WEAPONS AND TACTICS OF THE SOVIET ARMY

Fully Revised Edition

David C. Isby

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New edition

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Introduction

"Soviet leadership seeks continued enhancement of its power and prestige, probing at weakness, pausing before strength, but relentlessly pursuing its goals. Specific Soviet objectives include the weakening or demise of NATO and the withdrawal of US forces from Europe."—David Jones, general, Chairman Joint Chiefs of Staff, *Posture Statement*, 1982.

"You ought to ask: Why, what is this, what's the meaning of this?"—David Jones, private, 15th battalion, Royal Welch Fusiliers, *In Parenthesis*, Part IV.

Weapons and Tactics of the Soviet Army is a reference volume on a military subject, which is what Janes's has been publishing since 1898. Since then the nature of war has changed greatly, and a reference book must reflect today's complex realities. This book details the characteristics of the weapons currently in service with the Soviet Army, the tactics with which these weapons are used, the interrelation between weapons and tactics, and how effective each weapon is, how it works, its drawbacks and how it fits into the overall scheme of the Soviet Army. To examine the weapons themselves in isolation from their context would be misleading. Thus the analysis starts at the bottom, with the individual weapon, and works upwards through all levels of tactics, including those that the Soviets would term operations. The increased Soviet emphasis on the operational level of war is reflected in this edition.

Chapters One, Two and Three provide a broad and general overview, showing the larger framework into which the weapons and tactics fit. This book is not a handbook on the Soviet Army – there are already a number of them – but it covers much of the same ground. The format is designed for the reference user, who is advised, if looking for data on a specific weapon, to check also the material at the start of each chapter and, if possible, the chapters on offence and defence. This will give him an insight into its interaction with other weapons. Entries on related weapons can also be helpful.

Change is inevitable, and this revised edition tries to set out how the Soviet Army has changed in 1980–87, and how its actions have made apparent earlier changes. These years have produced a great deal of literature, both in the West and in the Soviet Union, on the Soviet military. The English-language literature is certainly much more extensive than it was a decade ago. This accounts for much of the growth of this book over the first edition, though there still remain large gaps in what has appeared in print. I have tried to cover as much as I can, while making a conscious effort to try and keep the size and price down.

The 1973 Middle East war resulted in a flood of interest in, and information about, Soviet 1960s-era weapons: the T-62, BMP-1, Sagger, RPG-7, ZSU-23-4 and SA-6, among others. Though there has been no shortage of wars—Afghanistan, Lebanon, Iran-Iraq, Ethiopia, Angola, Nicaragua and elsewhere—the weapons and the lessons of these conflicts remain much less studied in the West than those of 1973. Similarly, weapons such as the T-64/72/80, BMP-2, BM-27, 2S4 and many others remain relatively shadowy years after they were introduced.

Since the first edition, new divisions have formed while others have changed type or increased in readiness, even if the basic form of the army, its organisation and its deployment remain unchanged. Unfortunately, the details of these changes have been poorly documented in open sources in the West, so the figures in the order of battle section remain largely those of the late 1970s, updated where possible.

The war in Afghanistan has been the major operational development since the first edition. Each chapter includes details of combat in Afghanistan as it applies to each type of weapons system, and there is a new chapter to put them into the overall context of the war. Yet while the war has been total and all-consuming to the Afghans, it continues to be of limited significance to the Soviet Union, with an effect on the Soviet Army as a whole that remains correspondingly limited.

Accuracy in any work dealing with the Soviet Army of today is relative. A certain amount of the information in this volume will inevitably be incorrect. Other material may be misinformation, disseminated by interested parties in both the East and the West, to mislead people such as myself (the first edition contained at least one choice example of disinformation, now fortunately excised). I have passed on unconfirmed reports whenever I thought that to do so would be valid, accepting that a certain percentage might be wrong. The magic words "probably", "reportedly" and "it has been stated that" must appear frequently in any work on this topic. All statements about specific weapons being in service (and the type of service) and specific numbers of weapons must all be judged as approximate and estimated, as must all statements of

specific weapons effectiveness, dead spaces and their like. Just as it is misleading to compare the characteristics of the 2S1 with those of the M109A3 or Abbot without comparing their different roles, missions and fire-control systems, it is also misleading to compare hit probabilities (which can be computed on paper, by computer, on the Aberdeen Proving Ground Ranges, in action in Sinai, by comparisons with Western systems or, I fear, "fudged" by those who should know better) without considering what goes on behind the weapon.

Limitations of space have meant that arms such as engineers, signals, motor transport, railway troops, radioelectronic combat, intelligence, and pipeline troops have not been treated in the depth they deserve. This must be considered a reflection of the realities of book publishing rather than of any lack of Soviet emphasis on these arms. I chose to concentrate upon the combat weapons. These areas have been treated at greater length than in the first edition.

If any readers have information, source material, corrections, photographs or anything else that might be pertinent to a further revised edition, please send it to me at Jane's Publishing Company Ltd, 238 City Road, London EC1V 2PU.

This book would have been but a shadow of itself without the contributions of many people to the project. My thanks for both editions go to Joseph Backofen, Joseph Balkoski, William Baxter, Alain Dupouy, Edward Ezell, Chris Foss, Terry Gander, Mark Herman, Ian Hogg, Charles Kamps, James Loop, Virginia Mulholland, Anne Marie Shackleton, John Sloan, Larry Williams and Steven Zaloga, who all gave generously of their knowledge and expertise, and who provided invaluable corrections, information and encouragement. I would like to thank the Soviet experts, in both the US and Great Britain, whose comments and inputs on both editions have been greatly appreciated. The illustrations in this volume appear by virtue of the great assistance of *AFV G-Z*, Leon Conjour, EW Communications Inc., the Egyptian Military Attaché, Washington, V. M. Martinova. Manny Milkuhn, *The Marine Corps Gazette*, *Soldat und Technik*, *Truppendienst*, Tom Woltjer, Paul Woolf, Charles Yust, Joe Bermudez, Ken Kraft, the Office of the Secretary of Defence, Public Affairs (especially Ed Michalski), John Crawford, Omega Publications Inc, Mohammed Shuaib, Massoud Khalili, Nabi Wardak, Dr Khalid Akram and Sayid Fazle Akbar. Special thanks go to Michael Isby for his efforts in checking and collating technical data.

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For research on Afghanistan I am vastly indebted to the many journalists, doctors and other travellers inside the country who have freely shared the knowledge they have gained out amongst the Hinds and land mines. My greatest debt, however, must be to the Afghans, whose hospitality and willingness to provide information never flagged in Washington or Peshawar, or during my research trips with them in the field. I was left with a great and undying respect for all those on *jihad* and am proud to count many as my friends. If this is anybody's book, it is theirs. Because they are very much on active service, I shall mention by name only the three who have helped me but have since been *shaheed*—Dr S. B. Majrooh of Kabul, *Maulaui* Shafiuallah of Koh-i-Safi and *Muallem* Halam Mutawakhil of Wardak—and let them stand for all those who remain, and who I hope will read the next edition of this book at home in a peaceful Afghanistan.

Finally, I trust my British readers will excuse my comparisons with US Army practice and my use of American military terms throughout. The gap between US and British military language has not closed since, in 1918, my uncle discovered that the Doughboys relieving his battalion did not understand what a Toc Emma, Emma Gee, or a Mills Bomb was.

(Every effort has been made to ensure that the information in this volume was current as of February 1988. However, the normal time lags of intelligence-gathering and publishing mean that a book of this sort can in places be one, two or more years out of date.)

David C. Isby
Washington DC, 1988

Contents

Glossary

armour basis The equivalent thickness in rolled homogeneous steel armour of any armour arrangement. The way to increase armour basis (apart from thickening of the armour) is by increasing the slope of the armour. The slope of the armour modifies its basis against most penetrators by the following amount:

Slope	Increase in basis
10°	101%
20°	106%
30°	115%
40°	130%
45°	140%
50°	155%
55°	174%
60°	200%
70°	290%

avoidance radius A planning figure used to determine the distance an aircraft will have to stay from a particular air-defence weapon if it is to avoid effective fire.

beam width The width of a radar beam. Fire-control radars have a narrow "pencil" beam, while search radars have a broader beam. The narrower beams are difficult to get on a target unless it is first located by another type of radar, but they are harder to jam.

burst radius The distance from the impact of a weapon at which its blast or fragmentation effects are likely to cause effective casualties.

CEP Circular error probability; the mean distance a projectile will be offset from its aiming point at impact. 50% of all projectiles will impact within the radius of the CEP from the aiming point; 90% will impact within 2.5 times the CEP and 99% will impact within 4 times the CEP.

cyclic rate of fire In an automatic weapon, the number of times the mechanism goes through the load-fire-eject cycle in a minute, not taking into account time to aim, reload, or adjust fire. It is a theoretical rather than a practical figure.

dead track AFV track that is not under pressure from its connectors and hence is dead weight, joined together by track pins or end connectors. It is easier to maintain than live track.

desant Cognate of the English "descent", this is an attack delivered outside the actions of a single combined-arms battle with the aim of achieving surprise. *Desants* may be strategic, operational or tactical. They may be inserted by parachute.

effective range For tanks, effective range is the maximum range at which a trained crew under "quasi-combat conditions" will achieve a 50% first-round hit probability against a stationary 2.5m-square target. For direct-fire weapons against armour, effective range is similar. For automatic weapons it is the longest range at which substantial losses are likely to be inflicted on a small-area target.

forward detachment A force with a specific battlefield objective which is deployed forward of the Soviet first echelon.

front Soviet operational formation, usually consisting of three to five armies plus air elements.

gradient The average slope of standard ground that a vehicle can climb. It is basically a comparative figure as in practice gradient depends heavily on type of soil; the T-62's gradient ability can vary from over 60° to less than 20°. River banks – naked and slippery slopes – reduce gradient ability most.

ground pressure The pressure, in kilograms, exerted on the ground by each square centimetre of the vehicle's tracks at combat weight. The lower the ground pressure, the more types of terrain the vehicle can cover.

horsepower All horsepower figures for vehicles are given in brake horsepower, except for helicopters, where the figures are for shaft horsepower.

infantry fighting/combat vehicle A vehicle carrying a squad of infantry that primarily fights while mounted on that vehicle. Normally has gunports for firing while under armour.

intermediate cartridge A cartridge between a rifle and a pistol cartridge in size and power.

live track Track joined together with end connectors so as to be under pressure, like a spring-hinged door. Because of this, live track requires less energy from the drive train to pick it up off the ground, as the springs raise it of its own accord. It normally uses rubber bushings. Live track is obviously more complicated than dead track and so is more difficult to maintain.

maximum range The farthest a projectile will travel. For direct-fire weapons it is normally determined by the maximum sighting distance on the direct-fire sights. For indirect fire it is how far the shell will travel. Some weapons, such as tank guns, may have to be mounted on an incline to reach their maximum indirect-fire range, as the mounts cannot achieve the elevation of comparable field guns.

minimum range The range below which a weapon cannot be guided. It is not the same as the arming distance, which is a safety factor in most missiles and rockets.

mobile group A temporary force assigned an oper-

ational combat mission independent of that of a main Soviet echelon. The operational manoeuvre group is a form of mobile group.

operational manoeuvre group (OMG) A temporary force assigned one operational mission, either independently or in conjunction with other forces, in furtherance of Soviet operational objectives. It can carry out a range of *reydy* or forward detachment missions.

point-blank range The range at which the highest point of the projectile's flightpath does not exceed the height of the target.

probable error deflection (PED) Similar to PER, but dealing with deflection. For rifled artillery it is much smaller than PER.

probable error range (PER) An index of precision of an artillery piece. The smaller the PER, the more accurate the weapon. 50% of a weapon's "overs" (shells that fall beyond the target) and 50% of its "shorts" (shells that fall short of the target) will each be within one PER (for that gun and range) of the mean point of impact. This figure is usually larger in the field than on paper.

probability of hit An estimate of the chances of a shell (or series of smaller projectiles) striking a specific target at a specific range. Most of these figures are taken from field tests or estimated on their results. Crew training and battlefield conditions can modify these results greatly.

probability of kill The US Army divides kills into K-Kills (total destruction of all combat ability), F-Kills (Firepower kills; destruction of the primary weapons systems capability) and M-Kills (Mobility kills; destruction of the ability to move). The probability of kill represents the average chance of achieving one of these. The exact point at which a projectile strikes a target greatly affects the probability of kill.

projectile expenditure rate Soviet term indicating the number of artillery shells to be used in a given time to achieve the desired result against a specific target.

range Where given, range is road range with full fuel and at road march speeds. These figures are for marches on metalled roads. For dirt roads range is about 75% of this figure, and less cross-country.

rate of fire The speed with which a weapon can load, fire and reload. Again it varies widely, depending on training and conditions, which is why it is usually divided into a theoretical maximum (at which the system is fired as quickly as its design allows) and an actual or combat rate of fire, which allows for such human activities as aiming.

reydy Cognate of the English "raid", this is a mobile action which does not include amongst its objectives the holding of terrain.

Sarandoy Internal security troops of the Ministry of the Interior of the DRA, successors to the Gendarmerie.

speed Speeds are normally given as maximum speeds along metalled roads. Speed on dirt roads is about 30–40% below this figure. Cross-country speeds depend greatly on the type of terrain, but usually are about 50% of their maximum road speed for tracked vehicles (although some are as low as 25% of the maximum), and 20% for wheeled vehicles, those with special cross-country mobility features being faster.

Spetsnaz *Spetsial'noye nazmacheniye* (special purpose troops). Special operations forces.

strategic/operational/tactical depth The distance behind the enemy front line at which the outcome of the war, operation or battle will be decided. The strategic depth includes the enemy's homeland and "strategic rear"; operational depth can be up to 200–500km, tactical depth less than that.

trench The width of a trench that the vehicle can cross at a perpendicular angle of approach. Angle and ground can also affect this capability.

trim vane A folding metal plate on the front of a vehicle that gives stability when swimming.

tilt The angle at which a vehicle can "bank" to the side. Also depends heavily on type of soil.

vertical obstacle The size of vertical step that a vehicle can surmount, although this would entail exposing its belly to any enemy position to its front. The effect of vertical obstacles is much worse on slopes. A T-62 cannot surmount a 0.6m step on a 20° slope, so that just a log on a hillside can stop even this powerful tank.

Abbreviations

AFV	armoured fighting vehicle; any armoured vehicle
AP	armour-piercing (also used with other abbreviations)
APC	armoured personnel carrier
APDS	armour-piercing discarding-sabot
APFSDS	armour-piercing fin-stabilised discarding-sabot
APHE	armour-piercing high explosive
ATGM	anti-tank guided missile
C	capped (used in conjunction with other abbreviations)
cal	length of gun in calibre
CIA	Central Intelligence Agency of the US Government
DIA	Defence Intelligence Agency of the US Department of Defence
DRA	Democratic Republic of Afghanistan. The regime in power in Kabul since the *putsch* of April 1978.
ECM	electronic countermeasures
EM	enlisted men
EW	electronic warfare
Frag	fragmentation
GHz	Gigahertz (thousand Megahertz)
GRU	*Glavnoe Razved-Yvatelnoe Upravlenie* (Main Intelligence Directorate of the General Staff)
HE	high-explosive
HEAT	high-explosive anti-tank
HEP	high-explosive plastic
HESH	high-explosive squash-head
HV	high-velocity (used in conjunction with other abbreviations)
HVAP	high-velocity armour-piercing
I	incendiary (used in conjunction with other abbreviations)
MHz	Megahertz
m/sec	metres per second
m/v	muzzle velocity
NBC	nuclear, biological and chemical
POL	petroleum, oil and lubricants
PPS	radar pulses per second
PRF	pulse-repetition frequency
RAP	rocket-assisted projectile
RoF	rate of fire
T	tracer (used in conjunction with other abbreviations)
Trav	traverse
TVD	*Teatr Voyennykh Deystivy* (Theatre of Military Operations)
WP	white phosphorus

Unit, vehicle and other symbols


Airborne infantry


Air defence


Tank


Chemical


Naval infantry


Engineers


Artillery (towed or SP, weapon type shown at side)


Motorised rifle


Infantry (non-Soviet)


Medical


Anti-tank (any)


Anti-tank artillery


Reconnaissance


Special forces


Rocket or missile artillery


Service support element


Supply installation (fixed)


Signals

Service support

Unit has had components detached from it

Unit has been reinforced with non-organic assets

Headquarters (while moving)


Headquarters (deployed)


Unit is an ad hoc or mission-specific grouping


Observation post


Squad or individual vehicle

Section (US usage of term)

Platoon

Company or battery

Battalion


Regiment

Brigade

Division

Corps

Army

Front

Theatre


Command post


Mortars


SAM launcher (tactical)

ZSU-23-4

Main battle tank

Light tank

Heavy tank

APC or BMP

SP gun

AVLB

Engineer APC

Minefields

Unit boundary (here a battalion)

Unit defensive position (here a platoon)

Chapter One

The Soviet way of war

"Wars are not won by big armies, but by good ones."
MARSHAL SAXE

Military doctrine

The cornerstone of the Soviet Army is military doctrine, the officially approved system for perceiving and analysing the nature of war, how it will be waged and with what weapons. It is a fundamental statement of first principles which, in the words of Marshal Nikolai Ogarkov, former Chief of Staff, is "a system of guiding principles and scientifically substantiated views of the Communist Party and the Soviet Government on the essence, character, and methods of waging a war . . . as well as the military organisational development and preparation of our armed forces and country. . . ." Doctrine itself flows from many sources: Marxist-Leninist thought, Russian nationalism, and changing military requirements. Military doctrine is determined at the highest level of political leadership: the Politburo and the Party Secretary. Doctrine answers basic questions as to the kind of enemy, war, Soviet forces, Soviet preparation, and means of war at which the resources of party, state and military should be aimed. Though seen as unitary (including all services and activities), empirical and scientific, doctrine is not static and unchangeable. Military doctrine has two components: military–technological and political. The Soviets have no doubt that war is a continuation of politics (which in turn is a continuation of economics). Once doctrine is decided upon, it cannot be questioned except through indirect routes or at the highest levels.

Soviet doctrine has gone through a number of phases since 1945. The 1945–53 Stalinist phase continued the primacy of Second World War-style conventional war; the 1953–59 transitional phase came to grips with the problems of nuclear weapons, leading to the primacy of nuclear warfare, centring on strategic forces, which had emerged in the 1950s. By the mid-1960s the Soviets also incorporated the potential for conventional operations in their doctrine, which today combines the key importance of nuclear weapons with the desire to fight conventionally. The Soviet belief that they had achieved the ability to attain theatre objectives in conventional war was not seen as inconsistent with the continued central importance of nuclear weapons to all aspects of modern war, and probably lay behind the 1981 "no nuclear first use" declaration.

For all the importance the Soviets place upon doctrine, they realise it cannot be translated into reality without proper armament norms and combat effectiveness. This is simply a recognition that any armed forces require weapons in a number and quality sufficient to carry out their mission as imposed by doctrine, and that these weapons must be used effectively or they are so much junk. Subordinated directly to doctrine, the concepts of armament norms and effectiveness prevent doctrine from becoming empty words. This is what happened before 1941, when the Soviets had made advances in thinking at all levels but the troops and weapons needed to realise them were lacking. The Soviets are well aware that, even at the highest levels, weapons and tactics remain the foundation of their strength. The highest level of Soviet military thought aims to understand and follow doctrine and achieve the required armament norms and combat effectiveness. Once that is achieved, all else should follow.

Doctrine must be distinguished from military science and military art. To the Soviets each is a different and precise thing. While doctrine directs the full range and sweep of Soviet military thought, military science is "a system of knowledge concerning the nature, essence, and content of armed conflict." The term science is deliberately chosen. The Russians have long been great believers in fundamental scientific laws (as illustrated, for example, by the work of Dmitri Mendeleyev) and have transferred this to military science. These laws of war may have the character of necessity, but they are not fixed. Because they affect all aspects of life, they are by no means purely military and are the responsibility of the highest level of Soviet leadership. Like any science, it is based on empirical data, which can be gathered either through actual use, manoeuvres, tests and other experiments, or from historical study. According to the late Marshal of the Soviet Union A.A. Grechko, "The value of military history is in the creative perception of the experience and lessons of the past, in the capability to disclose the regular laws of the development of methods for the conduct of war, in its

boundless capability for the expansion of the military world outlook and military thinking of officers and generals." Finding out the nature of war through empirical study is a key part of military science.

The elements of military science include the general theory of military science, the theory of the organisation of the armed forces, military geography and military history, theory of military training, military training and, most important, military art.

Military art is "the theory and practice of combat," and, despite its name, is recognised as a scientific theory. Military art encompasses the theory and practice of combat from the highest to the lowest level, and is divided by its scope into strategic, operational and tactical levels.

As throughout Soviet military thought, the principles of military art for modern war have been in a state of flux. By 1977 the *Soviet Military Encyclopedia* was defining them as:

1 Preparedness for war forces, plans and thinking.
2 Surprise and initiative.
3 Most efficient use of all assets.
4 Co-operation between services and forces.
5 Concentration of forces at the decisive point and time.
6 In-depth operations.
7 Full use of moral–political strength.
8 Strong and direct top-down leadership.
9 Steadfastness and decisiveness in carrying out orders.
10 Surprise and security.
11 Rapid restoration and rebuilding of forces.

Marshal Ogarkov, when he was Chief of the General Staff, stated in 1984 that new weapons technology was fundamentally changing the nature of warfare; but while the nature of the whole of Soviet military art and science was evolving in response to changing technology, the basic elements were likely to endure. His successor, Marshal Akhromeyev, apparently shares this Marxist view of technology as the locomotive of change.

Strategy is the major element of military art. The Soviets do not have different army, air and naval strategies; there is one common strategy for all the services. The integration of the services is seen to be possible only with a single strategy. In wartime, strategy will be planned by the highest levels of Soviet command and will deal with global operations and the grouping of forces to carry out operational missions.

Operational art is the next level of military art. Each service has a different operational art (although they are held together by having the same strategy, military science and, of course, doctrine). It deals with combat by armies and fronts, which are theatre-level forces. A front (equivalent to an army group or army) is the basic operational formation. These will all be integrated into a single command by a TVD (equivalent to a theatre of military action) high command. The re-emergent TVD level of command has its actions governed by the principles of the operational art. Possible Soviet plans for the invasion of Western Europe are examples of strategic-operational planning, and they would only be undertaken in the context of a larger strategic plan.

Tactics govern the action of the military units making up an operational force. Divisions and regiments are considered tactical units; battalions and smaller are tactical sub-units. Operational success is based on the correct application of tactics, much as strategic success is based on the sum of operational results. Each different unit and sub-unit, and each individual weapon system, has its own individual tactics. The Soviets spend a great deal of time in determining the optimum tactics for each and how they should be carried out. To accomplish this, there are many numerical standards, tables and algorithms, stemming from the scientific perception of the military art at all levels. It is easy to be convinced that these numbers represent reality, but all the similiar calculations made before 1914, which appeared equally impressive, proved fallacious. (Examples of this Soviet approach can be seen in the "chance of victory" table in Chapter 7.) Scepticism about this sort of approach is not uncommon in Soviet Army publications. It has been criticised as reflecting neither the importance of political consciousness nor the commander's creativity and skill.

The Soviets believe that all the charts, nomograms and tactical computers cannot substitute for a thorough understanding of both military science and military art. This should be acquired over a lifetime's service, including field command, professional military education and "culture". It is such a background that will allow a commander to decide correctly whether the norms must be filled or are unobtainable goals, or if there are circumstances beyond those of the nomograms.

If empirical research has determined the best way for a unit to act on the battlefield, then all its commander need do is to make sure that it does indeed behave in that way. However, in the words of one writer, "a victory cannot be calculated, it must be won." Despite these reservations, the Soviets retain this empirical outlook and it is a key part of their comprehensive yet highly regimented system.

Laws and principles

The 1977 edition of *The Soviet Military Encyclopedia* offered six basic laws of war to guide formulation of strategy:

1 War is dependent on political goals.
2 War is dependent on economic strength.
3 War is dependent on scientific–technical strength.
4 War is dependent on moral–political strength.

5 War is dependent on military strength.
6 Victory goes to the side that offers and uses the capabilities of a new and more progressive socio-economic order.

These laws restate the Soviet view of war as a clash not simply of armed forces, but of every aspect – social, economic, cultural, political – of the opposing nations, which explains much of the structure of these elements in Soviet life. The resulting militarisation is what Marxism–Leninism requires of a modern state if it is to ensure its survival – and the inevitable triumph of socialism – in a hostile world. It is in terms of these laws – rather than simple totals of ICBMs and divisions – that the Soviets evaluate, at the highest strategic level, the "correlation of forces". This approach also has the advantage, for the Soviets, of looking for strengths to set against their weaknesses, especially in the economic and diplomatic sphere.

The principles of the operational art govern both operational and tactical-level Soviet units on the battlefield. They can be seen as themes that run throughout Soviet operational and tactical thought. The Soviets realise that no set of operational principles can be immutable, for changes in technology and strategy will affect them all or their relative importance. While their precise application may vary, and there are even different sets of principles, Soviet military thought at operational level and, indeed, all levels is guided by:

1 Speed and shock: mobility, manoeuvre and high rates of combat operations.
2 Concentration of effort: decisive superiority at the decisive place at the decisive time.
3 Surprise and security.
4 Combat activeness.
5 Preservation of combat effectiveness.
6 Conformity of the goal.
7 Co-ordination of forces.

Only the offensive will yield victory; the principle of speed, shock and manoeuvre is the decisive component of the offensive. On the nuclear battlefield it may be the best defence against nuclear targeting. The Soviets insist on maintaining the momentum of the offensive. Even if nuclear weapons are not used to defeat the enemy, surprise, suppressive fire, bypassing or outflanking resistance and a greater emphasis on "deep thrusts" will contribute to the speed, shock and manoeuvre. The Soviets realise that speed and shock without manoeuvre cannot prevail, even against an outnumbered enemy. The principle of manoeuvre includes both the movement of troops and the application of firepower, "manoeuvring fire" and similar tactical concepts. The Soviets realise that the need for swiftness does not always justify frontal attacks, as attempted by the Syrians in 1973.

Concentration of forces creates numerical superiority, reflected in the allocation of frontage as well as the massing of weapons. Armament norms must be met if the Soviets are to achieve their objectives. This does not mean numerical superiority either all along the front, or in a theatre of operations, but rather being superior at the decisive point at the decisive time. Identifying these is one of the highest tasks of military art.

"It is necessary to take the enemy by surprise" – V.I. Lenin. Surprise is becoming more important as a principle of Soviet operations. Surprise is seen as a key "force multiplier," making the Soviet forces much more effective than they would otherwise be. The Soviets would apparently be willing to forgo some of their numerical superiority and logistical preparation to ensure that lengthy mobilisation did not alert the enemy. The Soviets also realise that surprise requires great command skill and forces that can take advantage of it. The Soviets intend to both create and exploit surprise by rapid manoeuvre of their forces to turn it into a concrete advantage. The faster the tempo of an attack, the greater the chance of surprising the enemy and the less chance he will have to recover. Nuclear weapons have increased the importance of surprise, as has the introduction of accurate conventional battlefield weapons; even the most deadly ATGM is ineffective if it is surprised before it can be deployed.

Nuclear weapons underlined, for the Soviets, the fact that the wages of waiting to be struck by the enemy are defeat. But pre-emption is not limited to the use of nuclear weapons. Suvorov said: "The one who forestalls is victorious." Marshal Kulikov, when Chief of the General Staff, wrote that "the most important consideration" in modern war was to "oppose an attempted enemy surprise attack." This has led to the rejection of the defensive except to lead to the offensive.

The Soviets will use well developed security and deception plans to attain surprise, as they have done from the Stalingrad offensive in 1942 to the invasion of Czechoslovakia in 1968. The Soviet publication *Field Regulations for Staff* requires all plans at division or higher level to include a fully developed deception scheme. While the Soviets realise that although modern reconnaissance methods mean that there is no way to hide mobilisation, political surprise is still attainable. The invasions of Czechoslavokia and Afghanistan, as well as the Manchuria campaign of 1945, show that even extensive mobilisations need not rule out surprise if *maskirovka* (operational camouflage and deception) is used effectively.

Combat activeness is the principle of the offensive, and is often rendered as such. The Soviets stress bold and decisive action in all operations, even in the defensive. Combat activeness implies the maintenance of the offensive, and the end of the offensive is annihilation, which is frequently included as an operational principle.

Preservation of combat effectiveness includes proper

organisation, effective systems of command, control and communications, and maintenance of morale.

Conformity of the goal is identical with the Western principle of "the mission." Goals usually include a terrain goal, enemy forces to be annihilated (usually a secondary goal), and a time goal.

Co-ordination is seen in the emphasis on combined-arms operations throughout the Soviet military. This principle also includes what the West terms unity of command, which is followed in the Soviet emphasis on centralised command functions throughout the army. Co-operation between arms is as vital to Soviet operations as it is to tactics. It is a much broader term than the comparable Western concept of "combined arms". All-arms co-operation has been seen as *the* crucial factor in battle. In Exercise Berezina in 1978, "the impressive picture of precise collaboration" was "the turning point of the decisive battle." Centralised command also implements co-ordination between different formations or different strikes, ensuring co-operation as well as the maximum effective utilisation of available weapons. It is part of the Soviet "systems approach" to military affairs, which requires individual issues – weapons, tactics or larger entities – to be examined as components of a larger whole. This philosophy imbues the Soviet military, from the highest levels down to battlefield tactics.

These principles of war are basically offensive, and, as the principles are built around the primacy of the offensive, it should come as no surprise that Soviet weapons and tactics, even defensive ones, are also offensive. Doctrine dictates that the goal is not just to beat back the enemy or buy time; it is victory. Marxist-Leninist thought holds that if a world-wide war breaks out between the forces of socialism and those of capitalism, it can have only one result: the triumph of the socialist system. That is why the question so often asked in the West – does the Soviet Union think it can fight and win a future war? – must be answered in the affirmative. A nuclear war is seen as a war like any other, with a winner and a loser, and fundamentals of doctrine have outlasted the nuclear revolution in military affairs. What is at issue is the cost of such a victory and, more important, whether the world situation makes it necessary. In fact the Soviet Union appears to have no intention of starting a nuclear war but only of being ready for it, since the potential costs limit its use as a rational element of statecraft to only the gravest situations. Since 1945 the Soviets have used armed force sparingly but well.

In 1987 there were a number of declaratory statements recognising the limited utility of nuclear weapons for war-fighting purposes. Along with preparations and operational concepts intended to lead to strategic or theatre-level victory with conventional forces while forestalling NATO nuclear use, these declarations suggest that every effort is being made to fight conventionally if war comes, and that the conventional solution will continue to be preferred for as long as there is any possibility of a nuclear response from NATO.

The weapons and tactics of the Soviet Army are designed to maximise Soviet strengths and avoid weaknesses. Just as on the battlefield the Soviets would try to exploit success rather than redeem failure, they invest resources to be stronger at what they are good at rather than mend failures.

Continuing reports of Soviet incompetence could cause the West to become unwisely complacent. Taken out of context, Afghanistan, the problems flowing from the 1981 partial mobilisation against Poland, Chernobyl, and a series of spectacular naval disasters could give a picture of the Soviets as techno-midgets, presenting little threat to the West. A look at the enduring economic, social and agricultural difficulties of the Soviet Union and its relations with its allies also indicates that the problems are not limited to technology. But the Soviet Army does not have to be the best in the world; it simply has to be able to win in the end. Inefficient it certainly is, ineffective it is not. In this it shares some characteristics with wartime Western armies. It is big, so big that there is neither the time nor the resources to give in-depth training to all the thousands of platoon and company commanders. The large-scale mistakes – the exploding ammunition dumps, the poorly handled offensives – are also those of a large force full of short-service personnel.

The Soviets beat the Third Reich with an improvised army. The purges and the losses of 1941 carried away the pre-war army, but the Russians were able eventually to enter Berlin. The Army that defeated Nazi Germany has certainly not been reduced to a collection of bunglers and black-marketeers by the passage of time. The Western focus on weapons and tactics should not obscure the fact that the Soviets have backed up these tools with a systematic and well thought out approach to war that has no equivalent in the West.

Chapter Two

Command and organisation

High Command

The top bodies in the Soviet national command structure are the Council of Defence, the Main Military Council, the Ministry of Defence, and the General Staff.

The Politburo, the central decisionmaking apparatus of party and government, controls all the nation's resources and their allocation, as well as the direction and form of policy and who shall carry it out. It can also focus on low-level decisions which have ramifications in these areas. The Politburo will make decisions on controversial or costly defence programmes, starting, reviewing or halting them. As the Party's senior leadership, it directs the Party's relationship with the Soviety military. The top military representative is the Defence Minister. But although previous Ministers of Defence have been full members, the current Minister, Marshal Yazov, like his immediate predecessor Marshal Sokolov, is but a "candidate" (non-voting) member. The Politburo is drawn from the 300 or so members of the Central Committee. While the Politburo retains final authority on major policy decisions, it is likely that the recommendations of the Council of Defence on military-related matters are usually acted on.

Comrade Mikhail Gorbachev, General Secretary of the Communist Party of the Soviet Union (by 1987 Gorbachev still had not inherited Brezhnev's title as Supreme Commander-in-Chief of the Warsaw Pact), is also chairman of the Council of Defence. Its members are probably all Politburo members, including the Minister of Defence; the Second Secretary of the Party; the chairmen of the Council of Ministers, Supreme Soviet and KGB; the Central Committee Secretary for Defence Industries; and possibly the Minister for Foreign Affairs, the Chief of Staff and First Deputy Ministers of Defence. Other Party and military heads may be called to attend meetings. The Council of Defence deals with preparedness at its highest level, ensuring that all the elements of the Soviet Union – armed forces, industry, transport, Party – are fit for any possible conflict. The Council has broad and far-reaching powers to affect the make-up and organisation of the Soviet armed forces. It may draw up five-year plans and make major procurement decisions.

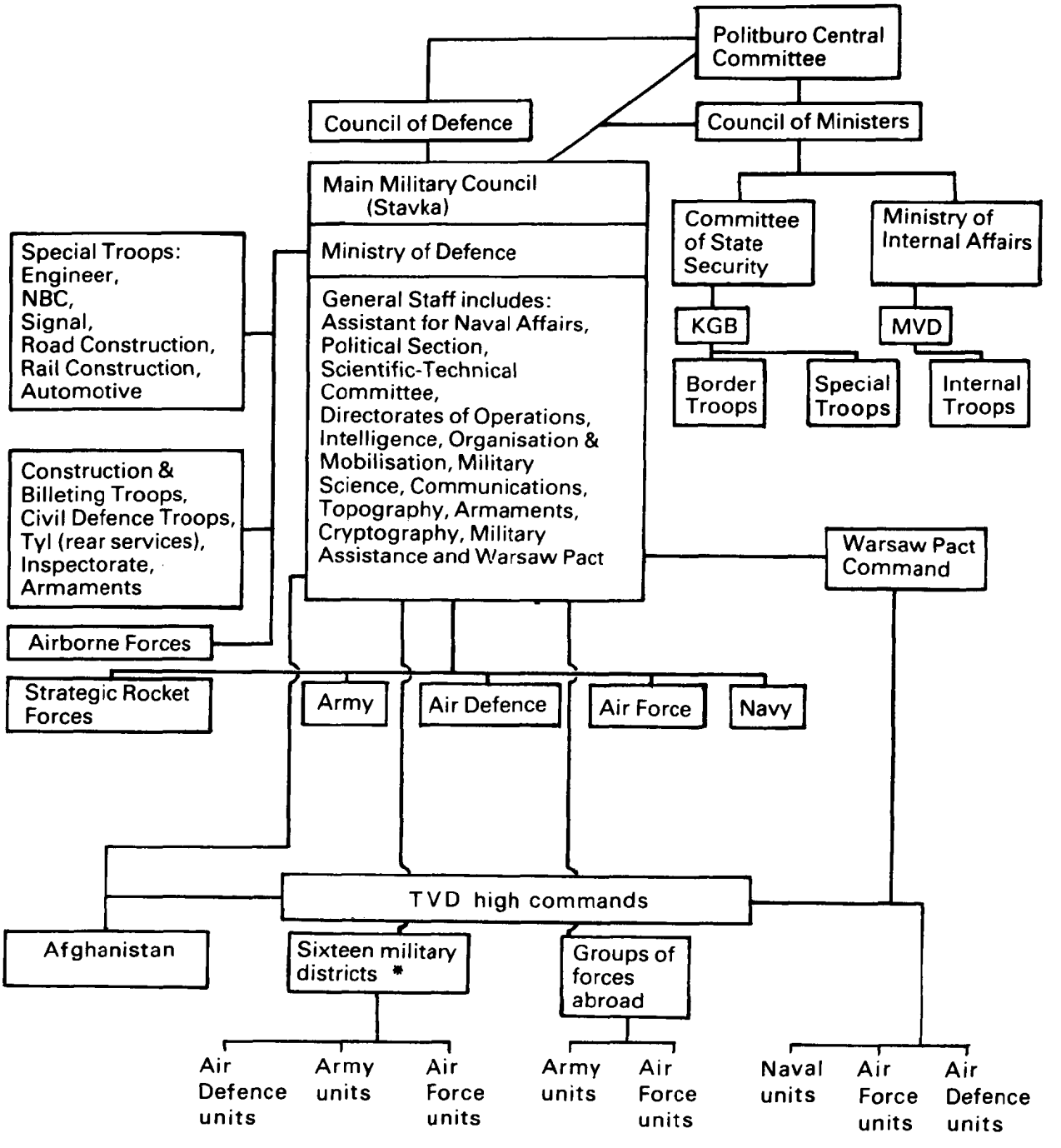
The Council of Defence is the most senior decision-making body for all aspects of national security policy. In wartime it would probably be expanded, functioning in a manner similar to that of the Second World War State Defence Committee. General Secretary Gorbachev would act as chairman, thus exercising direct leadership of the Soviet armed forces as Supreme Commander-in-Chief of the *Verkhovnoe Glavnokomandovaniye* (VGK, the successor to the wartime Supreme High Command) and head of its General Headquarters (*Stavka*), as well as the entire political and economic direction of a conflict. In peacetime the Council of Defence defines national defence policy, plans its implementation, and allocates resources, subject to Politburo approval. It is the highest element of national control, whereas the Politburo is the highest element of national political policy formulation. A Military Industrial Commission is probably attached to the Council of Defence.

The Ministry of Defence Collegium is a consultative body and policy review board. Membership includes the Deputy Ministers of Defence, the Chief of the Main Political Directorate, and the service chiefs. The Collegium would probably provide the foundation for the wartime *Stavka*, which would also include Gorbachev. The Collegium is part of the Main Military Council of the Ministry of Defence.

The Main Military Council is the Defence Ministry organisation that supervises the management and direction of the armed forces. The Soviet General Staff currently acts as the Main Military Council's executive agent. Marshal Sokolovskiy described the *Stavka*'s purpose: "The direct leadership of the Armed Forces during a war will obviously be accomplished, as before, by the *Stavka* of the Supreme High Command. The *Stavka* will be a collegial agency of leadership under the chairmanship of the supreme commander-in-chief." In peace, as in war, this body is concerned with strategic planning, leadership and direction. Membership includes the Party Secretary (Comrade Gorbachev), the Minister of Defence (Marshal Yazov), his three First Deputy and ten Deputy Ministers of Defence, the Chief of the Military Political Administration, and the commanders-in-chief of the five Soviet armed services: the Strategic Rocket Forces, the Army, the Air Force, Air Defence and the Navy. In addition, the chiefs of civil defence, construction and railway troops, and rear services are also presumed to be members, as are the Deputy Minister of Defence for armaments and the Inspector-General.

The General Staff, immediately subordinate in peacetime to the Main Military Council and to the *Stavka* in wartime, is the brains of the Soviet military. It has apparently been the driving force in the evolution of Soviet strategic and operational thought since the mid-1970s, using the findings of research staff at the Voroshilov

HIGH-LEVEL ORGANISATION



(* Strategic reserve military districts not under TVD command.)

(General Staff) and Frunze (Staff College) academies, as well as a constellation of other research institutions. In 1988 the General Staff was headed by Marshal S.F. Akhromeyev and had operational control over the armed forces. In wartime the General Staff would carry out the strategic and operational orders of the Supreme High Command. The General Staff is the link between the political leadership and the armed forces. It exercises actual operational control over the armed forces and has exclusive responsibility for translating strategy, doctrine