soviet military history. The symposium's notably varied themes and the more active utilization of Soviet historiography should be mentioned. There are of course some questions for further consideration, for instance:

> Where are the roots of the victories, not only of Suvorov, but also of Kutuzov, Rumiantsev, Brusilov, Ushakov, Nakhimov and others, if, as it has been said, the discipline in the Russian Army and Navy was primarily based on the terrible maltreatment of the soldiers and sailors?
>
> How does one explain that 80 percent of the Red Army officers during the Civil War came from Tsarist Army? Was it really possible for the Cheka to accomplish this by itself?

> If the Soviet Air Force did not achieve the level of performance of the *Luftwaffe*, "even in 1945," how could it manage to obtain overall air superiority in 1943 and, moreover, temporarily on one front in the Battle for Moscow in 1941?
>
> How could the Soviet Union even, hypocritically, change a defensive doctrine for an offensive one in 1968, when at that time we didn't have strategic parity with the United States?
>
> And about our "panic" concerning SDI: there is no panic, but we see it as a new threat to mankind. The Soviet Union will find and give an effective answer to SDI, as postwar history has proven, but again it would not be our choice.

A certain part of the papers dealing with Soviet military history were suppressed by ideological concerns, unavoidably leading to a loss of scientific potential. For their evaluation the following cautionary note, given in one of the American guides on military history is relevant: "Propagandistic or censored history is dangerous and should not be used, for it can provide no sound lessons or basis of professional training. It leads to false conclusions and fosters one of the worst evils in professional military thinking—self-deception."[14]

The relations between the USSR and the United States are in the center of world events and on their development depends the survival of mankind. Our country needs security on her borders and the borders of her allies. We never started wars in the past and will never start them in the future. Now a definite prospect is looming ahead on some important issues of world security. Soviet historians see it as their duty to support this process, to make every possible contribution to the peaceful initiatives of the Soviet state and to the establishment of sound, mutually respectful relations between our two great nations, which is in the interest of the world at large. Thank you very much!

Notes

1. *Materialy XXVII s'ezda Kommunisticheskoi partii Sovetskogo Soiuza* (Moscow, 1986), p 67.
2. *Sovetskaia voennaia entsiklopediia* (Moscow, 1978), VI, p 137.
3. *Istoriia Vtoroi mirovoi voiny, 1939–1945* (Moscow, 1979), X, p 344.
4. V. I. Lenin, *Polnoe sobranie sochinenii* (Moscow, 1969), XXXVI, p 531.
5. A. I. Kotelenets, et al, eds, *Sorokaletie pobedy sovetskogo naroda v Velikoi otechestvennoi voine. Dokumenty i materialy* (Moscow, 1985), pp 15, 61, 62.
6. For more information see *Sovetskaia voennaia entsiklopediia* (Moscow, 1977), III.
7. *Sovetskaia voennaia entsiklopediia*, 8 vols (Moscow, 1976–1980).
8. *Voennyi entsiklopedicheskii slovar'* (Moscow, 1984).
9. *Velikaia Otechestvennaia voina, 1941–1945. Entsiklopediia* (Moscow, 1985).
10. B. V. Panov, et al, *Istoriia voennogo iskusstva* (Moscow, 1984).
11. V. I. Lenin, *Polnoe sobranie sochinenii*, 5th ed (Moscow, 1969), XXVII, p 48.
12. G. N. Sevost'ianov, et al, eds, *Istoriia SShA v chetyrekh tomakh*, 4 vols (Moscow, 1983–1987).
13. *Rossiia i SShA. Stanovlenie otnoshenii, 1765–1815* (Moscow, 1980). (Published in the United States as *The United States and Russia: The Beginning of Relations, 1765–1815*, Nina N. Baskina, et al, eds, Washington, 1980. Ed.)
14. *The Writing of American Military History—A Guide*, Department of the Army Pamphlet, No. 20–200 (Washington, 1956), p 8.

Appendix

Soviet Bibliographies and Their Use as Research Aids*

Harriet Fast Scott
and
Colonel William F. Scott, USAF, Ret.

*This is a revised and updated version of "Soviet Bibliographies and their Use As Research Aids," Defense Nuclear Agency Report, DNA6175T, December 31, 1981. Ed.

Appendix Contents

Tables

Preface

Since 1981, when the first edition of this research aid appeared, much additional data has been compiled to provide reference aids for the military researcher. Under the auspices of the Defense Nuclear Agency, 10,195 Soviet military books and pamphlets, covering the twenty-five-year period 1960 through 1984, have been indexed. These have been compiled in four volumes, each covering a different period—1960–69, 1970–74, 1975–79, and 1980–84. At the end of each volume are six different indexes:

author
title in Russian transliteration
title in English translation
translation of books to and from the Russian language
subject
keyword

The Bibliographic Index will be periodically updated. In addition, each volume is arranged by year and subject matter. For example, a person browsing through the index to find out what was published about the Great Patriotic War in 1973 can turn to page 78 in the corresponding index and find more than one hundred books listed. The researcher looking for books about the Soviet Air Force in the 1980s can find seventeen titles on pages 150–51. The military historian searching for unit histories during the Great Patriotic War will find more than 500 units identified by name and number in the subject index under Armed Forces of the USSR.

Each of the more than 10,000 entries is listed by category and year and gives the following information: author(s); title in English translation; title in Russian transliteration; brief identifying information (textbook; memoir; language, if not Russian; volume; series; editor; etc.); place of publication; publisher; date; number of pages; number printed; and price. Index titles with DNA identifying numbers are:

Bibliographic Index of Soviet Military Books 1960–1969 (426 pages)
William F. and Harriet Fast Scott
DNA–TR–85–325
Bibliographic Index of Soviet Military Books 1970–1974 (328 pages)
William F. and Harriet Fast Scott
DNA–TR–84–112
Bibliographic Index of Soviet Military Books 1975–1979 (364 pages)
William F. and Harriet Fast Scott
DNA–TR–84–113
Bibliographic Index of Soviet Military Books 1980–1984 (302 pages)
William F. and Harriet Fast Scott
DNA–TR–86–71

Two additional titles are:*

Bibliographic Index of Soviet Military Books 1985
William F. and Harriet Fast Scott
Bibliographic Index of Soviet Military Books 1986
William F. and Harriet Fast Scott

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*For copies of the 1985 and 1986 bibliographies, contact:
Office of Net Assessment
Office of the Secretary of Defense
The Pentagon
Washington, D. C. 20301

APPENDIX 350

Introduction

Are there discernible shifts in Soviet military doctrine and strategy? How do the Soviets view Washington's policies on nuclear targeting? What are Soviet concepts on the possibility of a protracted nuclear conflict? These are but a few of the questions which concern Western political and defense leaders. The military superpower status of the Soviet Union and the role of Soviet military forces in world affairs has brought about a recognized requirement to study all aspects of Soviet military activities.

In United States' universities and research institutes, many individuals are seeking to understand the full extent and nature of Soviet military power. Funded by grants from private foundations and the government, such research costs millions of dollars annually. If this work is to produce needed insights into Soviet military affairs, it is essential that all possible sources be used, particularly primary ones.

Mechanical means of gathering data provide information on Soviet weapon systems and order of battle. Classified intelligence collection methods contribute data of use in a variety of areas. Despite the value of these sources, much of the needed information on the Soviet Union can best be obtained by a careful reading of Soviet publications. In fact, for certain information, Soviet publications are the only source.

The Soviet leadership has an obsession with secrecy, and all Soviet publications are carefully censored. Nevertheless, a great deal of information on military and military-political matters must be made openly available to the Soviet population at large and to the armed forces. The communications requirement is too great to be kept entirely in classified channels.

A considerable number of Soviet publications on military matters, from books to pamphlets to journals and newspapers, are available to researchers. A few key books and journal articles soon become known to those analysts who work with original Soviet sources. Many researchers, however, may not be aware that a number of Soviet bibliographical publications also are available that make it possible to work with Soviet publications in a fairly systematic manner.

The purpose of this monograph is to facilitate the work of those who use Soviet publications when doing research on Soviet military affairs. The monograph will give an overview of Soviet bibliographies that identifies Soviet writings on military subjects, the content of the bibliographies, and how subjects are indexed.

Primary attention will be given to the 300–600 Soviet books and pamphlets published annually in the Soviet Union and specifically identified in Soviet bibliographies under the heading, "Military Science, and Military Affairs." Journal and newspaper articles under the same general heading also will be described.

It is anticipated that researchers will find many uses for Soviet bibliographies, once they are identified. For example, Soviet writers specialize in certain areas. Some write primarily on doctrine and strategy, and their names soon become recognizable to those doing research on these subjects. Others concentrate on tactics and the equipment of small Ground Forces units. Still others write on the military-patriotic education of youth. A number specialize on the armed forces of the United States. Recognition of key Soviet military and political-military spokesmen, the institutions with which they are associated, and the topics on which they write will be of specific help to researchers in developing sources and in providing more comprehensive analyses.

Soviet Bibliographic Publications on Military Science and Military Affairs

There are three basic weekly Soviet bibliographical publications readily available to scholars who read Russian.[1] One gives book and pamphlet titles, another journal articles, and a third lists newspaper articles. Each publication is divided into fifty identical general subject headings, with subheadings (Table 1). In addition to the weekly bibliographies, book and pamphlet titles are consolidated into an annual publication,[2] which also is divided into fifty general subject headings, the same as in the weekly publications.

For those researchers primarily interested in military matters, most of the books, pamphlets, and articles will be found under the general heading, "13. Military Science, Military Affairs."[3] However, related subjects, such as shipbuilding and aircraft construction, would be found under the general heading of "36. Transport."

General descriptions of Soviet bibliographies and examples of how military writings are listed will be described below.

Books and Pamphlets

Knizhnaia letopis' (Book Chronicle)

Knizhnaia letopis' is published in seven editions. The basic edition is the weekly publication, giving book and pamphlet titles appearing during the particular week, divided into the fifty general subject headings. As an example, the weekly *Knizhnaia letopis'* for the first week in May 1986 (identified on the cover as 19/86) contained a total of 902 book and pamphlet titles. Nine of this total number were under the general heading, "Military Science, Military Affairs," with subheadings as follows:

Military Science, Military Art, History of Military-Theoretical Thought—1 title
Armed Forces USSR—1 title
History of the Armed Forces USSR—5 titles
Party-Political Work in the Armed Forces USSR—1 title
Mass Defense Work, Military Patriotic Indoctrination, DOSAAF—1 title

The first entry, under the subheading "Military Science, Military Art, History of Military-Theoretical Thought," was a pamphlet, described as follows:

16891.[4] Lashchenko, P. N. *Iskusstvo voenachal'nika.*—M.: Voenizdat, 1986.—206 s. 22 sm.—V per. 1 r. 10 k.—25000 ekz.—(86–933) p vs 355

[16891. Lashchenko, P. N. *Art of the Military Leader.*—Moscow: Military Publishing House, 1986.—206 pages. 22 centimeters. —In a binding. 1 ruble, 10 kopecks.—25,000 copies. (Registration number (19)86–933); printed for the first time; printing method; index of universal decimal classification.]

The final entry for the week, under the subheading, "Mass-Defense Work, Military-Patriotic Education, DOSAAF," gave the following data:

16898. Soldatov, S. A. *DOSAAF v sisteme obshchestvennykh organizatsii*—M.: Izd-vo DOSAAF, 1985.—51 s.; 20 sm.—(B-chka Propagandista DOSAAF).—Bespl. (Vyp. dan.: dlia vnutrived. prodazhi 5k.).—(85–105286) p vs 355.58:061.23(47 57)

[16898. Soldatov, S. A. *DOSAAF in the System of Public Organizations.*—Moscow: DOSAAF Publishing House, 1985.—51 pages. 20

Table 1

Subject Headings, Numerical Designations, and Order of Listings in Soviet Bibliographies

1. Marxism-Leninism
2. General Sciences as a Whole
3. Philosophical Sciences, Sociology, Psychology
4. Atheism, Religion
5. History, Historical Sciences
6. Economics, Economic Sciences
7. Statistics, Demography
8. International Relations, Contemporary Political Position of States
   - 8.1 International Relations
   - 8.2 Contemporary Political Positions of Socialist Countries
   - 8.3 Contemporary Political Positions of Developing Countries
   - 8.4 Contemporary Political Positions of Capitalist Countries
9. International Communist Movement, Communist and Workers Parties
10. International Trade Union Movement, Trade Unions
11. International Democratic Movements of Youth, Youth Organizations
12. Government and Law, Juristic Sciences
13. Military Science, Military Affairs
    - 13.1 General Questions
    - 13.2 Military Science, Military Art, History of Military-Theoretical Thought
    - 13.3 Military Equipment, Military Technical Sciences
    - 13.4 Armed Forces of the USSR
    - 13.4.1 History of the Armed Forces of the USSR
    - 13.4.2 Party-Political Work
    - 13.4.2.1 Political Education
    - 13.4.3 Mass Defense Work, Patriotic Indoctrination, DOSAAF
    - 13.4.4 Services of the Armed Forces USSR, Service Branches
    - 13.4.4.1 Rocket Troops
    - 13.4.4.2 Ground Forces
    - 13.4.4.3 Troops of Air Defense (PVO)
    - 13.4.4.4 Air Force
    - 13.4.4.5 Navy
    - 13.4.5 Border Guards, Internal Troops
    - 13.4.6 Rear Services and Supply
    - 13.4.7 Civil Defense
    - 13.5 Armed Forces of Socialist Countries
    - 13.6 Armed Forces of Developing Countries
    - 13.7 Armed Forces of Capitalist Countries
14. Science

15. Cybernetics, Semiotics, Information
16. Natural Science as a Whole
17. Physical-Mathematical Sciences
18. Chemical Sciences
19. Geodetics and Geological-Geographic Sciences
20. Biological Sciences
21. Technology, Technological Sciences
22. Industry as a Whole
23. Energy
    23.2 Electronic Equipment
24. Radio-Electronics, Automations, Telemetry
25. Mining Industry
26. Metallurgy
27. Mechanical Engineering, Engineering Technology, Instrument-Making
28. Chemical Industry
29. Food Industry
30. Woodworking Industry, Forest Industry, Cellulose-Paper Industry
31. Light Industry
32. Construction
    32.4.1 Machine Building and Mechanization
33. Water Industry
34. Housing and Communal Services, Routine Repairs and Other Services of the Population, Fire Protection
35. Procurement, Trade, Public Catering
36. Transport
    36.2 Railroad Transport
    36.3 Motor Transport
    36.5 Water Transport
    36.5.3 Shipbuilding
    36.6 Air Transport
    36.6.3 Aircraft Construction
    36.7 Cosmonautics, Interplanetary Communications
37. Communications
38. Agriculture Industries, Agricultural Sciences
39. Forestry Industry, Science of Industry
40. Hunting Industry, Fishing Industry
41. Public Health, Medical Sciences
42. Physical Culture, Sport
43. Education, Pedagogical Sciences
44. Culture, Culture Building
45. Press, Library Sciences, Polygraphy
46. Philological Sciences
47. Fiction, Folklore
48. Literature for Children, Folklore for Children
49. Art, Study of Art
50. Literature of a General Content

centimeters.—(Library of the DOSAAF Propagandist).—No cost. (Issuing data: For intradepartmental sale 5 k.).—(Registration number (19)85–105286); printed for the first time; printing method; index of universal decimal classification.]

The number of titles given in the *Knizhnaia letopis'*, as well as in the other two weekly bibliographies, varies from week to week. There is a quarterly index of names, subjects and geographical locations. Once a year, serial publications are listed in a separate pamphlet.

There also is a monthly *Knizhnaia letopis', dopolnitel'nyi vypusk* (Book Chronicle, Supplementary Issue), which gives book and pamphlet titles of irregular publications. Subject headings are the same as used in the regular bibliographies. Quarterly indexes of this pamphlet are published giving names and geographical locations. Serial publications are published once a year separately. Beginning in 1986, the Soviet Union cancelled subscriptions going abroad for the supplementary issues and indexes.

Lastly, there is a monthly *Knizhnaia letopis', avtoreferaty dissertatsii* (Book Chronicle, Abstracts of Dissertations). The Soviet Union does not accept foreign subscriptions for this pamphlet.

Ezhegodnik knigi SSSR (Yearbook of Books, USSR)

Book and pamphlet titles for each year, after initially appearing in the weekly *Knizhnaia letopis'* are consolidated in the *Ezhegodnik knigi SSSR*. Because of the number of titles, approximately 40,000 each year, publication in two volumes is required. (Since 1981, each volume has come with a separate index.) For example, the book and pamphlet titles first published in the fifty-two-week *Knizhnaia letopis'* in 1982–83 were consolidated in the *Ezhegodnik knigi SSSR*, 1982, volume 1, parts I and II, and volume 2, parts I and II. It was not published until 1985. There usually is a two-year or longer delay between the time the book or pamphlet is first listed in the weekly *Knizhnaia letopis'* and its publication in the annual *Ezhegodnik knigi SSSR*.[5]

Titles in the annual *Ezhegodnik knigi SSSR* are given under the same general headings as they appear in the weekly *Knizhnaia letopis'* (see Table 1). As already noted, the same general heading, "Military Science, Military Affairs," with various subheadings, is found in each. Over the years these subheadings have expanded and changed, reflecting a new or different emphasis due to military or political developments. In general, these changes were long overdue by the time they took place.

For example, Table 2 shows the various subheadings for the years 1960–64, inclusive. At that time there was no separate heading for the Ground Forces. Rather, there was a subheading for "Infantry, Artillery, Tanks." "Rocket Troops" then were listed after Air and Naval Forces (which were combined under one heading) although the Strategic Rocket Troops were created and became the number one service in 1959.

Table 3 gives the subheadings from 1965–71 inclusive. Rocket Troops then were placed first, ahead of the Ground Forces. Civil Defense was given a separate subheading only in 1965, even though Civil Defense came into being in 1961.

As seen in Table 4, covering the years 1972–77 inclusive, the five services were listed in their current order of precedence.[6] Next are Border Guards of the KGB and the Internal Troops of the Ministry of Internal Affairs. These forces are part of the Soviet armed forces, but are not subordinate to the Ministry of Defense. They are followed by the Rear Services and Supply, which includes the troops of the *tyl* or rear services. The next entry is Civil Defense. One of the most significant additions

Table 2

Subject Headings and Year of Publication, "Military Science, Military Affairs"

	1960	1961	1962	1963	1964
1. General Questions	8	3	4	4	10
2. Armed Forces USSR (General Questions, Organization, Military Training)	42	40	47	53	40
3. History of Armed Forces USSR	15	12	10	20	20
4. Armed Forces in the Great Patriotic War	29	54	47	79	53
5. History of Russian Army	4	2	0	1	1
6. Party-Political Work; Cultural-Educational Work	18	13	3	12	10
7. Life and Daily Routine	0	0	1	0	0
8. Military Equipment, Military Art	33	24	14	25	24
9. Infantry, Artillery, Tanks	36	38	40	31	37
10. Engineer Troops, Military Communications, Military Topography	2	6	15	16	7
11. Air and Naval Forces	48	42	53	60	48
12. Rocket Troops	8	10	11	14	14
13. Other Services and Branches	2	0	2	0	0
14. Weapons of Mass Destruction		10	0	0	0
15. Antiaircraft Defense From Weapons of Mass Destruction	26	11	16	26	23
16. Rear Services	1	0	1	2	1
17. Mass Defense Work	10	1	13	3	11
18. Armed Forces of Foreign Socialist Countries	3	1	1	2	1
19. Armed Forces of Other Foreign Nations	2	5	4	2	4
20. Border Guards	1	2	2	7	1

Table 3

Subject Headings and Year of Publication, "Military Science, Military Affairs"

	1965	1966	1967	1968	1969	1970	1971
1. General Questions	9	0	3	2	20	9	12
2. Armed Forces USSR (General Questions, Organization)	35	32	32	37	56	44	46
3. History of Armed Forces USSR	22	22	27	40	21	24	25
4. Armed Forces in the Great Patriotic War	94	75	74	91	76	115	76
5. History of Russian Army	0	1	3	4	2	2	0
6. Party-Political Work, Cultural-Educational Work	8	9	7	14	17	12	23
7. Military Art, Military Equipment (General Questions)	20	18	17	27	27	30	23
8. Rocket Troops, Military Rocket	13	12	6	13	4	5	4
9. Ground Forces Equipment	48	49	44	61	77	64	55
10. Air Force	18	23	13	26	18	30	24
11. Navy	18	31	27	25	24	26	31
12. Air Defense	1	2	4	4	2	1	4
13. Rear and Supply	2	1	2	3	1	2	2
14. Border Guards	3	5	3	10	16	4	9
15. Civil Defense	20	17	28	38	42	34	28
16. Armed Forces of Foreign Socialist States	1	2	0	0	2	1	4
17. Armed Forces of Other Foreign States	5	5	4	2	3	2	4

Table 4

Subject Headings and Year of Publication "Military Science, Military Affairs"

	1972	1973	1974	1975	1976	1977
1. General Questions	20	28	49	51	36	28
2. Military Equipment, Military Technical Science	13	7	7	23	23	14
3. Armed Forces USSR	82	101	115	114	93	101
4. History of Armed Forces	35	34	24	36	20	70
5. Armed Forces USSR in Great Patriotic War	79	108	110	164	59	43
6. Party-Political Work, Cultural-Educational Work	21	34	59	44	45	47
7. Rocket Troops	9	8	6	3	9	5
8. Ground Forces	67	110	91	113	68	65
9. Air Defense	4	1	4	2	1	6
10. Air Forces	19	33	30	40	29	25
11. Navy	22	28	35	38	32	37
12. Border Guards and Internal Troops	12	17	12	11	11	12
13. Rear Services and Supply	5	8	7	2	4	9
14. Civil Defense	22	19	13	11	19	14
15. Armed Forces of Socialist Countries	1	3	5	8	7	2
16. Armed Forces of Developing Countries	1	1	0	1	0	0
17. Armed Forces of Capitalist Countries	7	13	12	10	8	9

Table 5

Subject Headings and Year of Publication, "Military Science, Military Affairs"

	1978	1979	1980	1981	1982	1983	1984
1. General Questions	9	8	5	5	4	14	2
2. Military Science, Military Art, History of Military-Theoretical Thought	2	11	10	7	4	6	9
3. Military Equipment, Military Technical Science	13	13	13	9	9	20	6
4. Armed Forces USSR	58	45	42	51	37	38	35
5. History Armed Forces USSR	268	194	314	295	243	239	249
6. Party-Political Work	26	23	20	9	23	17	27
Political Education			2	0	1	0	2
7. Mass Defense Work, DOSAAF	29	28	24	20	18	36	27
8. Rocket Troops	3	3	1	0	1	1	0
9. Ground Forces	13	7	11	4	7	2	10
10. Air Defense	3	1	0	1	1	0	1
11. Air Forces	9	3	4	2	1	7	3
12. Navy	11	14	7	4	13	4	5
13. Border Guards and Internal Troops	7	4	4	5	0	4	1
14. Rear Services and Supply	0	1	1	1	1	0	0
15. Civil Defense	18	14	9	10	13	10	17
16. Armed Forces of Foreign Socialist Countries	4	1	3	1	0	0	1
17. Armed Forces of Developing Countries	0	2	1	1	1	1	0
18. Armed Forces of Capitalist Countries	6	8	4	2	15	1	7

in 1972 was the inclusion of "Armed Forces of Developing Countries," although little has been published openly in this area. The heading, however, suggests increased Soviet interest in the Third World.

Before 1977, a classification of thirty-one categories was used to facilitate the cataloging of books. It was then revised to the present fifty categories as given in Table 1. Table 5, spanning the years 1978–84, reflects the new classification.

The category containing theoretical works has undergone the most change in the last twenty-five years. From 1960 to 1964, some of these books were under "General Questions" and some under "Military Equipment, Military Art." From 1965 to 1971, "General Questions" remained, but the latter category reversed to "Military Art, Military Equipment (General Questions)." Then, from 1972 to 1977, "General Questions" increased several times in volume while "Military Art" disappeared altogether. A small category of "Military Equipment, Military Technical Science" remained. This was finally resolved, after a fashion, in 1978 by a reduction in the number of "General Questions," the retaining of "Military Equipment, Military Technical Science" and the creation of a new category "Military Science, Military Art, History of Military-Theoretical Thought."

Journal Articles

Letopis' zhurnal'nykh statei (Chronicle of Journal Articles)

The weekly *Letopis' zhurnal'nykh statei* for the first week in May, 1986 (18/86) listed 3,683 journal articles, of which nineteen were under the general heading, "Military Science, Military Affairs." They covered articles published the last part of 1985 and early 1986. Under this rubric, articles were listed under the following subheadings:

Armed Forces USSR—2 articles
History of Armed Forces USSR—2 articles
Party-Political Work in the Armed Forces USSR—3 articles
Political Education—3 articles
Mass Defense Work. Military-Patriotic Education. DOSAAF—1 article
Services of the Armed Forces USSR, Service Branches—articles in these subcategories were as follows:
Rocket Forces—1 article
Ground Forces—5 articles
Armed Forces of Capitalist Countries—2 articles

The first article listed under the subheading, "Armed Forces USSR," in this particular issue was as follows:

2171. Kostikov, N. *Politicheskaia kul'tura Sovetskogo ofitsera* (Material k teme "Polit. kul'tura ofitsera")// Kommunist Vooruzh Sil.—1985.—No. 24.—S. 32–39.
[62171. Kostikov, N. *Political Culture of the Soviet Officer* (Material for the theme "Political Culture of the Officer") // Communist of the Armed Forces.—1985.—No. 24.—Pages 32–39.]

Of the nineteen articles given in the *Letopis' zhurnalnykh statei* for 16/86, sixteen were from Soviet military journals, as shown below:

Communist of the Armed Forces—7 articles
Equipment and Armaments—9 articles

The remaining three articles were from these journals:

Problems of History—1 article

Upsurge—1 article
Cybernetics—1 article

Daily Paper Articles

Letopis' gazetnykh statei (Chronicle of Daily Paper Articles)

In the last week of April 1986 (16/86) a total of 834 daily paper articles, with authors and titles, were listed in this weekly bibliographical journal. Twenty-three of the articles, 11–16 February 1986, were under the general heading, "Military Science, Military Affairs." Subheadings, with the number of articles under each, were as follows:

Armed Forces USSR—7 articles
History of the Armed Forces USSR—3 articles
Party-Political Work—1 article
Mass-Defense Work, Military-Patriotic Education, DOSAAF—1 article
Services of the Armed Forces USSR, Service Branches—10 articles
Armed Forces of Foreign Socialist Countries—1 article

Of the twenty-three articles identified for the particular week, seventeen originally had appeared in *Krasnaia zvezda* (Red Star). Two articles came from *Komsomolskaia pravda*, another from *Moskovskii komsomolets* and a third from *Gudok*. Two had been published in *Sovetskii patriot*.

The first article, under the heading "Armed Forces USSR" was as follows:

11896. Byt' Bditel'nym: ./.Peredovaia././/*Krasnaia zvezda*.—1986.—15 Fevr.
[11896. Be Vigilant. (Lead article). *Red Star*.—1986.—15 Feb.]

Most of the newspaper articles of military interest will have been published in *Krasnaia zvezda*, with *Sovetskii patriot* in second place.[7]

Soviet "Closed Press" Publications

The Soviet Union publishes many books and pamphlets in the "closed" press. Some estimate that as many as one third of the total number are in this category. There are many categories. Some books are "*besplatno*" (not requiring payment) and are for internal use only. Some military books have "Only for generals, admirals and officers of the Soviet Army and Navy" (appears to equate to "confidential") printed on the outside cover. Others are labeled inside "(Only) for intradepartmental sale" ("*Dlia sluzhebnego pol'zovaniia*"—similar to "official use only") and have a price inside while "*besplatno*" is imprinted on the cover. Nevertheless, they all bear the censor's mark. They rarely find their way to a book store. There are higher categories: "*Sekretno*" (secret), "*Sovershenno sekretno*" (top secret), etc.

"*Besplatno*" books and pamphlets are published by *Voenizdat*, by military academy or school presses, by military districts through their political directorates and printed on district presses, and so forth. Some are handsomely bound and printed on the highest quality paper, indicating they are presentation volumes. Others are printed on cheap pulp. Usually the number of copies printed is omitted, but when given it has been respectable in some cases (10,000–15,000 copies).

Since "*besplatno*" also can mean "free of charge," pamphlets commonly found in English or some other foreign language at airports and railroad stations can also

bear this mark. There is another category, "*bez tseny*" (no price listed). A few textbooks are listed in this way, however by far the largest category are pamphlets with lectures of the "*Znanie*" Society having twelve to twenty pages. Since other "*Znanie*" lectures of thirty to forty pages sell for three kopeks (three cents), one may presume that one kopek was too little to charge and hence, "*bez tseny.*"

It should be assumed that Soviet censors permit only the most innocuous "*besplatno*" titles to be given in openly published bibliographies. These probably represent only a small percentage of the total number of such publications. Soviet books at times make reference to other books which are never found in bookstores or even in bibliographical listings. For example, specific mention is made of a new textbook on military strategy in a 1977 work, *Academy of the General Staff*.[8] There is no indication, however, of this book ever being put out for general sale.

In the "Military Sciences, Military Affairs" section of the *Knizhnaia letopis'* 1968, three of the 347 books and pamphlets identified were listed as being "*besplatno.*" The following year seven of the 342 books under the same general heading were in the "*besplatno*" category. By 1970 the number of "*besplatno*" books in the "Military Science, Military Affairs" section had jumped to fifty-nine out of 407 books and pamphlets listed. In 1977 the number of "*besplatno*" books and pamphlets was 106 out of a total listing of 473 (Table 6). For that particular year, the "*besplatno*" books were in the following groups:

> Forty-six of the 106 "*besplatno*" books and pamphlets were published by various "military and higher military schools," primarily textbooks and lectures for *kursants* (cadets). Soviet "military and higher military schools," of which there are approximately 140, correspond roughly to the military academies—West Point, Annapolis, and Colorado Springs—in the United States. Courses are four to five years.
>
> Twenty-nine of the "*besplatno*" books and pamphlets were issued by the Soviet military academies. There are a total of eighteen such academies, roughly equivalent to the war and staff colleges in the United States. Courses are three to five years, except for the General Staff Academy, which is two years.
>
> Thirteen of the "*besplatno*" publications were issued by the Soviet Ministry of Defense.
>
> The remaining eighteen "*besplatno*" works were from a number of organizations, including civilian universities.

The first "*besplatno*" entry under the "Military Science, Military Affairs" section in the *Knizhnaia letopis' 1977* was listed under the subheading "General Questions." The entry was as follows:

> 6413 Akhrameev, A. A. *Osnovnyie empiricheskiie metody nauchnogo poznaniia v voennom dele* / Kiev. Vyssh. Aviats. Inzh. Uchilishche.—Kiev: KVVAIU, 1977.—32s.—Bespl.
>
> [6413 Akhrameev, A. A. *Basic Empirical Methods of Scientific Cognition in Military Affairs.* Kiev Higher Military Aviation Engineering School. Kiev: KVVAIU, 1977. 32 pages. Not for purchase.]

Most of these "*besplatno*" publications are pamphlets of less than sixty pages. Many are identified as textbooks, or as abstracts of lectures. The number of these printed, when given, is only 200 or 300.

Why the "*besplatno*" entries began in Soviet bibliographies in the late 1960s, rapidly increased, and then began dropping in 1978 has not been ascertained. One reason could be that a new requirement was issued in the late 1960s to register books and pamphlets of a certain type. Then in 1978 the classification system was revamped. They may have all been moved to the *Knizhnaia letopis': dopolnitel'nyi vypusk* (Book Chronicle: Supplementary Issue). This publication is no longer

available abroad. Regardless of the reason, over a thousand "*besplatno*" book and pamphlet titles have been published in *Knizhnaia letopis'* since 1968.

Table 6

Numbers of *Besplatno* and *Bez Tseny* Books, 1968–1984

Year	*Besplatno*	*Bez Tseny*	All Books	Less *Besplatno*
1968	3		347	344
1969	7		342	335
1970	59		407	348
1971	36		468	432
1972	15		365	350
1973	114		584	470
1974	166		630	464
1975	124		623	499
1976	168	11	471	292
1977	106		473	367
1978	58	3	469	411
1979	46	10	406	350
1980	33	5	474	436
1981	17	10	342	315
1982	25	2	351	324
1983	9	4	456	443
1984	10	3	467	454

Although only the author, title, organization, place of publication, and number of pages normally are given for the "*besplatno*" writings that are listed in Soviet bibliographies, the information may assist scholars with the following:

As an indication of the emphasis placed on certain subjects taught in Soviet military educational institutions: when "*besplatno*" titles are examined over a period of several years, some indication might be found of trends by the attention given to specific subjects. As Soviet spokesmen have pointed out, military schools in the 1960s and 1970s were training the officer corps for the year 2000, for at that time graduates of such schools will be moving into command positions. Military academies, attended by officers with several years of service, are setting forth concepts which will guide Soviet military actions for the 1980s and 1990s.

In giving names of faculty members of the various Soviet military academies and schools, their specialties and the institutions with which they are associated: when examined in conjunction with Soviet publications available in the open press, this information helps to identify the extent of a particular author's work and some indication of its use.

In providing a better understanding of the scope and size of the military schools and academies and of the emphasis given to specific areas: it should be assumed, however, that the titles of many of the lectures and textbooks are classified, and not identified in any openly published bibliography.

Inconsistencies in Soviet Book and Pamphlet Listings

Plan vypuska literatury (Advance Publication Plan)

When researching Soviet military writings, scholars will face a number of unanticipated problems. One will be the inconsistencies found in Soviet bibliographies. The following examples from the *Plan vypuska literatury* of *Voenizdat* are illustrative.

Each year *Voenizdat*, the publishing house of the Soviet Ministry of Defense, issues a pamphlet called *Plan vypuska literatury*. The pamphlet lists the authors and titles of all books and pamphlets scheduled for publication by *Voenizdat* the following year. The "plan" however, is not always fulfilled. Many of the books listed are published a year or two later than the announced date. Some never appear, possibly failing to get past the censor.

The *Plan vypuska literatury 1976* was typeset December 31, 1974 and sent to the printers January 27, 1975. Of the 249 titles given in this publication plan, 28 percent had not appeared as of early 1981; 23 percent finally were published in 1977, instead of 1976 as had been scheduled. Thus, approximately 50 percent of the books appeared as originally planned.

There were other inconsistencies in the *Plan vypuska literatury 1976*, Soviet bibliographical listings, and the actual appearance of specific books. Some examples noted with respect to the advance publication plan and actual books available were as follows:

> Admiral Gorshkov's book, *Sea Power of the State*, was in the *Plan vypuska literatury 1976* but did not appear in the annual *Ezhegodnik knigi 1976*. However, it came out on schedule, as had been announced in the publication plan.
>
> Marshal Grechko's *Year of the War* was in the *Ezhegodnik 1976* but had not appeared in the *Plan vypuska literatury 1976*.
>
> Marshal of Aviation Zimin's book, *Development of PVO* (Air Defense), which appeared in 1976, was neither in the *Ezhegodnik knigi 1976* nor in the advance publication plan.
>
> General of the Army Shavrov's 1976 book, *Problems of Training and Education in Military Schools* was neither in the *Ezhegodnik knigi 1976* nor in the advance publication plan.

With the possible exception of Marshal Grechko's *Years of War*, the books noted above were of high interest to Western scholars concerned with Soviet military developments. Whether the inconsistencies observed were due to security reasons or for other purposes has not yet been ascertained. However, these findings do indicate that the annual *Plan vypuska literatury* is not sufficient as a single method of identifying books that are to be published.

The Case of Civil Defense

Western scholars studying Soviet civil defense programs should know that books on this subject may be omitted from Soviet bibliographies. This appears to have been especially true since the mid-1970s, when Western leaders became concerned with the possible extent of Soviet civil defense activities. Western observers, such as Leon Goure and Harriet Fast Scott who had written on this subject, were attacked by name in a number of Soviet publications, including *Pravda*, *Krasnaia zvezda* and *Voennoe znanie*. Soviet defense-intellectuals in Moscow, who are permitted to meet with visiting Americans, insisted that reports

in the United States' press about Soviet civil defense measures were false. With respect to the Soviet denials, it is interesting to note that a number of Soviet books on the subject have never been listed in the annual *Ezhegodnik knigi*. The following three books are examples of Soviet civil defense publications that Western scholars would not find in any known Soviet bibliographical listing:

A. A. Gromov and N. P. Krechetnikov, *Grazhdanskaia oborona promyshlennogo ob'ekta* (Civil Defense of Industrial Units), Moscow: Atomizdat, 1975. 2d ed, 243,100 copies.

F. G. Krotkov, *Meditsinskaia sluzhba grazhdanskoi oborony* (Medical Service of Civil Defense), Moscow: Meditsina, 1975. (This work is described as a textbook for doctors.) 20,000 copies.

K. G. Kotlukov, *Grazhdanskaia oborona* (Civil Defense), Moscow: Prosveshchenie, 1977. 10th ed, 1,700,000 copies. A textbook for Soviet middle schools (such schools are roughly the equivalent of junior colleges.)

These examples suggest that Soviet bibliographies, while a most valuable research aid, do not provide all of the data needed about Soviet publications.

Bibliography of the Academy of Sciences

For the military historian, the annual *Bibliografiia izdanii Akademii nauk SSSR* (Bibliography of Publications of the Academy of Sciences USSR) can be very useful. The first yearbook was published in 1957. Until the Institute of Military History was created in 1966, the Institute of History of the Academy of Sciences USSR was a source of research materials on military history. In 1968, the Institute of History was divided into the Institute of General History and the Institute of the History of the USSR.

Between 1965 and 1975, under the rubric "The Second World War in Research, Recollections and Documents," the Academy of Sciences sponsored a series of nearly one hundred books. Some of these books were written by marshals and generals who were directly involved in the operations described and are detailed accounts.

The *Bibliography of the Academy of Sciences* gives a more extensive description of the books it publishes than does the *Ezhegodnik*. Some books have as many as twenty or more contributors. The bibliography gives the name of each author and the title of the chapter he wrote, along with other details. This is of considerable help to researchers looking for specific authors or for certain aspects of an operation in the war. They are indexed by author and subject matter.

Books from the Academy's series, "The Second World War in Research, Recollections and Documents" (1965–75), for instance, are not always listed in the "Military Science, Military Affairs" section of the *Ezhegodnik knigi SSSR*, so the historian may not be aware that some of them exist. There are nearly one hundred books in this series, many of them on the "official books" list which will be discussed later.

Institute of Military History of the Ministry of Defense (IVIMO)

The Institute of Military History, part of the Academy of Sciences, was formed more than twenty years ago on August 27, 1966. Organizationally, it is subordinated to the Ministry of Defense and the Main Political Administration. The Academy of Sciences guides the methodology of its scientific research work, and it is part of the Department of History of the Academy's Social Sciences Section. Books by the

institute are listed in the *Bibliography of Publications of the Academy of Sciences USSR* already mentioned.

One of their most important publications was the twelve-volume *History of the Second World War.* They worked with the Central Committee's Institute of Marxism-Leninism, the Academy of Science's Institute of General History and the Institute of History of the USSR. They also contributed to the eight-volume *Soviet Military Encyclopedia.* Both series were published by *Voenizdat*, the Military Publishing House. A great many books published by the Institute come from the Academy's press, *Nauka* (Science). Their books are higher quality than most presses and many contain a rarity among Soviet books, an index.

In 1977, the Institute of Military History published a "Survey of Soviet Literature from 1941 to 1967" in the *USSR in the Years of the Great Patriotic War, 1941–1945.* This was an extensive bibliography of both books, individual chapters of books, journal and daily paper articles. It is divided into periods of the war, geographical areas, actions of *fronts*, individual services and service branches, and fleets, military art, strategy, operational art and tactics. It also includes reviews of books and their authors. In 1981, a third volume about individuals was added, "Heroes of the Front and Rear." Unfortunately, all three cover only the period from 1941 to 1967. Many of the early reference materials are difficult to locate. However, they do bring to light some little-known publications of this period.

Other Bibliographies

In 1979 DOSAAF published an *Annotated Catalog of Literature by the DOSAAF USSR Publishing House 1945–1977.* It has both an author and subject index.

Voenizdat has published two annotated indexes of memoirs from the Great Patriotic War pariod. The first edition, covering the years 1941 to 1975, was published in 1977 and a second edition, for the years 1975 to 1981, came out in 1982 both under the title *O Voine, o tovarishchakh, o sebe* (About War, About Comrades, About Myself). The first edition covered 886 books, the second 828. They are separated by service into Ground Forces, Air Forces and Navy. Most of the books (1201) are about the ground forces. The Air Forces are reflected in 253 and the Navy in 161. The index contained both titles and authors and annotations indicating reviews of the book in the press. The indexes include many publishers, not just the "Military Memoir" series published by *Voenizdat.*

The Lenin Library in Moscow regularly publishes booklets of recommended reading about the Great Patriotic War. A booklet in one such series came out in 1965, with others following in 1970, 1975, 1979 and 1985. The first was entitled *The Great Patriotic War of the Soviet Union, 1941–1945*; the second was under the title *Velikiĭ podvig* (The Great Feat). Since 1975, it has been entitled *Velikaia pobeda* (The Great Victory). The 1965 edition contains materials dating prior to November 1, 1964, the Khrushchev era. The others cover "the previous four or five years." They include books and journal articles, novels and poems. The entries are annotated, grouped in useful categories and indexed.

Soviet Books and Pamphlets About the "Great Patriotic War"

The Great Patriotic War and Its Lessons

Western visitors to the Soviet Union frequently remark about the attention given by the Soviet media to the Great Patriotic War, as the Soviets refer to that portion

of World War II in which they participated. Television, radio, and the press refer daily to that war, as if it had taken place only recently.

There are many reasons why Soviet books and pamphlets give continuing attention to a war that ended decades ago. Victory in the Great Patriotic War, according to Soviet spokesmen, was due to the wise leadership provided by the Communist Party. Children are told that the defeat of both Germany and Japan was due to the combat might of the Soviet armed forces. The role of Britain, the United States and other nations is scarcely mentioned. In order to prevent such a war from again taking place, Soviet spokesmen write that the armed forces must be maintained in a state of constant combat readiness and remain unsurpassed by any other nation.

The Great Patriotic War provides Soviet military writers with numerous historical events, from which carefully selected lessons can be drawn that are considered applicable to the present. Textbooks on procedures for command and control, protection of rear areas, tactics, mobilization, war financing, military economy, leadership, morale--whatever the subject might be—begin with some account or example from the Great Patriotic War. The most significant books on Soviet military doctrine, strategy, and tactics, from Marshal V. D. Sokolovskii's *Military Strategy* to Lt. Gen. V. G. Reznichenko's *Tactics*, devote considerable space to operations, troop control and lessons from the 1941–45 period.[9]

In early 1981, Western scholars concerned with Soviet military affairs noticed that changes were taking place in the organization of air defense troops. Certain air defense functions of the Soviet Ground Forces appeared to have been transferred to the Troops of Air Defense, one of the five Soviet military services. When searching for the Soviet rationale for this organization modification, analysts found that the change had been preceded by lengthy discussions of the role of air defense during the Great Patriotic War.[10]

Identification of "Great Patriotic" War Themes in Soviet Bibliographies

Of the 351 books listed in the "Military Science, Military Affairs," section of the *Knizhnaia letopis' 1982*, 226 were under the subheading "History of the Armed Forces USSR." The following were in this category:

> Books of military memoirs by senior Soviet officers—14. A military memoir written in 1982, for example, is not only to remind readers of the Great Patriotic War, but also to provide concepts that are applicable to military situations at the time the work is published.
>
> Books published by DOSAAF—6. These publications contain stories about the Great Patriotic War intended to appeal to the youth. Heroic feats are described in such a manner as to instill patriotic feelings in the mind of the reader
>
> Books published in language of Soviet nationality groups—30. These may be about a hero in the Great Patriotic War of a particular nationality. The apparent intent is to foster a feeling of "Soviet" patriotism.
>
> Books published in non-Soviet languages—34. Th ere in Dari, four each in Spanish and French, and five each in Gerr nd English. The purpose is to show the might of the Soviet a forces in defeating Germany and Japan.
>
> "*Besplatno*" books—3. One of these, entitled *Collection of Tactical Examples of Naval Actions in the Great Patriotic War, 1941–1945*, was a textbook published by the Higher Naval Command School in Leningrad. Another was *Ships and Auxilliary Ships of the Navy,*

1917–1927. The third was a list of articles in the *Military History Journal* from 1969 to 1978.

The remainder of the books under the Great Patriotic War subheading were by various publishers, primarily designed for patriotic-military indoctrination.

A number of the most significant books on military-theoretical thought have been based almost exclusively on examples from World War II, but listed in the "Military Science, Military Affairs" sections of bibliographies under the subheading "General Questions." One such book was *Methodology of Military-Scientific Knowledge* (1977), by Gen. I. E. Shavrov, at the time Commandant of the General Staff Academy. He used examples from the Great Patriotic War throughout his book to explain current concepts and problems. Another work of significance was Gen. M. A. Gareev's book, *M. V. Frunze—Military Theoretician* (1985).[11] This is one of the most instructive writings currently available on Soviet military thinking.

As a general rule, scholars concerned with Soviet military affairs will find that those books about the Great Patriotic War published by *Voenizdat* will be of greater value than those issued by publishers in the various republics. Of particular significance may be the military memoirs published in recent years. These, written by the remaining generals and marshals with combat experience in World War II, are to teach lessons applicable at the present time.

Publishers of Military Books

Titles of books and pamphlets under the general heading, "Military Science, Military Affairs," represent dozens of different publishing houses. The main publishing houses are as follows:

Voenizdat. This is the publishing house of the Soviet Ministry of Defense, which issues the more significant writings on military matters. Some books will be "*besplatno*"—but not for sale.

DOSAAF (Volunteer Society for Cooperation with Army, Aviation, and Fleet). DOSAAF publishers issue books and pamphlets for military training and Communist Party-patriotic indoctrination of youth, as well as various publications on civil defense. Some of these writings are most useful to scholars. Works on fiction and sport, of a military or military-related nature, also are published by DOSAAF.

Military Academies and Schools. A small number of the many publications by military educational institutions are sometimes carried in bibliographies as "*besplatno.*" Many are listed as textbooks; others are pamphlets described as abstracts of lectures. Only the author, title, number of pages, subject area and publishing institution are indicated. As can be seen from Table 7, the difference in this category between 1977 and 1982 is considerable. The "*besplatno*" books and pamphlets continued to be published, but even the few titles that were allowed to be listed in the open press now appear to have been reduced.

Znanie. This is the publishing house of the "All-Union *Znanie* Society," whose purpose is to spread "political and scientific knowledge." In 1984, about 4,000 academicians and corresponding members of the Soviet Unions academies of sciences (both national and regional) were members of this organization, as were the majority of individuals holding advanced degrees (215,000). A *Znanie* society is found in each of the republics.

Most of the titles are in the series "To Help the Lecturer," since indoctrination of the populace in military affairs, especially in civil

defense, is one of the many tasks of *Znanie*. There was a drastic reduction on the number of *Znanie* titles between 1977 and 1982 carried in the military section. However, official Soviet sources show that they published thirty-one more titles in 1982 than they did in 1977.[12] Obviously, not all of the *Znanie* titles are being published.

Table 7

Major Soviet Publishers of Military Books and Pamphlets
(for selected years)

Publisher	1977	1982
Voenizdat	84	97
DOSAAF	46	33
Military academies/schools	51	8
Znanie	45	7
Nauka	6	7
Politizdat	3	6
Others	123	168
(Russian)	(89)	(138)
(languages of USSR)	(34)	(30)
None given	4	8
Progress (foreign language)	6	11
Novosti (foreign language)	5	6
Total books published	373	351

Progress Publishers. All of the titles in the bibliographies issued by this organization are in non-Soviet languages—English, French, Spanish, Dari, Arabic, etc. This publishing house specializes in publications in non-Soviet languages.

Novosti Press. Like Progress Publishers, most of the *Novosti* titles are in non-Soviet languages. Generally, the *Novosti* publications are pamphlets, not books.

Nauka. This is the publishing house of the Soviet Academy of Sciences. A number of military writings of significant interest are published by *Nauka* each year.

Politizdat (Political Literature Publishing House). *Politizdat* publishers are located in Moscow. The subject matter of these books appears primarily for military-patriotic indoctrination.

Other Publishing Houses. These include publishing houses of various types in the Soviet republics. Many of the books and pamphlets were in the languages of the Soviet nationalities— Altai, Azeri, Chechen, Georgian, Kazakh, Tadzhik, Udmurt, etc. Most of the publications in these languages are about local heroes during the Great Patriotic War. Many, however, are civil defense manuals and instructions. A number of pamphlets are issued by *Red Star* publishers. Both books and pamphlets are published by *Molodaia gvardiia* (Young Guard), publishing house of the *Komsomol* (Young Communist League).

Scholars of Soviet military matters may find those books published by nonmilitary publishers to be of considerable interest, especially when seeking to determine the significance of the Soviet military throughout the social structure of the Soviet Union.

Books and Pamphlets of Possible Military Interest Not Listed in the "Military Science, Military Affairs" Section of Soviet Bibliographies

As shown in Table 1, books and pamphlets in the weekly *Knizhnaia letopis'* and the annual *Ezhegodnik knigi SSSR* are divided into fifty general headings, one of which is "Military Science, Military Affairs." Writings of possible interest to scholars concerned with Soviet defense matters may be found under many of the other general headings as well. Some of these publications will have been published by *Voenizdat*, the Ministry of Defense publishing house. The following examples are from the *Ezhegodnik knigi SSSR 1982*.

Under the general heading: "Marxism-Leninism":

Marx, K., Engels, F., Lenin, V. I. *On War and Army: Collection of Works.* Moscow: Voenizdat, 1982. 512 pages. 95 kopeks. 90,000 copies.

Under the general heading, "Philosophical Science, Sociology, Psychology":

Men'chikov, G. P. *Structure of Social Consciousness and Formation of Consciousness in Soviet Soldiers.* Abridged lecture text. Kazan: Kazan Higher Military Engineering School, 1981 39 pages. "*Besplatno.*"

Under the general heading of "History" and the subheading "History of the USSR":

Mukhachev, Iu. V. *Eight Centimeters: Recollections of an Intelligence Radioman.* 2d ed. Moscow: Voenizdat, 1982. 271 pages. 1 portrait. 1 ruble 30 kopeks. 65,000 copies.

Under the general heading, "International Relations":

Kulikov, V. G. (Marshal of the Soviet Union). *Collective Defense of Socialism.* Moscow: Voenizdat, 1982. 96 pages. (Decisions of the 27th Congress CPSU—Into Life) 20 kopeks. 100,000 copies.

Demchuk, P. A. *Military Threat: Myth and Fact. Criticism of Modern Bourgeois Inventions on Problems of War and Peace, and Organizations for Defense of the Gains of Socialism.* Kiev: Kiev Military Combined-Arms Command School, 1982. 80 pages. "*Besplatno.*" 300 copies.

Under the general heading, "International Communist Movement":

Military Questions in the Course of History of the CPSU. Textbook for cadets and students of higher military schools and academies. Authors: V. S. Vovk, S. V. Baranov, S. P. Voytenko, et al. Moscow: Voenizdat, 1982. 224 pages. 70 kopeks. 60,000 copies.

Under the general heading, "Radioelectronics, Automation and Telemechanics":

N. N. Berchenko, V. E. Krevs, V. G. Sredin. *Semiconducting Solid Solubles and Their Use (Reference tables).* Moscow: Voenizdat, 1982. 208 pages. 1 ruble. 4,500 copies.

Under the general heading, "Air Transport":

Beliakov, A. V. *In Flight Over the Years: Military Memoirs.* Moscow: Voenizdat, 1982. 350 pages. 1 ruble, 50 kopeks. 200,000 copies.

Aerodynamics and Dynamics of Flight of Transport Aircraft with DTRD and TVD Textbook for Military Aviation Pilot Schools and Pilots of Drill Units. Authors: V. V. Filippov, A. I. Belianin, G. F. Bonch-Bruievich, et al. Moscow: Voenizdat, 1981. 416 pages. "*Besplatno.*"

Lasers in Aviation. Authors: I. N. Goncharov, V. N. Dezhin, V. P. Kutakhov, et al. V. M. Sidorin, ed. Moscow: Voenizdat, 1982. 160 pages. 40 kopeks. 13,000 copies.

Soviet "Defense Industries" and Publishing Houses

Of particular interest to scholars of Soviet military affairs are publications of the various Soviet defense industries, many of which have their own publishing houses. Since defense industries produce goods that are also used for civilian consumption,[13] their publications often are difficult to categorize. Officially, there is only one "defense industry." In actual practice, however, the following Soviet ministries generally are regarded as being in the "defense industry" category:

Ministry	Product
General Machine Building	Rockets and space equipment
Machine Building	Munitions
Shipbuilding Industry	Naval products and ships
Aviation Industry	Aircraft and helicopters
Defense Industry	Conventional armaments
Radio Industry	Radios
Communications Equipment Industry	Other communications equipment
Medium Machine Building	Military applications of atomic energy
Electronic Industry	Radars

Books and pamphlets issued by the publishing houses of the defense ministries that are of interest to military personnel often will be advertised or reviewed in military journals. For example, *Aviatsiia i kosmonavtika* (Aviation and Cosmonautics) reviewed the following book in 1986:

Cosmonautics USSR. Moscow: Mashinostroenie (Machinebuilding), 1986. 495 pages. 21 rubles, 90 kopeks.

Another magazine, *Tekhnika i vooruzhenie* (Equipment and Armaments) in early 1986 listed the following titles under "new books":

Balakhnin, G. S. *Organization and Planning of Construction Work in Machinebuilding*. Moscow: Machinostroenie, 1986. 1 ruble, 30 kopeks.

Gamrat-Kurek, L. I. *Economics of Engineering Decisions in Machinebuilding*. Moscow: Machinostroenie, 1986. 1 ruble, 30 kopeks.

Scientific Bases for Progressive Equipment and Technology. Authors: V. P. Barmin. N. D. Kuznetsov, V. P. Makeyev, et al. Moscow: Machinostroenie, 1986. 5 rubles.

Morskoi sbornik (Naval Collection) advertised the following books in 1986:

Lacquer Paint Materials: Technical Demands and Quality Control. Handbook. Eds: M. I. Kanakin, N. V. Maiorov. Moscow: Khimiia, 1985. 272 pages. 29,000 copies. 1 ruble, 50 kopeks.

Electric Propeller Emplacements-Handbook. 2d ed. Leningrad: Sudostroenie (Shipbuilding), 1985. 304 pages. 3,500 copies. 1 ruble, 40 kopeks.

V. N. Vasil'ev, N. Ia. Karaush. *Operation of Ship Electrical Wiring*. Handbook. Moscow: Transport, 1985. 278 pages. 8,500 copies. 1 ruble, 60 kopeks.

A. M. Khor'kov. *Assembling, Operation and Repair of Ship Automation*. Textbook for Technical Schools. 2d ed. Leningrad: Sudostroenie, 1985. 159 pages. 6,800 copies. 40 kopeks.

Translations

Ideally, it would be good if all scholars concerned with Soviet military affairs could do research in original Russian-language materials. Since this obviously is impossible, some information about the availability and reliability of English-language translations of Soviet books and pamphlets may be useful to those using Soviet bibliographical data.

A number of organizations in the United States, such as the Foreign Technological Division (U. S. Air Force), the Department of Commerce and various groups in the military services translate selected Soviet writings on military affairs. These include, however, only a very small percentage of the books and pamphlets listed in Soviet bibliographies that might be of interest to scholars.

Beginning in 1973 a few key Soviet books on military doctrine, strategy and tactics were translated under the auspices of the U.S. Air Force and published by the Government Printing Office, Washington, D. C.* In 1975 a commercial publisher was found for the third edition of Marshal V. D. Sokolovskii's *Military Strategy*, which had been written in 1968.[14] These translations have been studied closely by scholars in both the United States and Britain, and are the basis of many articles and books about arms control and Soviet military matters.

Current Restrictions on Translations of Soviet Material

The brief effort to make translations of Soviet military publications available to Western readers was severely curtailed in May, 1973, when the Soviet Union joined the Copyright Convention. Prior to that time many Western military writings were translated by Soviet authorities and sold throughout the Soviet Union. In like manner, Soviet books of various types were translated in the West. Now, however, Soviet books, pamphlets, and journals published since May 1973, cannot be translated and sold for profit in the United States unless Soviet authorities give permission. Only Soviet newspapers are exempt from copyright.

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*As of 1987 the following Soviet military titles had been translated under the auspices of the USAF as the *Soviet Military Thought Series* and published by the United States Government Printing Office, Washington, D. C. 20402:

The Offensive
Marxism-Leninism on War and Army
Scientific-Technical Progress and the Revolution in Military Affairs
Basic Principles of Operational Art and Tactics
The Philosophical Heritage of V. I. Lenin and Problems of Contemporary War
Concept, Algorithm, Decision
Military Pedagogy
Military Psychology
Dictionary of Basic Military Terms
Civil Defense
Selected Soviet Military Writings: 1970–75
The Armed Forces of the Soviet State
The Officer's Handbook
The People, The Army, The Commander
Long-Range Missile-Equipped
Forecasting in Military Affairs
The Command and Staff of the Soviet Army Air Force in the Great Patriotic War 1941–45
Fundamentals of Tactical Command and Control
The Soviet Armed Forces: A History of Their Organizational Development
The Initial Period of War
Tactics

Even after giving authority to translate and publish a book, Soviet officials retain the right to "correct" the translation. For example, the USAF obtained permission to translate and publish the second edition of *The Armed Forces of the Soviet State*, by the late Soviet Minister of Defense, Marshal A. A. Grechko. The Soviets, however, required that certain statements in the book be rewritten or eliminated.

In the original Russian language edition of *The Armed Forces of the Soviet State*, Marshal Grechko had noted that in preparing the economy and populace for war, there must be "the systematic conduct of specialized exercises and practices" which are as important as in training in the armed forces. Soviet censors omitted this statement in the approved English translation. Elsewhere Grechko had written of the need for a uniform military-technological policy, which:

> *along with the resolution of current problems, orients scientific, technological cadres on the development of long-term problems, the results of which may find broad application in future military affairs. Of particular importance is basic research, aimed at discovering still unknown attributes of matter, phenomena and laws of nature, and developing new methods for their study and use to reinforce the state's capabilities.*

This entire statement was deleted. A new paragraph was substituted, which stressed the struggle of the party "to ban new kinds and systems of weapons of mass destruction. This is an important aim of military detente."[15]

English Language Editions of Military Writings by Soviet Publishers

Each year a number of Soviet books on military matters, international relations and arms control are translated into English and other foreign languages by Soviet publishing houses. Progress Publishers (Moscow) is the leader in this field. The decision to translate Soviet writings to be sent abroad probably is made by one of the departments of the Central Committee of the Communist Party.

Translations of Soviet military writings by Soviet agencies should be viewed with caution. Some may be accurate, while others are altered significantly. A number may be written primarily for the purpose of providing disinformation to the Western reader.

It is difficult to determine the reason why some Soviet books are translated by Soviet publishers and others are not. For example, in 1971 Progress Publishers came out with an English translation of *The Soviet Army*, by S. S. Lototskii. In 1969 this work had first been published by *Politizdat*, and later was awarded a Frunze Prize.[16] In that same year Progress Publishers came out with a second work of note, *Marxism-Leninism on War and the Army*. This was a reasonably faithful translation of the 5th edition of this work, first published by *Voenizdat* in 1968.

The Soviet leadership may have noticed the attention given in the United States to Soviet military writings which were being translated under the auspices of the USAF. This interest may have been one of the reasons why in 1976 Progress Publishers began a "Progress Military Series" in English, with the following note on the back cover:

> *The books in the new Progress Military Series will describe the sources of Soviet victories, examine the structure of the various arms of the services and expound Soviet views on the war. Readers will form an idea of Soviet officers and men and of the kind of training that is given to the fighting men who are always ready to deliver a crushing blow against any attacker who dares to violate the frontiers of the Soviet Union or the socialist community as a whole.*

Following are three books of the "Progress Military Series" that have appeared in English (and in other non-Russian languages as well) with identical covers:

Ruban, M. *The Soviet School of Courage and Warcraft.* Moscow: Progress Publishers, 1976.

Babenko, I. *Soviet Officers.* Moscow: Progress Publishers, 1976.

Ryabov, V. *The Soviet Armed Forces Yesterday and Today.* Moscow: Progress Publishers, 1976.

The three books appear to have been written for foreign consumption, and a preliminary check has not identified a Russian-language edition of any of the above. The use of the English language is somewhat awkward, and not at all up to the standard of *Marxism-Leninism on War and the Army* or *The Soviet Army.*

Scholars often must use translated material. They should at all times, however, carefully check its origins. English-language books and pamphlets published in the Soviet Union should be read with caution. Soviet-approved translations published since 1973 in the United States may have been edited carefully by Soviet authorities, and may differ significantly from the original Russian-language text.

Authors of Soviet Military Writings

Most of the authors of books issued by *Voenizdat*, the Military Publishing House, or by DOSAAF, are either active duty or retired military personnel. Many are on the faculties of military academies or higher military schools and often write extensively.

For example, Maj. Gen. A. S. Milovidov, a Doctor of Philosophical Sciences and a Professor at the Lenin Military-Political Academy, has had articles published in *Military Thought*, the *Military History Journal*, *Communist of the Armed Forces*, and *Questions of Philosophy*, a Communist Party political journal. He has been a contributor to a number of books and was the editor of *The Philosophical Heritage of V. I. Lenin and Problems of Contemporary War.*

With respect to military doctrine and strategy a few key writings by specific groups or individuals will be quoted repeatedly by other writers. *Bditel'no stoiat' na strazhe mire* (Vigilantly Stand Guard Over the Peace), a 1962 pamphlet by the then Minister of Defense, Marshal R. Ia. Malinovskii was the most frequently quoted document on military doctrine and strategy throughout the 1960s. Marshal A. A. Grechko's book, *The Armed Forces of the Soviet State*, also served as an authoritative work in this area throughout the latter part of the 1970s.

Critical articles and books at the same time may be written by officers at the level of colonel and below. From the viewpoint of U. S. scholars who follow Soviet defense matters, two of the most significant military books in the early 1970s were *Nastuplenie* (The Offensive) by Col. A. A. Sidorenko, Candidate of Military Sciences, and *Osnovnye printsipy operativnovo iskusstva i taktiki* (Basic Principles of Operational Art and Tactics), by Col. V. E. Savkin, Candidate of Military Sciences. Both of these books have been translated under the auspices of the USAF and published by the U.S. Government Printing Office.

Although the name and position of an author are important, the subject matter in a book published by *Voenizdat* is of greater significance. For example, should an unknown author of low military rank write a book describing the need for the Soviet Union to expand its military space capabilities, the work should be taken seriously. Such a book, pamphlet, or article could not have been published in the Soviet Union without the permission of both higher Party and military authorities.

Many of the DOSAAF publications are written by reserve or retired military personnel. Some of its publications, especially those about the Great Patriotic War,

are of very low quality, and may be for the purpose of meeting a quota on publications about particular groups in the Soviet Union. On the other hand, many of the DOSAAF books and pamphlets provide the best information available about certain military subjects.

Soviet Military Publications of Particular General Interest

All Soviet writings on military affairs serve some purpose for the Kremlin's leaders. Any military or military-related publication may be of use to scholars seeking information in specialized areas. To most scholars the number of Soviet books about the Great Patriotic War printed in the Kirgiz language each year may not seem important. But to those seeking information to determine problems the Soviet leadership might have with the growing percentage of national groups entering the Soviet armed forces each year, such data might give the insights needed.

For those analysts working on a daily basis with Soviet military writings, the book reviews and announcements of new books on the back cover of most Soviet military journals will be of interest. Some of the reviews are lengthy, and most specify the audience for which the book is intended.

The "Officer's Library" Series

Several times in the past the Soviet military leadership has published a "library" of books that are of particular interest to scholars concerned with defense matters. Between the Civil War and World War II a book series was issued called "Library of the Commander." An "Officer's Library" series appeared in the 1950s. A second "Officer's Library" series was announced in December, 1964, consisting of seventeen titles to be issued over a three-year period, 1965–67. However, neither the planned schedule nor stated titles were followed. The final book in the series appeared only in 1973.

This series provided Western scholars with new insights into Soviet military organization, doctrine, tactics, strategy, personnel and other key matters. Authors of these works were on the faculties of the Academy of the General Staff, the Frunze Military Academy, the Lenin Military-Political Academy or in various administrations of the Ministry of Defense. The purpose of the series was "for the self-study of officers." Titles and years published were as follows:

M. V. Frunze: Selected Works, 1965.
Dictionary of Basic Military Terms, 1965.
V. I. Lenin on War, Army, and Military Science, 1965.
Organization and Armaments of Armies and Navies of Capitalist States, 1965.
Marxism-Leninism on War and Army, 1966.
Basis of Soviet Military Law, 1966.
History of Military Art, 1966.
Tactics, 1966.
Military Pedagogy, 1966.
M. I. Kalinin: On Communist Education and Military Duty, 1967.
Military Psychology, 1968.
Officer's Guide for Quartermasters, 1968.
Military Strategy, 1968.
Party-Political Work in the Soviet Armed Forces, 1968.

Officer's Handbook, 1971.
Concept, Algorithm, Decision, 1973.
Scientific-Technical Progress and the Revolution in Military Affairs, 1973.

The "Officer's Library Series" for the 1980s

On October 3, 1979, *Red Star* announced that a new "Officer's Library" series soon would begin, with the following titles identified:

V. I. Lenin and the Soviet Armed Forces. (Published in 1980.)
The CPSU on the Armed Forces on the Soviet Union. (Collection of documents, published in 1981.)
On Guard Over Peace and Socialism. (By L. I. Brezhnev, published in 1981.)
Marxist-Leninist Teaching on War and Army. (Published in 1984.)
Party-Political Work in the Soviet Army and Navy. (Published in 1982.)
Fundamentals of Military Education.
Fundamentals of Soviet Military Legislation and Questions of Legal Education of Soldiers (Published in 1983 as *Military Legislation and Legal Education of Soldiers.*)
Basic Methods of Combat Training.
Tactics of Combined Arms Battle. (Published in 1984 as *Tactics.*)
History of Military Art. (Published in 1986.)
Armies of the Countries of the Warsaw Pact. (Published in 1985.)
Armed Forces of the Basic Capitalist States.

By early 1986, eleven books had appeared. The initial book in the series, *V. I. Lenin and the Soviet Armed Forces*, was published in 1980. It is the third edition of this Frunze prize-winning work. The second edition appeared in 1969. The three editions of this book, published over a thirteen-year period, disclose many of the changes in military concepts over those years.

Four books not in the original plan have been added to the series:

Defense From Weapons of Mass Destruction (1984).
M. V. Frunze. Selected Works (1984).
Military Pedagogics and Psychology (1986).
Officer's Handbook. (To be published.)

Books That Are Referenced in Other Publications

In the past certain books were listed in the "Soldier's Bookshelf," a section in the annual *Calendar of a Soldier*. Publication of the "calendar" began in 1968. In the 1981 issue the "Soldier's Bookshelf" section was dropped. This section had contained between 90 and 125 books each year on military subjects, plus other books on sports, fiction, the arts and similar subjects considered appropriate for the young soldier.

References following the entries in the eight-volume *Soviet Military Encyclopedia*[17] can be of help to scholars seeking additional information on a particular subject. For example, volume seven of this encyclopedia, published in July 1979, contained the entry, "Military Strategy," signed by N. V. Ogarkov. Although neither rank nor position were given, this contributor obviously was the Chief of the General Staff. At the end of the entry, under "references," were first listed works by Lenin, Marx, Engels and Frunze, followed by collections of

speeches by L. I. Brezhnev and D. F. Ustinov, Minister of Defense. Ogarkov then identified two specific books, *Military Strategy*, 3d edition (1968) and *War and Army* (1977). A few books by "bourgeois" authors then were given. From these references any scholar could assume that *Military Strategy* and *War and Army* remain two basic Soviet texts.

"Official" Soviet Military History Books

Western military historians and researchers can be so overwhelmed by the available Soviet data that they scarcely know where to start. In such circumstances, the list of seventy-five "official works" in a 1985 book, *41–45 Great Patriotic War*, edited by Lt. Gen. M. M. Kir'ian, Deputy Head of the Institute of Military History of the Ministry of Defense, is most welcome. The books date from 1943 (*Defeat of Fascist German Troops Near Moscow*) to 1984 (*Second World War—Short History*).[18] Twenty were by *Voenizdat*, the Military Publishing House. *Nauka*, the publishing house of the Academy of Sciences USSR, was second with twenty-one. Sixteen came from *Politizdat*, the Political Publishing House. *Planeta*, *Mysl'* and *Belarus'* had two each. *Liesma*, *Priok*, *Tula*, *Molodaia Gvardiia*, and *Moskovskii Rabochii* each had one book on the list.

The *Soviet Military Encyclopedia* and the *Military Encyclopedic Dictionary* (1984) are "official works," as is the twelve-volume *History of the Second World War 1939–1945*. Also on the list are *50 Years of the Armed Forces USSR* (1967), *Army of the Soviets* (1969), and *The Soviet Armed Forces: A History of Their Organizational Development* (1978). After the general books, the various battles, the services, the front histories, partisans and rear services are other subjects of "official works." There is a separate list of nineteen memoirs right after the "official" one. Eight Communist Party leaders are on a list of their own—led off by N. A. Voznesenskii's *War Economy of the USSR in the Period of the Great Patriotic War* (1948). This book had been suppressed by Stalin and the author arrested. Voznesenskii was subsequently shot in 1950.[19]

Censorship of Soviet Military Publications

All openly published Soviet military materials are carefully censored, to ensure that no classified military data is released and that authors do not deviate from policies established by the Party leadership. All books, journals, and daily papers published by organizations of the Soviet armed forces, such as *Voenizdat*, are under control of the Main Political Administration of the Soviet Army and Navy, an organization with the rights of a department of the Central Committee of the Communist Party. This ensures that only approved Party-military views are published.

Government and Military Secrets

Many types of information on military matters that are readily available in the West simply do not appear in the Soviet press. For example, although the Soviet "Backfire" bombers have been flying since the early 1970s, as of mid-1986 no photograph of this aircraft has appeared in Soviet military journals. Some extent to which information is controlled in the Soviet Union can be seen in the following definition of government and military "secrets":

Government secrets are made up of information of state importance: mobilization plans and operational plans and data, calculations, projects, and measures about the Armed Forces as a whole and on separate military objectives; all questions connected with the defense of the country; information about mobilization, material, and food reserves; list of military production, and military orders and other documents of defense importance.

Also considered a government secret is important economic information; the wealth of our country; discoveries, inventions, and improvements of a nonmilitary nature in all areas of science, technology, and the economy (before their publication); information about negotiations, dealings, and agreements of the USSR with foreign governments; and also any other measures in the realm of foreign policy and foreign trade not published in official sources; government ciphers, and the content of correspondence written in cipher, and so forth.

Information on the organization of the Armed Forces, their number, locations, combat capability, armaments, equipment, combat training, the moral-political state of groups, their material and financial support, is a military secret.

Data about the guarding of state borders, information on military inventions and improvements; about the economy, having military significance; about the location of military objects (depots, airdromes, and so forth); about the status of communications, transport, etc., also are considered military secrets.

The range of questions composing military secrets in time of war, naturally, is broader.[20]

The above covers about every type of information possible about military matters. From this definition of a "secret," it is apparent that what does appear in the Soviet press is carefully filtered. Soviet books and pamphlets of all types, with very few exceptions, must show a censor number.[21]

Possibilities of Deception

Photographs in Soviet military publications frequently are altered. Certain items may be blurred with an air brush, or the photograph may even be a composite. The caption beneath the photograph or illustration may be completely incorrect. As with errors in other Soviet material, it generally is impossible to determine if the misleading information is deliberate, or simply due to carelessness.

For these reasons, it is important for anyone using Soviet materials to check a variety of sources. The Soviet leadership seeks to keep military secrets from the Soviet people as well as from foreigners. Even top Soviet diplomats may not have access to information about the Soviet armed forces of a type that is common knowledge of the armed forces of non-Soviet nations. Despite the care with which Soviet publications are censored, any scholar who reads Soviet military and military-related works, from textbooks for higher military schools to accounts of the Great Patriotic War, can obtain a knowledge of and insights into the Soviet armed forces unobtainable from any other sources.

Notes

1. These three publications, which will be described in detail, may be ordered by subscription from Victor Kamkin, Inc., 12224 Parklawn Drive, Rockville, Maryland 20852.

2. This annual publication, which will be described later, can be found in the Library of Congress. Purchase of copies is uncertain.

3. The exact order and composition of general headings and subheadings change each several years. The listing in Table 1 is as of 1 July 1986.

4. This number simply signifies the number of books and pamphlets listed up to this particular point in the current calendar year.

5. Titles and commentary on Soviet military journals are given in the Appendix.

6. As of July 1986, the order of precedence of Soviet services was: Strategic Rocket Forces, Ground Forces, Troops of Air Defense, Air Forces, Navy.

7. Daily papers in which articles of military interest are most likely to be found are given in the Appendix.

8. V. G. Kulikov, *Akademiia general'nogo shtaba* (Moscow: Voenizdat, 1976), pp. 205–6. At the time this book was written, General of the Army Kulikov was Chief of the General Staff. Beginning in 1978, members of the Institute of the USA and Canada told visiting Americans that a new book on military strategy soon would appear. As of mid-1987, the promised work had not materialized.

9. See: V. D. Sokolovskiy, *Soviet Military Strategy*, 3d ed, Analysis and Commentary by Harriet Fast Scott, ed (New York: Crane, Russak and Co., 1984; fourth reprint with new introduction); Lt. Gen. V. G. Reznichenko, ed, *Tactics* (Moscow: Voenizdat, 1984).

10. Looking back, analysts found that a number of articles published in *Voenno-istoricheskii zhurnal* during 1979–80 were concerned with the role of air defense during the Great Patriotic War. Of particular interest was a book by N. A. Svetlishin, *Voiska PVO strany v Velikoi otechestvennoi voine* (Troops of National Air Defense in the Great Patriotic War) (Moscow: *Nauka*, 1979).

11. *M. V. Frunze—voennyi teoretik* (Moscow: Voenizdat, 1985).

12. Annuals of the *Bolshaia sovetskaia entsiklopediia* for 1978 and 1983 show that 742 titles were published in 1977 and 773 in 1982.

13. According to the late General Secretary Brezhnev, "as much as 42 percent of the defense industry's output is used for civilian purposes" (*24th Congress of the CPSU*, Moscow: Novosti Press, 1971, p. 47).

14. Marshal V. D. Sokolovskiy, *Soviet Military Strategy*, 3d ed, Analysis and Commentary by Harriet Fast Scott, ed (New York, 1984).

15. For a more detailed discussion of the translation of Marshal Grechko's book, see the review by William F. Scott "Guidelines for the Future," *Strategic Review* (Summer, 1977), pp. 87–89.

16. This is a prize awarded for the best writings each year on military subjects.

17. The first volume of this series appeared in 1979, the final, eighth volume was published in 1980.

18. The books were distributed in the time period as follows: 1940s—3; 1950s—2; 1960–64—6; 1965–69—13; 1970–74—18; 1975–79—16; 1980–84—18.

19. *Istoriia Velikoi otechestvennoi voiny Sovetskogo Soiuza, 1941–1945* (Moscow: Voenizdat, 1965), Vol. 6, p. 418.

20. N. A. Beshkarev, *V pomoshch' doprizyvniku* (To Help the Pre-Callup) (Moscow: Voenizdat, 1967), p. 93.

21. Speeches and articles by Party Secretary L. I. Brezhnev did not carry a censor number.

Addendum

Soviet Publications of Military and Military-Related Interest Journals

Journals Directed Primarily at Military Readers

Voenno-istoricheskii zhurnal (Military History Journal). This is one of the best written and best edited of all the Soviet military publications. New writings on World War II appear each month, not simply to provide information about that war, but also to give examples considered applicable to the study of current doctrine, strategy, tactics and organization. Military history receives great attention in the Soviet military structure.

Kommunist vooruzhennykh sil (Communist of the Armed Forces). This twice-monthly journal of the Main Political Administration of the Soviet Army and Navy has a "political studies" section, in which specific directions are given to political instructors in units, outlining lesson plans and hours to be given to the study of particular themes.

Voennaia mysl' (Military Thought). A monthly journal for Soviet officers, generals and admirals published under the auspices of the Soviet General Staff. Circulation is similar to the "Restricted" level of classification and sometimes there are higher levels of classification. In recent years about eighty of the "Restricted" level issues through December, 1973, have been translated by the U. S. government and are obtainable. (See *Selected Readings from Military Thought 1963–1973, Studies in Communist Affairs*, Volume 5, Parts I and II, U.S. Government Printing Office, Washington, D. C. 20402, for a selection of the best of these articles.)

Zarubezhnoe voennoe obozrenie (Foreign Military Observer). Soviet military personnel may stay abreast on the military forces on non-Soviet bloc nations through reading this journal. Since Soviet secrecy permits very little information to be published on Soviet military hardware, this monthly journal provides up-to-date information on the latest military equipment found in non-Soviet nations. Beginning January 1, 1986, copies of this journal were no longer available abroad by subscription.

Journals of the Five Soviet Military Services*

Voennyi vestnik (Military Herald). This is the monthly combined-arms journal of the Soviet Ground Forces, and contains articles of interest on tactics and equipment, generally directed at company grade officers.

Vestnik protivovozdushnoi oborony (Herald of Air Defense). Troops of PVO (air defense) form the second largest service in the Soviet armed forces. Their monthly journal includes articles on interceptor aircraft, surface-to-air missiles and radar units.

Aviatsiia i kosmonavtika (Aviation and Cosmonautics). The official journal of the Soviet Air Force is published monthly and includes articles on space. One or more cosmonauts are on its editorial board.

Morskoi sbornik (Naval Collections). This monthly journal of the Soviet Navy is somewhat similar in format to its U. S. counterpart, the *Naval Institute Proceedings*. Articles generally are of a high quality.

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*All except the Strategic Rocket Forces openly publish their own journals.

Journals for a Variety of Readers.

Tyl i snabzhenie Sovetskikh voorzhennykh sil (Rear and Supply of the Soviet Armed Forces). This is the monthly journal of the Soviet Rear Services, which performs quartermaster and other functions for the entire Soviet armed forces.

Tekhnika i vooruzhenie (Equipment and Armaments). A Deputy Minister for Armaments is at the Ministry of Defense level, and each service has a deputy commander in chief also concerned with armaments. This monthly journal is of interest to armament and engineering officers of all Soviet services.

Voennoe znanie (Military Knowledge). The monthly journal of DOSAAF and of civil defense. It is intended primarily for those who teach Soviet youth "Beginning Military Training," especially males before being called up for active military service and the civil defense instructor.

Znamenosets (Banner Carrier). Published monthly by the Ministry of Defense, this illustrated journal is for warrant officers and noncommissioned officers of all the Soviet branches and services. It contains articles of a technical nature and stories.

Sovetskii voin (Soviet Soldier). A twice-monthly publication of the Main Political Administration of the Soviet Army and Navy, this illustrated journal is for Soviet enlisted personnel. Its primary stress is on the glory of the Soviet Fatherland and the armed forces.

Soviet Military Review. A monthly publication published in English, French, Spanish, Arabic and Russian. It is intended primarily for foreign consumption. While many of its articles are of interest, as a whole the tone of this journal is not the same as that of journals intended primarily for Soviet military personnel.

Agitator armii i flota (Agitator of the Army and Navy). Another twice-monthly publication of the Main Political Administration, the journal is intended for use by the "agitator and propagandist," two respectable terms in Soviet society. Scholars interested in finding indications of what the Soviet military are told at Party and Komsomol meetings will find this booklet of interest.

Journals That May Carry Articles of Military Interest

Kommunist (Communist). This is the official journal of the Communist Party of the Soviet Union. It may occasionally publish articles by the Ministry of Defense or other key military figures.

Voprosy filosofii. (Questions of Philosophy). Articles in this journal usually are associated with questions of Marxist-Leninist philosophy. On a few occasions articles of major military interest have appeared in this journal.

SSHA (USA). This monthly journal of the Institute of the USA and Canada is apparently designed to inform Soviet readers about United States' policies, and also it is to appeal to United States readers. A number of the articles are on military and military-political matters, dealing with SALT, European security and related items. Well-known Soviet military strategists are associated with the institute. Many of this journal's articles may be simply for propaganda and disinformation purposes.

Mirovaia ekonomika i mezhdunarodnoe otnoshenie (World Economy and International Relations). This is the monthly journal of another Soviet research institute of the Soviet Academy, the Institute of World Economy and International Relations (IMEMO). Like the Institute of the USA and Canada, military strategists serve on its staff, and articles of military interest at times are published. Its interests extend to all of the non-Communist world, not simply to the United States. As with articles in the journal, SSHA articles in this journal should be read with some skepticism.

Military Daily Papers

Krasnaia zvezda (*Red Star*—usually 4 pages). This daily paper is by far the most important publication for scholars interested in Soviet military affairs. It is the official daily of the Ministry of Defense, and is published every day except Monday. This paper is available throughout the Soviet Union, and frequently contains articles on military doctrine, strategy, tactics, organization and related military subjects written by the Minister of Defense and other senior military leaders.

Sovetskii patriot (Soviet Patriot—4 pages). An official organ of DOSAAF (Volunteer Organization for Cooperation with the Army, Aviation and Fleet) and is published twice weekly. Intended primarily for youthful readers, this paper devotes a great deal of attention to civil defense.

Each of the Soviet military districts, groups abroad and fleets publishes its own paper, but these are difficult to obtain.

Other Daily Papers

Pravda (6 pages). This is the official daily paper of the Communist Party of the Soviet Union. Occasionally items of military interest are published.

Izvestiia (6 pages). The official organ of the Soviet government, this daily paper also occasionally publishes items of military interest.

Following Armed Forces Day, Tank Day, Navy Day, Rockets and Artillery Day and other military holidays, many Soviet journals and papers carry articles by senior military leaders and particular services or service arms are extolled on these occasions.

Contributors

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