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BAR Special Report: The Soviet Union and Russia

Volume 1

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Contents

Front Cover Photo: Russian T-90A during the rehearsal on the Alabino Training Ground for the 2014 Victory Day Parade. Photo by Vitaly Kuzmin, Creative Commons Attribution-ShareAlike 4.0 International License.

The views expressed herein (including editorial content) are those of the author concerned and do not necessarily conform to official policy.

A front view of a Russian T-54 Main Battle Tank. These tanks were primarily built during the Soviet Union era and many thousands were sold to other countries.
Photo US Department of Defense, Released

Editorial

Welcome to the first volume of the British Army Review (BAR) Special Report on Russia and the Soviet Union. This volume covers the period of 1954 up to the collapse of the Soviet Union. The articles within these pages have been taken from the archives of BAR and as such cover the Cold War era. But why publish this volume of articles that, I suspect, for most people will be considered dusty history?

The obvious answer to that is that Russia's resurgence and military build-up parallels the Soviet military build-up throughout the Cold War. Aside from references to past events, the ideas and themes within these pages are as relevant today as they were when they were first published. Soviet strategy and tactics is not much different from the tactics and strategies of modern Russia.

Of course, it is up to the reader to take what they want from this volume. For me, if one person downloads one or all of the articles onto their phone, tablet or computer and uses the information here to inform their own knowledge of Russia and the Soviet Union then putting all the work into this has been worthwhile.

This is the first of two volumes and while this deals with the Soviet Union the second will be about Russia, and its military resurgence in the 21st Century. Taken together, both volumes should provide the reader with an interesting and informed look at one of the key players of the 20th and 21st Centuries.

In order to make both volumes as accessible as possible it was decided that this Special Report would be online only, enabling the reader to download both volumes from the Army Knowledge Exchange on the Defence Gateway onto whatever device they choose, anywhere, at any time.

Graham Thomas
Editor, British Army Review

Red Army Day in Berlin, 1949. A member of the Soviet Army band poses for the British Army's photographer with his tuba during the wreath laying ceremony at the Russian War Memorialin the British Sector of Berlin. The bandsman is also carrying a camera
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Ivan - Soviet Soldier

This article was originally published in British Army Annual Issue 1, July 1954 and is the story of a fictitious Russian soldier carrying out his period of compulsory service loyally but without much desire to make the Army his career. He is not a real individual but is typical of the large number of conscripts who filled the ranks of the Soviet Army.

Ivan Pavlovitch Krylov was born in 1932 in a small village near Kharkov. From the age of six he had attended the village school and learnt to read, write and praise Stalin. On leaving school he had gone to work in the fields with the other members of the local *Kolkhoz* (collective farm).

Ivan first registered at his local *Raivoyenkomat* (recruiting centre) in 1950 at the age of 18. He knew that under the universal conscription law all Soviet male citizens were required to serve for two years. He also knew that although called up in the summer or autumn his service would only count from January the following year; that he would then be required to serve a full two years before becoming eligible for demobilization, and that this would probably not take place until the autumn following that. Ivan therefore prepared himself for at least three years with the Forces. During that winter he was instructed to do his '110 hours' pre-military training. This was carried out in the nearby town's 'club' under the auspices of DOSARM[1] and as this was some way from his village he was billeted in a nearby house. The training was carried out in civilian clothes and included basic drill, weapons training and marching.

It was with no great surprise, therefore, when on 15 July 1951, a letter arrived instructing him to report to the *Raivoyenkomat* a week later. Here he found a number of other youths from the surrounding districts. They were given a detailed medical examination and sent off by train to a large camp about a hundred miles away.

On arrival, the recruits were given a shower bath, inoculated (not without some protest) and had their hair close-cropped, as it would remain until their third year of service. They were issued with uniforms: first, a *gymnastyorka* or long loose-fitting blouse of traditional Russian pattern with a stand-up collar; the blouse was worn outside the breeches and was pulled together at the waist by a leather belt with a large metal buckle incorporating the Red Star. Next issued were a pair of khaki coloured breeches, a pair of jackboots and a greatcoat, which was rolled up and slung round the shoulders. Finally, they were issued with a side-hat and some foot bindings, the latter to be worn wound round the feet in lieu of socks.

Early Training

Ivan spent his first ten days in camp in quarantine with the rest of his draft. When this quarantine period was completed Ivan began his elementary training, and from early morning to late at night he learnt how to march, drill and use his rifle. After ten weeks of this training, the day came for the recruits to 'take the oath'. The whole company was paraded and the colonel appeared. 'Hail Comrades', he shouted.

'We wish you health,' chanted the recruits,

'I compliment the company on its bearing.'

'Hurrah!' roared the company.

'Thank you, Comrades,' replied the colonel.

'We serve the Soviet Union,' shouted the recruits in parrot fashion. This ceremony is laid down in detail in Soviet Army Regulations, as is the lengthy Military Oath, which each man now recited in front of the assembled troops.

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1 Amalgamated, in September, 1951, with DOSA\r and DOSFLOT to form DOSAAF, the Voluntary Society for Co-operation with the Army, Air Force and Fleet

The next day Ivan and many of his draft were issued with better quality uniforms and jackboots and from this they gathered that they would be going to Germany. True enough, on the following morning all were marched off to the station behind a regimental band and herded on to a train. The conditions were far from comfortable. Over thirty recruits were crowded into a covered wagon in which wooden tiers had been erected and these hard boards were their beds: not that there was room for them all to lie down at the same time. While some slept the remainder stood or sat around singing or talking. Meals, cooked in a special box-car attached to the train, were eaten during halts at wayside stations. At the Russian-Polish frontier Ivan and the others detrained and were surrounded by Frontier Troops of the MVD while their names were checked against a roll. Everyone was ordered to destroy all personal letters and photographs. The journey across Poland and East Germany continued much as before but the most stringent security precautions were taken: the doors were locked, the windows covered and the train only stopped in deep forest. At last, after about ten days, they arrived at their destination. Ivan found himself lined up with many others whilst officers sitting at tables divided up the draft to various units.

Life In Germany

A few hours later Ivan and some fifty others were on the way to their new unit, a motor rifle battalion of a tank regiment. Ivan's new home was a big kaserne on the outskirts of a German town not far from Berlin. The barracks, built by Hitler, were more spacious than anything Ivan had known in Russia. He soon found, however, that the barrack area was more like a prison, being cut off from the outside world by a high wooden fence. No one was allowed out of barracks, except on duty, and the only glimpses of the outside world were through the chinks in the fence or when moving by truck to the local training area. Ivan found that there were many other restrictions too - no fraternization with the local population, no alcoholic drinks and no girls; even the few Soviet women in the barracks were officially authorized to associate only with the officers.

Ivan was given little chance to brood over his sorry lot (and, anyhow, from as early as he could remember he had been taught that the State was always right). The days were long. Reveille was sounded at 0600 hours and five minutes later Ivan had to be outside dressed in PT kit. Half an hour of PT was followed by a period for cleaning up and morning inspections. Breakfast was from 0730 to 0800hrs and consisted of broth soup with pieces of meat in it, black bread and tea with sugar. The morning training period lasted until 1400hrs when there was a break for dinner. Dinner was somewhat more ample than breakfast; Ivan had *borsch* (vegetable and meat soup), fried meat and *kasha* (porridge made from millet). Tea and black bread were also issued. Coming from a collective farm, however, Ivan felt that he was not getting enough to eat. This was because, as a civilian, he had eaten an unbalanced diet of potatoes and bread and he had

not yet adjusted himself to the more balanced army diet. In fact, he was probably eating better than he did before, either on the farm or whilst serving in the USSR. He knew that he was entitled to a butter ration and was rather rankled because it did not appear to be issued to him, not realizing that it had already been used in the preparation of the food. After dinner he had a two-hour rest period followed by three more hours of training and weapon cleaning. At 1930hrs came supper, mashed potatoes, cabbage, bread and tea. This was followed by political instruction or 'hobbies', which lasted until the time came for roll call followed by the 'evening walk', when the various platoons marched round the parade ground each singing at the top of their voices a different 'patriotic' song - a strange and incredibly noisy performance.

Meal Time

The Inspection

Through the winter months one day followed the next with little to break the monotony. But when April came a fresh impetus was given to the training by the arrival of an inspecting team, consisting of several well-known generals from Moscow.

The regiment was drawn up on parade and the inspectors went around asking each man if he had any complaints. Later, standards of political training drill, shooting and physical fitness were tested. In one of the tank battalions of the regiment there was a CSM who was an excellent shot with both the tank gun and the machine gun. During the inspection this CSM was changed from tank to tank so that the battalion got excellent

results in marksmanship. Ivan had heard that during a previous inspection his CO had been reprimanded for the large number of entries on the men's conduct sheets. This is not surprising in view of the fact that practically all crimes, whether serious or insignificant, are dealt with summarily by officers at all levels. A regimental commander, for instance, could give Ivan twenty days in the guardroom or give his platoon commander, Lieutenant Dmitriev, ten days in the same place. The CO however, had learnt his lesson and had recently taken to punishing the men with extra fatigues or severe reprimands that were not entered on the cards. As a result the inspectors found only '10 punishments and 52 commendations ' had been given during the year.

Summer Training

Shortly after this the whole division left winter quarters and moved out by night to a large training area near the River Elbe. Once more they were isolated from prying eyes as entry to the area was forbidden to all Germans. Here Ivan lived in a tent and saw for the first time the vehicles, tanks and SP guns of his regiment, most of which during winter had been kept in semi-preservation inside the garages and not used. Even now only a few of

Soldiers of the Group of Soviet forces in Germany in Perleberg in the early 1980s. Photo Ashot Pogosyants, Creative Commons Attribution Share Alike 3.0 Unported Licence, Wikimedia

the tanks and vehicles were used for everyday training and it was only later in the summer during divisional manoeuvres that he saw all the tanks being used at one time

Training in the summer camp from April to July was fairly similar to winter training but, as autumn approached, more and more troops were involved in the exercises until in early October the whole division moved to a concentration area and were joined there by other Soviet units. The main manoeuvre of the year was about to begin. Ivan did not really know what it was all about but for seven days and nights he slept in the open or did not sleep at all, sometimes carrying out mock attacks with tanks while artillery laid down real covering fire. At other times wading, swimming or rafting across rivers with the assistance of local materials whilst Soviet engineers built pontoon bridges for the tanks and trucks. He got used to the whine of the MIG 15s passing low overhead and the roar of the tanks as they moved across the countryside. He also got used to food at irregular intervals and the continual need to dig in and camouflage.

Back To Barracks

It was with great relief that the end of the exercise signalled the return to the comparative comfort of winter barracks where immediately Ivan found himself in the midst of cleaning up and preparing for the Soviet 'Holy Day', the anniversary of the October Revolution celebrated, as it happens, on 7th November.

It was now about a year since Ivan had come from Russia, and the class due for release was being sent back and new recruits were arriving.

Ivan's second year would have been much the same as his first but suddenly, in March, 1953, a tenseness fell on the Soviet Army. Stalin was dead. Leave was stopped - not that this affected Ivan because as a conscript he didn't get any - but here at last was something that would perhaps change the drab dullness of their lives. New names appeared, Falenkov, Khrushchev and others: but after a time life drifted back to the weary old ways and the date for summer camp came round again.

Eight weeks later the regiment was suddenly alerted and moved out almost immediately for Berlin - the date was 17 June 1953. On arrival an incredible sight met their eyes; crowds milled round the street, communist posters had been obliterated and communist headquarters stoned. The 'impossible' had happened; here was a spontaneous public revolt against a communist dictatorship. Ivan was given strict instructions not to open fire and he remained unperturbed when a few stones were flung at him and when he saw two youths haul down the 'Hammer and Sickle' from the Brandenburg Gate and run up the West German flag. The tanks, however, soon cleared the streets by advancing steadily on the crowds.

Later the Political Officers informed their classes that the riots had been sponsored by enemy agents, but Ivan was used to their themes and had his doubts. Two or three times a week he and his platoon were assembled in a lecture room and harangued by

Political Indoctrinatio

the *Zampolit* (the company Political Officer) or one of his 'agitators'. The subject matter varied but little; the history of the Party, the benefits of Communism, the life of Stalin or the war-mongering of the West. Ivan was bored; the references made to agriculture in Russia were to his own knowledge crude distortions, but there was little he could do: he had nowhere to turn for the true facts, and fear of 'informers' effectively sealed his lips when with his comrades. While the *Zampolit* droned on, Ivan dreamt of home - Mother Russia - girls and vodka, and wished they were not so unobtainable.

Little did he realise that at that very moment Lieutenant Dmitriev was reading the latest orders issued by the Army Commander that authorized fraternisation with the German public for the first time since 1945. Troops were now free to leave barracks and visit cafes and dance halls in off-duty hours, and there were several other minor concessions from the burdensome restrictions which, until then, had been 'essential to the security of the Soviet State'.

Ivan and a few friends took advantage of the new rules at the first opportunity; they got drunk, were involved in a fight with Germans over some women, and ended up with ten days in the guardroom. Other similar incidents occurred daily and it was rumoured that only organized parties would be allowed out. Fatalistically, Ivan thought that his

pay of thirty roubles a month would not have lasted very long anyhow. He thought of Lieutenant Dmitriev, who received about 1,000 roubles a month, but didn't feel envious: after all an officer had to remain in the army for life! He calculated that he only had another year to do unless he was made an NCO, in which case he would have to serve for an additional twelve months. Ivan turned over and went to sleep.

'A battalion commander'. Soviet officer (probably A. G. Yeremenko, Company political officer of the 220th Rifle Regiment, 4th Rifle Division, killed in action in 1942) leading his soldiers to the assault. USSR, Ukraine, Voroshilovgrad region.
Photo RIA Novosti archive, image #543/Alpert/CC-BY-SA 3.0, Wikimedia

Soviet Tanks on the ring road for People's Army Street temporarily withdrawing from Budapest, October 31 1956. Photo FOTO:FORTEPAN / Nagy Gyula, Creative Commons Attribution-Share Alike 3.0 Unported license, Wikimedia

The Soviet Threat To the West

This article was originally published in British Army Journal No 7, January 1952

Any account of life behind the Iron Curtain attracts attention today; and, as a result, many political refugees and others have taken the opportunity to publish both memoirs and prophecies. While some of these books contain much that is useful, they are often

written from one particular viewpoint and should not, therefore, be always taken at their face value. There are, however, three books that are commended to the notice of readers of the BAR. These are:

- *Russia by Daylight by Edward Crankshaw (Michael Joseph)*
- *Moscow Close-up by Harold Laycock (Dennis Yates)*
- *I Believed by Douglas Hyde (William Heinemann)*

Each deals with a different aspect of the Soviet threat to the West. Mr Crankshaw, an acknowledged authority on Communist doctrine, who was attached to the British Military Mission in the Soviet Union between 1941 and 1943, analyses the motives behind Soviet leaders. Mr Laycock, the last assistant editor of the *British Ally in Moscow*, describes the Russian people as they appear to a British resident in their country, while Mr Hyde, news editor of the *Daily Worker* until 1948, tells how he came to embrace Communism and how, after 20 years, he came to discard it.

These books provide a valuable background to the Cold War as to warrant something more than a simple review of each. Furthermore, if we are to depict their inter-related subjects in proper perspective, it is unsatisfactory to consider them in isolation from each other. In order to give readers some essential pegs on which to hang their thoughts it is worth looking briefly at Russian and Communist aims and methods before going any further.

Defining The Enemy

> *The first thing to do in any conflict is to define the enemy. Only then can we decide what the conflict is about; and until we know what we are fighting, and why, we shall not get very far'*

The above extract is from the first chapter of *Russia by Daylight* in which Mr. Crankshaw sets out to define the enemy in the conflict between East and West, which started as a Cold War in 1947 and morphed into full scale military operations in Korea and Vietnam along with proxy wars elsewhere. It is unfortunate that many people even in the Army have still no clear idea of what we are fighting. Some say that Russia is the main enemy, others that it is Communism. As Mr Crankshaw points out, they seem to think that 'either the rulers of Russia must be Marxists or quasi-Marxists, or they must be old-fashioned Great Russian imperialists or they must be gangsters. The truth, of course, is that they are all three together'. In other words our enemy is Russian imperialism guided and inspired by a neo-Marxist faith, sometimes called Stalinism, and ruthlessly directed by a minority determined to preserve their vested interests in the regime whereby they have risen to power.

Soviet Aims And Impulses

The Kremlin's two-fold aim would seem to be; Firstly, to preserve intact the Soviet Union as the base of Russia's resources and the citadel of the Stalinist faith, and secondly, to establish World Communism directed from Moscow. It is a curious mixture of idealism and theory, of realism and self-interest. Idealism inspires the evangelical mission to spread the Stalinist faith; self-interest dictates the policy that World Communism, once it is established, shall be directed from the Kremlin whose authority must be preserved.

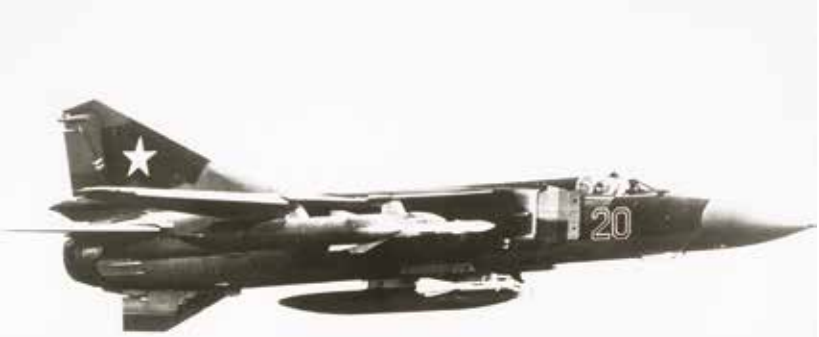
The Soviet leaders are theorists in that they seem to believe in Lenin's prediction that there will inevitably be 'violent collisions' between the USSR and the 'capitalist' states. However, they are realists in that they are unlikely to start a war unless they are confident that they can win it.

Perhaps the most interesting aspect of the Soviet aim is that it still embodies the old impulses that have always predominated in traditional Russian policy:

- *The expansionist or Petrine impulse, which has enlarged a small frontier less principality on the steppes of Eurasia into an empire stretching from the River Bug to the Yellow Sea and from the Armenian Highlands to the Arctic Circle: This expansion has been sometimes Strategic, to the next natural barrier; or Economic, in quest of a warm-water port; or Messianic, as inspired by the Pan Slav concept.*

- *The isolationist or Muscovite impulse, which has fostered an intense pre-occupation with security and self-preservation, preferably behind some form of Iron Curtain shutting out the rest of the world.*

In other words, the Soviet leaders have had to recognize the fact that the Marxist/Leninist/Stalinist faith, though it precipitated the 1917 Revolution and has inspired Soviet policy for the last several years, is quite incapable of changing the fundamental influence of a thousand years of history and more than a million square miles of geography. Thus, they have been forced to decant the new wine of Stalinism into the old bottles of Russian traditional impulses, so that the zeal of the expansionists has now been adapted to the modem messianic mission of accelerating world revolution; and, similarly, the old xenophobia and obsession for security are now justified by the theory that the Soviet Union will, sooner or later, be attacked by the capitalist powers seeking to avert the disasters inherent in their economic system.



An air-to-air right side view of a Soviet MiG-23MLA Flogger-G aircraft with an AA-7 Apex air-to-air missile attached to the outer wing pylon and an AA-8 Aphid air-to-air missile on the inner wing pylon. (From Soviet Military Power 1985) Photo PD-USGov-Military, Released

The Russian Race

Strategically, the Soviet leaders seem inflexibly determined to achieve their two-fold aim. Tactically, their policy ebbs and flows in accordance with the inherent characteristics of the Russian race derived both from heredity and environment. Of these the most important are fatalism and extremes of emotion; aggressiveness and respect for strength; callousness and kind-heartedness; realism and susceptibility to propaganda. It is surely no wonder that the Russians have so kindly taken to dialectical materialism, defined by Lenin as 'the study of the contradictions within the essence of things'!

How the Russians, at work and at play, appear to an English resident in Moscow is lightly (and, at times, colloquially) told by Mr Laycock in *Moscow Close-up*. *The British Ally*, of which he was for a short time an Assistant Editor, was started in 1942 as a weekly newspaper in Russia published through the British Embassy, first in Kiubyshcv and then in Moscow, to project the British way of life for the benefit of Russian readers. From 1948 onwards, however, the Soviet press began to attack the *British Ally* for 'disseminating untruthful information'. The Soviet government never forbade the publication of this paper, nor did they withdraw the Russian staff; but they so strangled its distribution that, in August 1950, the British Government reluctantly closed it down.

Mr Laycock's impressions are in direct contrast to the fulsome sycophancy with which fellow-travelling delegations describe their 'unsupervised' visits and conversations. Little do they suspect that not even one of their fellow-countrymen residing in Russia is allowed to speak to them without permission. Not only does Mr Laycock describe the systematic trailing of every foreigner by police agents, who cannot be shaken off even in a Turkish

bath; but he shows something of the drabness of daily life in this so-called 'Worker's Paradise'. Due to the massed concentration of workers into urban areas, dictated by the USSR's programme of industrial development, there is a chronic shortage of living room and an appalling lack of privacy. Even in Moscow, gangs of homeless juvenile delinquents *(bezprizorni)* roam the streets after dark. That two million persons with tubercular or cardiac disorders are treated for three weeks each year at State sanatoria may sound impressive; but, since there are some thirty-four million potential applicants, each individual has only one chance in seventeen years of getting any treatment.
It soon becomes apparent, however, that there is a marked difference between the Russian man-in-the-street - the genuine proletarian - and the 'top ten million' officials who govern the country. The much vaunted 'dictatorship of the proletariat' is a misnomer; it is at best the dictatorship of the Stalinist Party on behalf of the proletariat. Nevertheless, there is nothing in Mr Laycock's book that invalidates the contention of Mr Crankshaw that 'the acceptance of a detested regime by the people is a Russian response to a Russian situation'. For it is hard to imagine the Russian proletarian, with his extremes of emotion, responding to anything except loving kindness or naked force. And no government in history has been able to operate through loving kindness.

The Stalinist Faith

The Kremlin seeks to weaken the nations outside the Soviet orbit, while progressively strengthening the ideological influence and military and material resources of the USSR. Their mediums are the Communist Parties throughout the world providing a ready means of infiltration for the establishment of Stalinist bridgeheads, and the practical threat arising from the proximity and evident strength of the Russian Armed Forces, which they have exploited to help establish the communist regimes in Eastern Europe.

We have already observed how the Stalinist faith serves as the guide and inspiration of Soviet policy. Whether it means quite the same thing both inside and outside the Iron Curtain is, of course, questionable; but the main point is that it serves in every country to attract all sorts and conditions of men - not only the misfits and the aggrieved, but the idealists and the ambitious. It does even more than attract them: it co-ordinates and disciplines their efforts, and so converts them into the instruments of Soviet policy.

In his book *I Believed* Mr Hyde shows from his personal experiences how Communism can attract Englishmen. He himself was a sensitive young man whose emotional reaction to the hardships and unemployment of the late 1920s caused him to join the Party in which he soon reached a position of some responsibility. He remained a Communist for 20 years, not only because he was intellectually convinced that Communism was right, but because he was certain that it would triumph and that he would then be 'one of the mightiest in the land'. Belief in this ultimate victory no doubt made him - as all the other Party members - willing for a long time to put up with

any indignities or sacrifices that might be demanded of him. It also reconciled him to such diametrical reversals of the Party line as that which followed the German invasion of Russia on 22 Jun 1942: thereafter the Communists, who had previously done all they could to obstruct our war effort became over-night vociferous in their complaints that the government was not prosecuting the war with sufficient energy. Mr Hyde's eventual disillusionment seems to have sprung from the need for some spiritual incentive denied by the Communist preoccupation with material advantages; and this intellectual dissatisfaction in turn led him to revolt against the post-war Communist policy vis-a-vis Eastern Europe and the Marshal Plan.

In *I Believed*, the author seems to have somewhat exaggerated the importance of his own position in the British Communist Party, and has perhaps - from his one-sided outlook - tended to over-emphasise the Party's conspiratorial successes against the Police and Security authorities. Nevertheless, he does give a valuable account of the Communists' tactics. They usually identify themselves with any issue likely to weaken the existing regime. There are always social misfits who need little persuading that their disabilities are due, not to their own shortcomings, but to the iniquities of the ruling classes; and there are also many idealists and place-seekers who are attracted by some aspect of Communist teaching or by some feature of its practice. If there is no open discontent, the Communists will put temptation in the way of interested parties by holding out hopes of obtaining, by unofficial strikes and other means, more spectacular and swifter results than would accrue from the official processes of arbitration. They will pose as the only arbiters of justice to all who may be chafing under 'the law's delays'; but, in reality, they have the more sinister aim of actually delaying reforms and the administration of justice in order to increase popular discontent with the existing regime. In all this they receive advice and support from the Politburo in Moscow.

War or Peace?

It is significant that the Russian Armed Forces have so far been used merely as a threat. Other Communist armies, advised and equipped from the USSR, have gone into action with varying success; but the Soviet Army itself has consistently remained in the background watching and waiting. This strengthens the supposition that the rulers in the Kremlin, though undoubtedly prepared for 'collisions' with the Western Powers, as foretold by Lenin, are nevertheless anxious to achieve their aim without a third World War if they can possibly do so.

In *Russia by Daylight* Mr Crankshaw supports this view by emphasising the appalling devastation caused to Russia in World War II which, he argues, the Russians would be loath to incur again. He is, however, on less sure ground when he goes on to maintain that the Russian race is traditionally unwarlike; for he seems to ignore the fact that, between the years 1228 and 1462, the Russians not only waged 158 foreign

Oct. 27, 1961. During the confrontation at Checkpoint Charlie, Soviet T-54 tanks move to the border at Friedrichstrasse. From the booklet 'A City Torn Apart: Building of the Berlin Wall.' For more information, visit CIA's Historical Collections webpage. Photo CIA, Wikimedia, Released

campaigns, but also fought no less than 90 civil wars amongst themselves. He also commits an error, not uncommon among eye-witnesses of the Soviet horse-drawn transport in the Second World War, in making little or no allowance for subsequent mechanization. Again, the Russian youths today take part in para-military training at

an early age; and in *Moscow Close-up* Mr Laycock tells how, in the primary schools, elementary mathematics are taught with such problems as, 'How many bullets will three Soviet Army soldiers have left, if they each began with twelve and each has fired four?' Furthermore, although for the last three and a half years the Kremlin has taught the Soviet people that the USSR is bent on peace, while the Western bloc is preparing for war; it would not be too difficult to carry this propaganda line a stage further, and justify the Soviet Union 'fighting for peace' by attacking the Western Allies before their rearmament has been completed.

Whether or not the impulse to strike first outweighs the Soviet preference for peaceful penetration, it is certainly in the Kremlin's interest to persuade the more nervous elements in the West that it does so, and thereby to cause them to abandon their preparation for self-defence. For the Soviet leaders today have inherited all the fundamental characteristics of the Russian imperialists, of whom Palmerston said in 1860: 'It has always been the policy and practice of the Russian Government to expand its frontiers as rapidly as the apathy or timidity of neighbouring states would allow, but usually to halt and frequently to recoil when confronted by determined opposition'. Events in Korea have certainly banished all apathy to the Communist onslaught in the Cold War. The Soviet leaders may therefore be expected to play on the timidity of the 'weaker brethren' in the Western bloc, so as to prevent if possible the building up, in the North Atlantic Treaty Organization, of that 'determined opposition' before which the Kremlin must certainly halt and eventually recoil.

Sprut-SD self-propelled tank destroyer at the Army 2016 Demonstration at the Alabino Training Area near Moscow. Photo Vitaly V. Kuzman, http://vitalykuzmin.net, Creative Commons Attribution-Share Alike 4.0 International licence, Wikimedia

Soviet 3M6, AT-1 Snapper Anti-tank Missiles. Photo Creative Commons Attribution 3.0 Germany license, Wikimedia

Soviet Equipment

This article by Major R.E. Cole, was originally published in BAR 06, March 1958

Up until September 1957 when the Soviets claimed to have fired an ICBT, and later in October when this claim was substantiated beyond all reasonable doubt and the appearance of the first artificial satellite, there was common belief that Soviet equipment was not up to Western standards.

Perhaps it is fortunate in some ways that the satellite, in addition to winking at Whitehall, has probably done more to bring home to all of us the fact that we are not so far ahead as we thought and reminds us forcibly of the wartime admonition to 'know thine enemy.'

The truth about the Soviet Army and its equipment is that today it is, without doubt, the largest army in the world and is equipped with a completely new range of well-designed and well-made weapons to fit it for a war of any sort. Probably the most outstanding improvements since 1945 are:

- *Improvements in heavy mortars of which one at least is capable of firing a nuclear warhead.*
- *Increased use of rocket launchers, mounted on 6 X 6 cross-country vehicles.*
- *A new range of recoilless Anti-tank weapons.*
- *Continued development of assault guns mounted on tracked cross country chassis.*
- *Complete new range of artillery; one weapon at least having nuclear capability.*
- *Complete new range of basic infantry weapons, all firing a new standard lightweight round.*
- *Better mobility resulting from a new range of helicopters, amphibious tanks and B vehicles; a full range of tracked gun towing vehicles; tanks which combine protection with speed and punch at the expense only of comfort; and great progress in rapid pontoon bridging.*
- *Greatly improved reliability due to much better standards of workmanship.*

To deal with each of these in more detail:

Soviet 240mm mortar towed by M2 Tracked Prime Mover, BAR 06

Heavy Mortars

There are two in the new range, the larger of which is 240mm. This weapon has a calibre suitable for a nuclear shell. The maximum range is impressive and a high rate of fire can be maintained.

The smaller weapon is 160mm calibre. Both are breach-loading, have a high standard of accuracy and are quick into action. They are towed muzzle first by a tracked prime mover or cross-country truck, with their large circular base-plates in situ. Many smaller wartime designs, down to 82mm calibre are still in service.

BM-13-16 on a ZiS-151 chassis in a museum in Chisinau, Moldova.
Photo Taco Witter, Creative Commons Attribution 2.0 Generic license, Wikimedia

Rocket Launchers

Three new rocket launchers have been produced since the war, all mounted on ZIL-151 6 x 6 diesel trucks ('Knowing thy potential enemy' a little further; these trucks until recently were known as ZIS-151: ZAVOD IMENI STALINA - the factory called Stalin - now being called ZAVOD IMENI LENINA. The radiator badge has been modified to suit!).

The largest launcher of 240mm calibre is a 12 tube unit; the next is 200mm on a 4-tube mount and the smallest is a 16-tube 140mm piece. The 200mm carries the largest warhead and could conceivably have a nuclear capability.

107mm Recoiless Anti-Tank Gun, BAR 06license, Wikimedia

Recoilless Anti-Tank Weapons

The post-war range of RCL weapons consists of:

- *The RPG-82, which weighs about 165 lbs, has an effective range of over 400 metres, can penetrate up to eight inches of armour and fires an 82mm fin stabilized hollow charge projectile. It is the infantry company weapon.*
- *The 107mm, which is the equivalent of the BAT. This weapon weighs about 600 lbs, is towed on a wheeled carriage, fired from a tripod mounting and can penetrate up to 12 inches of armour at a maximum effective direct fire range of 800 metres.*

Assault Guns

The Soviets use assault guns in the same way as did Hitler's Wehrmacht, and not as we use self-propelled artillery. Those mounting 76mm and larger calibre guns have overhead protection. The wartime range consisted of:

- *SU-76 (76.2mm gun on modified T-70 chassis)*
- *SU-85 (85mm gun on T 34 tank chassis)*
- *SU-100 (100mm gun on T 34 tank chassis)*
- *JSU -122 (122mm gun on Joseph Stalin tank chassis)*
- *JSU-152 (152mm howitzer on Joseph Stalin tank chassis).*

The best of these have been retained (SU-100, JSU-122 and JSU-152); the SU-76 and SU-85 are now obsolete and a completely new SU with 45mm or 57mm high velocity Anti-Tank gun has appeared recently on a modified GAZ-47[1] chassis. Weighing only about seven tons this new SU may well be air transportable. The GAZ-47 itself is a postwar vehicle, first appearing as a snow crossing vehicle at the Russian Antarctic base.[2]

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1 Gorkovsky Avtomobiliny Zavod for those wondering what GAZ means.

2 You can be sure that any new Soviet vehicle however innocent it may appear at first, will sooner or later prove to have military importance.

Post War Artillery

The new range is characterised by being quicker into action by reason of more mobile carriages. Weight for weight their artillery can outrange ours as they have in each category both a high velocity gun and a heavier shelled howitzer instead of our compromise gun/howitzer. The new weapons are:

- *203mm Gun/Howitzer M.1955; firing a 300lbs shell to an estimated 28,000 yards. The calibre is suitable for a nuclear shell. This is the only gun/howitzer as such in the new range.*
- *152mm Howitzer M.1955; which it is assumed will replace the older 152mm 1943 model*
- *122mm Field Gun M.1955; which uses the same carriage as the new 152mm Howitzer*
- *100mm Field Gun M.1955; which is a dual purpose Field and Anti-Tank weapon*
- *85mm Auxiliary Propelled Field Gun D-48. This weapon is the wartime 85mm Div Gun with the addition of a motorcycle engine on the trail, driving the main carriage wheels through a propeller shaft and differential. A third wheel, which is swung out of the way when the gun is in action, provides the steering. The performance is sufficient to assist the gun out of deep atom-proof emplacements, and to make prime movers unnecessary for short tactical moves, at least over good going*
- *122mm AA Gun, with associated radar control gear*
- *100mm AA Gun KS-19, which is also radar controlled*
- *57mm AA Gun S-60, which is a clip fed, radar controlled weapon, replacing the old 37mm AA Gun M.1939*

Basic Infantry Weapons

We are standardizing on the 7.62mm NATO round; the Soviets have already gone firm on their own 7.62mm short round. It may be a little light for a rifle and a little heavy for a for a sub-machine gun, but it has the advantage of being interchangeable for all the new infantry weapons. These are:

- *SIMONOV carbine, weighing 8lbs, which is self-loading and is equipped with a small permanently fixed bayonet which folds back when not required*
- *KALASHNIKOV sub machine gun weighing 9 ½ lbs and fed by a curved 30 round box magazine*

- *RPD light machine gun, weighing 14 lbs and either belt or drum fed.*

In addition, two new personal weapons firing 9mm parabellum ammunition are in general issue - the MARAKOV automatic, which is rather like the German 9mm Walther, and the STECHKIN automatic with holster-cum-butt rather on the lines of the Mauser.

Russian Mil Mi-4 Hound Helicopter used by the Czechoslovak Army, seen here at the Aircraft Museum Kbely. Photo Jan Hrdonka, Released.

Accent on Mobility - Helicopters

The Soviets have fully realized the many potential uses of the helicopter and are working on the same lines as the Western Powers. They have built a complete range of helicopters from light two-seaters up to a heavy load carrier. These machines are all sound sturdy designs which apparently work wry well. There are already a considerable number of these helicopters flying. Both the HORSE and the HOUND are used for troop and load carrying. So far it is the HOUND which has received most publicity, but this can only be because not many HORSES have been built.

Parachute Troops

The Soviets have made considerable advancements in the field of parachuting. Apart from the large number of men trained and available they are continually carrying out new techniques and parachute designs.

The photographs show the main canopy with a square shape, and in addition they equip their parachutists with a secondary parachute. They claim that this design is better

than the circular type as it gives less oscillation, and collapses quickly on the ground preventing dragging.

Amphibious Vehicles

Four amphibians are known to exist; all in considerable numbers. One is a tank and the others are APCs or load carriers:

- *PT-76 Amphibious Tank This weighs about 15 tons, has a 76mm gun with all round traverse, and can enter the water and swim without special preparation*
- *K-61 Tracked Amphibian. This is a full tracked APC/load carrier carrying 20-30 men or a gun up to 122mm calibre, and weighs about 8 tons empty and 13 tons fully laden*
- *GAZ-46 4 x 4 wheeled amphibian which is a near enough copy of the wartime USA amphibious jeep*
- *BAV 6 x 6 wheeled amphibian which , like the GAZ-46, is another spitting image, this time of the USA wartime DUKW.*

Tracked Prime Movers

A very full range of tracked prime movers is available for towing artillery and other things of all sizes. At least six different soft-skinned and one armoured vehicles have been produced in great numbers. We have already seen the unarmoured M2 towing the big mortar; among the others are the YA-12 and YA-13, which are quite old designs, and the latest are the YA-14 (YA for Yaroslavets). The M1950 and the 'armoured TPM', which bears such a close resemblance to the civilian GAZ-47 that it must almost certainly have come from Gorki also.

Tanks

The wartime trusty T-34 medium with 76.2mm gun, itself more than a match for Hitler's 75mm Pz.KW.3, was first up-gunned to 85mm (T 34/85). The Chinese used the latter to good effect in Korea. The fact that a satellite had it at that time was good enough indication that the Soviets had something better for themselves. After a false start with the T-44 (85mm gun), which had suspension troubles, the T 51 emerged as the standard medium. Doubtless the T-44 designers were 'directed to other fields'.

The T 54 at 36 tons mounts a larger gun (100mm) than either Centurion 7 at 49 tons or M48 at 48 tons. It is light because it is small, not because it has no armour to speak of, and it is fast for the same reason. We, and the USA, are prepared to put up the weight for the advantage of more room inside. Similarly the JS-3 (122mm gun at 45 tons) is a good deal lighter than the Conqueror, but has not the same elaborate gun control equipment. Production of both T 54 and JS-3 is measured in thousands.

T55As on the streets during Martial Law in Poland. Photo J. Zolnierkiewicz, public domain, Wikimedia

Soviet Pontoon Bridging

The latest type of Soviet TMP Pontoon Bridge is used to make bridges and ferries of 50 ton load class extremely rapidly. The equipment is very simple; each pontoon section and its superstructure is carried on a ZIL-151 truck. The trucks back into the water and launch the pontoon sections; two pontoon sections are joined in the water and the metal girders are swung round so that they rest at right angles to the pontoon pier and are then decked. Large numbers of men are needed but these quickly-made piers can be joined together to form a bridge or ferry at remarkable speed. Used in conjunction with the large quantities of amphibians now held by Soviet engineers, these ferries and bridges go a long way to overcoming the problems posed by the threat of a nuclear strike during an assault river crossing.

A left front view of a Soviet BMP-1 mechanized infantry vehicle at Bolling Air Force Base circa 1986. US Navy Photo by DON S. Montgomery, Released

PKP Pecheneg of 45th Separate Guards Special Purpose Regiment.
Photo Vitaly Kuzmin Creative Commons Attribution-ShareAlike 4.0 International License

Soviet Tactics

This article by L'Heretique was originally published in BAR 07, September 1958

In an interesting article in the March 1958 issue of the *British Army Review*, Major K.J. Mears, extols the virtues of his own arm in the nuclear age and maintains that the importance of armour has increased in relation to that of infantry. On whether he is right I express no opinion, but his claim led me to reflect on what the other fellow is thinking and doing in this nuclear age.

We all know, of course, that he is spending very large sums of money in scientific research and development and that he is providing his field armies with a lavish scale of new equipment. But what do we know of the role and tactics of the Soviet Army in nuclear warfare?.

Soviet Military Theory

Soviet military theory is somewhat different from our own. It ridicules those principles of war which have been adopted by the British and United States Armies and has propounded its own. These are known as operating factors and are as follows:

- *Morale*
- *Stability of the rear*
- *Ability of commanders*
- *Quantity and quality of divisions*
- *Armament*
- *Surprise*

To these somewhat materialistic factors it adds a number of principles.

- *The Offensive: It is true to say that the Soviet Army has little time or inclination for the defence. Training in defence was neglected prior to the Second World War and it appears to be rarely practised now. All instruction is bent on instilling an offensive mentality into Soviet commanders of all ranks. The aim of the offensive is the complete annihilation of the enemy*
- *Mobility: Offensive manoeuvre is regarded as the correct and only means by which a decision can be forced. Positional warfare-in the Soviet view spells destruction.*
- *Deception and Security of lnformation: These are, of course, corollaries of surprise. We all know to what painstaking lengths the Soviet Command will go both in peace and war to deceive and to maintain the strictest security over its own activities.*
- *Intelligence: The importance of intelligence is stressed under the need for thorough preparation.*
- *Co-operation: Soviet theory teaches that victory can be won only by the combined effort of all services and arms. To this end it has integrated various arms - particularly tanks, artillery and infantry - at the lowest possible level.*
- *Dynamism: This finds expression both military planning and in*

training. In training dynamism is directed to encouraging commanders to use initiative.

- *Preparation: This is related to intelligence. Soviet theory demands meticulous preparation at all levels of command. Nothing it says must be left to chance. Part of this preparation is the concentration of forces at the correct time and place, and a correct concentration is one which gives to the Soviet commander a relative superiority of four to one.*

Such then is the background of Soviet tactical theory. How then is the Soviet High Command applying this tactical theory to the nuclear age?

Communist political and military doctrine painstakingly prepares for all eventualities. It is unwilling to rely on any single service, weapon or equipment, and because of this the Soviet High Command has adopted the belt and braces policy throughout all its services, formations and arms. It has, for example, eschewed a reliance on nuclear and atomic weapons, yet notwithstanding it certainly has spent considerable effort in making armament of this type available to all its armed services. It intends, moreover, to be prepared to fight both nuclear and non-nuclear war, and since 1954 the Soviet Army has been trained for the nuclear battle, without impairing its ability to undertake war under non-nuclear conditions. The Soviet theory of nuclear warfare as far as it concerns ground operations is based on the following premises.

- *The missile is an additional source of firepower, and firepower by itself - whatever its magnitude - is unable to effect a decision unless it is linked to manoeuvre - the manoeuvre of ground forces. (The gallant Marshal, you recall, sneered at those advocates of push-button warfare who maintain that ground forces are outdated.)*
- *Because of the magnitude of firepower, manoeuvre - that is to say mobility - is all important. This mobility is required both for the protection of their own troops and for the rapid exploitation of the effects of their own missiles.*
- *Tanks are now the predominant fighting arm on account of their mobility and comparative invulnerability to the effects of the missile.*
- *Ultimate success in nuclear war depends on the fighting man, his equipment, his training and his morale.*
- *The need for surprise is more important than ever before.*

Remember, of course, that emphasis continues to be placed on offensive action, and that all the factors and principles of war are believed to apply as much to nuclear as non-nuclear war. This brings me back to the burden of Major Mears' article.

T80 Main Battle Tank of the 4th Guards Kantemirovskaya Tank Division on exercise near Moscow, 2012. Photo Vitaly Kuzmin Creative Commons Attribution-ShareAlike 4.0 International License

The Predominance Of The Tank Arm

There is not very much doubt that the tank arm has already been raised to a position of pre-eminence in the Soviet Army. Tank divisions (each of nearly 500 tanks) are being steadily increased in number, and rifle divisions are being replaced by mechanized and motor rifle divisions (each having more than 200 tanks and sufficient APCs to carry all infantry). Indeed, several tank armies have been formed, each consisting of three or more tank divisions.

Nuclear missiles and tank formations are now regarded as complementary, one providing the main firepower, the other the manoeuvre. The tasks formerly undertaken by infantry and artillery formations, such as deliberate attacks on heavily fortified positions, will now be accomplished partially or in full by the use of the nuclear missile. All arms, and in particular artillery, infantry and engineers, are designed to maintain the momentum of the tank offensive. These supporting arms are fitted to move at tank speed having been equipped with armoured and tracked vehicles, APCs, amphibians and tracked prime movers. All but one of the nuclear missile launchers exhibited on the Moscow parade of 7 November 1957 were track mounted and highly mobile.

Tanks suffer, of course, from certain limitations. Difficulty and some delay is to be expected in crossing minefields and water obstacles and their use maybe restricted in darkness. The Soviet Army intends, however, that tanks should fight by night as well as by day without any reduction in the tempo of the offensive, and every effort is being made to enable tank formations to cross obstacles at speed. Soviet engineers and sappers have already achieved a high degree of proficiency in the construction of pontoon bridges and rafts, and a light, but heavily gunned, amphibious tank has been manufactured in fairly large numbers. New equipment will probably appear in due course.

The Soviet Army may still be experimenting in ground tactics in nuclear war, and it is possible that further reorganization is intended in the composition of its field forces. However, to date the field armies appear to be organized in the following pattern:

- *The Corps organization has ceased to exist and the chain of command is direct from HQ Army to HQ Division. Army HQ now appears to be the highest level at which the tactical battle is controlled.*
- *The division remains the basic fighting formation, and its outline organization has been little changed.*
- *Track mounted nuclear artillery and guided weapons are being taken into service.*
- *There has been no significant reduction in the scale of conventional artillery support and the artillery arm is being continuously provided with field and anti-aircraft guns of increased calibre and range and improved performance.*
- *The proportion of infantry to tanks has been reduced.*
- *Soviet Army equipment is modern and efficient.*

It will be seen, therefore, that the Soviet Command appears to be modifying its 1953 Army organization to enable it to fight a nuclear war. Every measure is being taken to improve its mobility, flexibility and firepower.

Painting of SS-25 'Sickle' operating in eastern Siberia. Image Brian W. McMullin, US DoD, Released

Application Of Tactics In Nuclear War

Likewise Soviet tactical doctrine for nuclear warfare appears to be an adaptation of its theory for non-nuclear war. Nuclear war emphasizes - in the Soviet view - well tried and accepted principles and techniques. Good intelligence, thorough and speedy preparation, surprise and deception, mobility, firepower, shock action and morale are now of increased importance.

During the last few years the following aspects of field training have been constantly practised:

- *The offensive*
- *Night movement and night fighting.*
- *Rapid tactical movement by night and day.*
- *Long approach marches probably timed to coincide with nuclear strikes.*
- *Assault crossings of water obstacles.*
- *Concealment and dispersal.*
- *Grouping of all arms at all levels from battalions to division.*
- *Training of all field commanders to use initiative.*

It is as yet premature to attempt to make an accurate forecast as to how Soviet tactical theory for nuclear war would be applied. It is probable, however, that the plan of campaigns would be based on fast moving and fluid operations following closely the tactical pattern for non-nuclear war.

An essential preliminary to the opening of a campaign or offensive would be the acquisition of detailed intelligence and the achieving of a high degree of surprise. The offensive would be developed with the destruction or neutralization of enemy nuclear missile launching sites, tactical airfields, early warning stations, HQ and communication centres and the rapid advance of mechanized divisions operating on very broad fronts. These divisions would probe the nature and extent of enemy positions, seeking out gaps and flanks in order that the main forces (consisting of mechanized and tank divisions) might be successfully launched in deep thrusts into the enemy rear. These thrusts would be directed in wide enveloping movements in order to isolate the enemy formations. Movement would be rapid, and although a large part of the Soviet ground armies would move across country, the greatest possible use would be made of roads and tracks. Nothing would be allowed to delay the rate of progress of the enveloping forces and enemy centres of resistance would, if possible, be by-passed. Obstacles would probably be crossed on broad fronts without pause for build up or the creation of bridgeheads, and the momentum of the attack would be assisted by airborne troops who would seize objectives in advance of the main forces.

The Soviet High Command apparently considers that it would be able to develop successfully its ground operations against an enemy equipped with nuclear tactical weapons. A plan of attack, in addition to the exploitation of surprise, mobility and armour, would probably be based on the following fundamentals:

- *Enemy nuclear weapons must be neutralized or destroyed*
- *Communications, HQ and rear areas must be so disrupted that the enemy would be unable to use his resources or develop his defensive plans.*
- *Enemy defensive nuclear strikes must be nullified by rapidity of movement, close contact, dispersal and concealment, and above all by developing one's own operations at night and in conditions of poor visibility*
- *Heavy losses must be accepted (and could be afforded)*

The assault frontages employed would vary according to the resistance to be overcome, but when attacking well prepared positions a divisional front would be as close as six kilometres. Should it be necessary to mount a deliberate attack as part of a breakthrough or mopping-up operation, the assault would probably be launched by mechanized or tank divisions advancing by night on fairly close frontages from dispersal areas in depth. The attack would take place immediately following the nuclear strike and would be supported by a heavy, but very short, artillery bombardment designed to seal off the area against reinforcement. Tanks would advance through the stricken area, the infantry support being brought over by APC or helicopter.

Soldiers in camouflage cloaks on the forest's edge in the Moscow region. Photo RIA Novosti archive, image #284 / Knorring / CC-BY-SA 3.0, Creative Commons Attribution-Share Alike 3.0 Unported, Wikimedia

Where Do We Go From Here?

We must put the Soviet Army and its tactical methods into proper perspective. Judged by the quantity and quality of its equipment alone, it is very formidable. On the other hand it should be remembered that the tactical methods I have described show ground operations

as the Soviet High Command would wish to see them developed. On its ability to develop them in this fashion there remains considerable doubt.

What is the best defence against such tactics? Soviet tactical organization is based on an Army HQ controlling a number of self-contained divisions, each of which is made up of regimental groups. Ours is based on a divisional HQ controlling a number of brigade groups, and it seems to me that a brigade group system is as good as any. But what form is the defence to take? Is it to be brigade or battalion bastions or dispersed company groups? Is the bulk of our defending force to be infantry moving on its feet and in soft-skinned transport, relying on the spade for immunity from the effects of the missile?

An infantry brigade or battalion, if well dug in, camouflaged and covered by armoured troops and its own patrols, may defeat any enemy attempt to dislodge it. It may in addition inflict very heavy casualties on the attacker. The possibility remains, however, that the enemy will not give battle but will bypass all such strongpoints. Again there is a danger that enemy tank forces may drive in covering forces and screens and so delineate our positions however well camouflaged they may be. Such positions, when demarcated, are, of course, particularly vulnerable to nuclear missiles followed immediately by heavy tank attacks.

There is, of course, the alternative that we should take a leaf from the other fellow's book and defeat him at his own game. That armoured troops are relatively invulnerable to the nuclear missile there is no doubt. Armoured troops have the ability to concentrate and disperse rapidly and, unlike the dugin infantryman, can be very difficult to locate. A continually moving and dispersing target is not an easy one to hit in this nuclear age. It is not simply a matter of move and destroy rather than sit and be destroyed.

How then shall our regiments be organized and equipped in this nuclear age? Shall Major Mears' regiment consist of three tank squadrons and one squadron of riflemen mounted in tracked amphibious APCs with overhead cover? Shall the number of our tank regiments be increased? Shall our infantry battalions consist of three companies of APC mounted riflemen and one or two companies of tanks? Are our engineers to be APC mounted and our gunners equipped with SP armoured artillery and track mounted rockets? Is this the answer in this nuclear age? Perhaps you know already.

SA-5 surface-to-air missiles for Libya were among thousands of tons of weaponry shipped by the Soviet Union to its client states in the 1980s. In return for military and political support to countries such as Libya and Syria, the Soviets were able to advance their political-military objectives and gained access to military facilities in the region. Image Ronald C. Wittmann, US Defence Intelligence Agency, Released

A demonstration of Russian Infantry tactics during Interpolitex 2013.
Photo Vitaly V. Kuzmin, Creative Commons Attribution=-Share Alike 4.0 International licence, Wikimedia.

The Pattern of Soviet Army Tactics

This article by L'Heretique was originally published in BAR 09, September 1959

There has been some criticism of the article on the Soviet theory of ground tactics, which was included in the Sep 58 issue of *The British Army Review*, on the grounds that it was of too general and theoretical a nature, and not sufficiently detailed to meet the requirements of the soldier in the field. A more descriptive account is apparently needed in order to show how these tactics are applied at the lower formation and unit level.

Soviet tactics are not difficult to understand if one has a clear appreciation of the theories and doctrine of the old German tank masters. It is a little inaccurate to regard modern Soviet tactics as a slavish copy of those of the German, because in the inter-war

years the two armies did develop side by side with a fairly free exchange of information between them. However, Guderian's treatise on armoured warfare was applied in the German Army (in the face of opposition by the older and more orthodox generals) after Hitler had broken off the liaison between the two armies, and the full significance of the new design of battle was as great a surprise to the Red Army, as it had been to France and Britain in 1940. Be that as it may, the Russian is very quick to assimilate new ideas, and by 1944 his armoured and mechanized formations proved that they had little to learn from the Germans.

Since the war the High Command has retained many of the German techniques, and in some cases has improved on them. The Soviet Army has been reorganized; it is reputed to have a strength of about 175 line divisions of which at least a half are estimated to be of the armoured type (tank, mechanized and motor rifle). The German Army on the other hand, even at the height of its power, had a very much smaller proportion of armoured troops, the bulk of its fighting strength consisting of infantry divisions with horse-drawn artillery and transport. The High Command has apparently proved - at least to its own satisfaction - that armour and the Guderian design of battle is ideal for fighting war under both nuclear and non-nuclear conditions. Nor should one, I think, brush its conclusions lightly aside. As one of the foremost nuclear and rocket powers, it cannot be ignorant of the effects of the nuclear missile on the tactical battle.

I am convinced that one of the keys-if not the main key-to success on the battlefield lies in tactical air power. Many of our earlier defeats in the last war, particularly in the Far East, might have been averted, if we had been able to control the tactical air space and afford proper support to our ground forces. In nuclear war tactical air power becomes trebly important; the odds are heavily weighted against a force, which must operate in conditions of tactical air inferiority. Although the rocket may relegate the long range bomber to the museum, it can never entirely replace the tactical fighter and the fighter bomber. In nuclear war aircraft are the eyes of the ground commander, and it is these aircraft that can most effectively gouge out the eyes of the enemy.

Moreover, the inherent flexibility of the manned machine permits the engagement and destruction of mobile launcher equipment, tactical headquarters and moving troops on sight, without the problems of location and target response. This can be done quite effectively with conventional rocket or cannon fire. It is doubtful whether surf ace to air guided weapons will have any material effect on the tactical air situation, since large numbers of fighters scudding over the countryside at little above tree top level will both saturate and destroy the guided weapon units.

Neither the German nor the Russian has ever believed that the air arm is capable of deciding wars or campaigns by itself, and the doctrine of Douhet has always been ridiculed. Nor does the Russian believe that wars will be won by the sole use of the nuclear missile.

As originally conceived, the German armoured offensive relied on close and very heavy air support by ground attack aircraft. Soviet tank armies and tank divisions are designed to break into the enemy rear and destroy him by the violence of their assault and the rapidity of their manoeuvre, and their organization and equipment is indicative of the tactics they will use. A tank division has between 400-500 tanks, but only 2,000 armoured infantry, which is few even by German standards. The deduction to be drawn is that these formations are designed to cover ground, avoiding serious engagement by manoeuvre. Should the enemy succeed in slowing down their momentum, they will be assisted forward, or extricated, as the case may be, by nuclear firepower or a very heavy weight of air support, or both. Tank formations need air reconnaissance and air cover, since they can eventually be brought to a standstill by nuclear and air attack and the armoured counter offensive. In nuclear war, their success and indeed their existence, depend on tactical air superiority.

Soviet AT2 Swatter (Falanga 3M11) Anti-Tank Missiles, Wikimedia, Released

Soviet airmen of the tactical air forces are soldiers and are not really part of a separate independent service. Each army group is allotted at least one air army consisting of more than 1,000 combat aircraft (of which the greater part are fighters) and this air army is put under command of the ground force commander. The main tasks of the air army, probably in order of priority are as follows:

- *To keep all enemy aircraft including the reconnaissance sneak, out of the sky. (The gaining and maintenance of air supremacy is achieved by annihilating the enemy in the air and on the ground).*
- *Reconnaissance (this takes place during all phases).*
- *Location and engagement of nuclear missile launchers and tank forces.*
- *Interdiction and direct air support.*

In addition limited transport support may be provided in the form of helicopters. In making an assessment of likely Soviet tactics in future war one has in the former German panzer formations, a precedent or parallel. If those of us who are old enough, can cast our minds back to the fluid fast moving encounters that followed when German armour was engaged (not German infantry formations for we shall never see those slogging battles again), we are, I think, getting close to the conditions of war in which the modern element of the Soviet army is being trained to fight. Of course there are differences. Soviet Army equipment is superior, and its techniques more sophisticated, than those of the best German wartime divisions. Technically and administratively there is no reason why they should not move farther and faster.

However, even in this technical age, combat readiness does not depend entirely on equipment. Training, leadership and morale have not lost any of their importance as battle winning factors. The standard of training in the Soviet Army tends, I understand, to be very uneven, varying from the first rate to the very indifferent. Leadership also varies in quality, but in the main may be good. The doubt arises in the quality of the Soviet other ranks.

That the Soviet soldier is able to discharge his technical duties efficiently, whether he is a gunner, driver, signaller, radar mechanic or private of armoured infantry, must be accepted. But that does not necessarily complete the many abstract qualities required to make a first class soldier. The German on the other hand did make (and probably will continue to make) an excellent fighting man. At the end of the last war men of 50 and boys of 16 were being committed to the line after only a few months' training, and within a week or so were conducting themselves like veterans, fighting right to the end with dogged determination and skill against overwhelming odds in a despairing situation. Sometimes fanatical, but always devoted to duty, almost without exception they fought with bravery and daring. The German character is such that it takes easily to soldiering, and provided first rate material to execute the earlier 'blitzkrieg' doctrines. With the Soviet soldier, however, it is somewhat different. He is multinational, and one must, therefore, be careful not to over generalize, but in the main he is hardy and brave, but lacking in perseverance and clash. He cannot always be relied upon when he is in a tight corner, and in the past he has tended to be cautious and deliberate.

Such characteristics do not fit in well with the Soviet concept of tactics that I have described. Nevertheless, since the end of the war much may have been accomplished

by leadership and training. It is indicative that leaders of all ranks are continually being exhorted to use their initiative and show daring to the point of impetuosity, disregarding open flanks and enemy threats of envelopment. Although the Soviet soldier, man for man, will never equal the German, it must be remembered that the German standard was extremely high.

But to return to our main theme - Soviet tactics in the field, the army commander has under his command two or three mechanized/motor rifle divisions (each with more than 200 tanks and nine battalions of armoured infantry), and one or two tank divisions (each of over 400 tanks and a small armoured infantry component). The frontage of attack given to him will vary according to the army group (Front) commander's battle plan, and may be as close as 30 kilometres or as wide as 80. It may, or may not be, intended to pass one or more tank armies through his frontage as soon as he has taken his objectives. However, let us assume that he has an allotted frontage of 50 kilometres.

The Soviet field armies are not sufficiently numerous to engage the whole front in strength, and the first planning task is to select sectors of main effort where the main attacks will go in. (This is in accordance with German doctrine, where the main sectors were known as pivots or *Schwerpunkte*). Assaulting divisions will tend to concentrate towards these sectors, the frontages still being relatively dispersed however, to the extent of 12 kilometres or more to the division. On an army frontage of SO kilometres, two or more divisions may be forward with one or two in reserve. Before the offensive starts, part of the troops of line divisions in contact are kept right forward close to the enemy (and safe from the nuclear missile) or dispersed back in depth to distances of up to 20 kilometres. Other assault forces are kept back in greater depth (of up to 80 kilometres).

The design of the offensive is to hit the enemy whilst the attacking formations are on the move, whether they be reserve regiments of the forward divisions, or complete divisions of the army reserve, moving in rapidly from their dispersal areas in depth, dispersed in regimental, battalion and sometimes company groups, in order to get enmeshed and through the enemy at speed. In darkness, in movement and in close contact lies safety.

At the same time the enemy is engaged throughout his depth and in his near areas, by rocket, a heavy weight of air attack, by parachutists and partisans, all intent on destroying missile launchers, airfields, headquarters and communication systems-the *blitzkrieg* all over again.

The army commander will intend to break through the enemy by the following means (once again in the probable order of priority):

- *Armoured and mechanized infiltration*
- *Outflanking defences.*
- *Direct attack (with or without nuclear fire).*

The Russian is particularly adept at infiltration and is better at it than the German. Like the German, he will not attack if he can bypass and outflank, and when he is forced to attack, his main attack (like that of the German) will come in from the flank. On occasions if conditions are fluid, he may attack a position from the rear.

A Russian BTR-80 KPVT shooting during Interpolitex 2010.
Photo Photo Vitaly V. Kuzmin, Creative Commons Attribution=-Share Alike 4.0 International licence, Wikimedia.

The Soviet technique of attacking with sustained momentum ensures that there is no delay between the approach and the assault, and all deployment is carried out on the move. Such a technique is indispensable for an attack in nuclear conditions; it is used at all levels from division to battalion. Deployment areas and FUPs are dispensed with and there is no halting on a start line. In consequence, the likelihood of being caught in the enemy's nuclear defensive fire is very much reduced and the timing of the approach can be made to coincide with Soviet nuclear strike; so that their troops are able to exploit the effects of the fire before enemy remnants can reorganize. The technique is not entirely new however, because it is common to the armoured troops of many nations, and was used by the German panzer and panzer grenadier regiments. It can be carried out only by troops, which have complete tactical mobility. It is difficult and sometimes dangerous to generalise on the question of assault frontages and battle grouping.

The tactics of the company and the Soviet tank and motor rifle battalion are the same for both nuclear and non-nuclear war. The only difference in nuclear war arises in the scale of the artillery support allotted, and the dispersion between battalions and between regiments. As for the rest, the tactics in both conditions of war are identical. The accent is on night movement and night fighting, infiltration, outflanking and very rapid movement. Because of the need for dispersion and rapid movement, artillery and engineers are often decentralised and put under the command of regiments and battalions.
Assault frontages are probably as follows:

- *Motor rifle company and Tank company - 500 yards or more*
- *Motor rifle battalion and Tank battalion - 1200 yards or more*
- *Motor rifle/mechanised regiments and Tank regiment - 4000 yards or more.*

In nuclear war it is probable that the scale of conventional artillery available would be comparatively light, and this deficiency would presumably be made good by the use of nuclear missiles, tank firepower and direct fire guns. In non-nuclear war the scale of artillery support would be very heavy. Because of the danger of the tree-top fighter aircraft, about which I spoke earlier, the field forces are now bristling with anti-aircraft guns of all calibres.

The High Command appears to be fully cognizant of the necessity to maintain the rapid momentum of its armies, even when faced with numerous water obstacles. Mobile bridging equipment is held in large quantities together with numbers of airborne formations, helicopters and tracked and wheeled amphibians. In addition, armies have been equipped with substantial numbers of amphibious tanks mounting a 76 mm gun, and experiments are being carried out in crossing medium tanks under water obstacles.

Such then is the outline of Soviet assault tactics. In concept it is not so very different from the pattern of German armoured tactics in 1940 and 1941, but one must always

remember that the Soviet Army has far more armoured type divisions available than the German Army ever had. Future war, whether nuclear or non-nuclear, will be even more fluid and fast moving. Whether or not the Russian is capable of conducting this type of warfare, time alone will tell.

I am sometimes asked, in doubting tone, whether I believe that such a type of warfare is possible in this nuclear age. I do.

However, what I believe is unimportant. It is what the Russian believes that matters. He apparently thinks that ground campaigns will be won by large ground armies consisting almost entirely of armoured formations, and that the plan of campaign will be based on the ultra 'blitzkrieg'. I am neither a prophet nor an intelligence officer and am, therefore, in no position to forecast whether the High Command will change from its traditional line organizations, nor whether it will further improve its tactics. But I do forecast that any campaign it may undertake will be based on the rapidity of manoeuvre of large numbers of tanks and armoured troops, moving under strong tactical air cover. One last point, if the Editor of the Review will allow me heretic's licence.

A very large number of articles are appearing in the official and unofficial military press suggesting how the British Army should be reorganized to fight a war in nuclear conditions. As a heretic, I would be the last to discourage new ideas, because the day when officers cease to produce them will be a sad one for our Service. However, let us keep our feet firmly on the ground and not just produce a new idea because it is new. The common characteristics of these articles are as follows:

- *A determination to scrap existing British Army organizations and start again from the ruins (wiping the slate clean I believe they call it).*
- *A complete disregard of the tactics of the armies of the Communist bloc. In most articles they are not mentioned, and in some cases where they are discussed, the writer has obviously not the slightest comprehension of the subject.*
- *A disregard of tactical air power.*
- *The use of the recurring argument 'And let no one contradict me who has not himself seen the effects of the nuclear missile.' But has the writer? The Russians, however, have seen them.*
- *A determination to be rid of the tank.*

Most of these articles base the fighting of the battle round nuclear fire power, and there is probably nothing wrong in this. But the writers seem to think that the battle will be won by this firepower alone, and they propose organizations that are nothing more than nuclear artillery units. The requirement for formations to carry out the task of fighting the land battle, exploiting and using nuclear firepower is ignored, or alternatively

there is considered to be no such requirement. If many of these authors had they way, the whole of the British Army would belong to the Royal Regiment. Admittedly, some of them propose to have an infantry escort for the launchers or guns, and some allot armoured cars of armoured infantry to keep the enemy under surveillance and call for nuclear fire. Others foresee that a time may come when launchers become even lighter-jeep or manpack affairs-but whatever the weight of the equipment the principle is always the same. One team picks up the target and another destroys it, with few, if any, of our own troops on the ground for the serious business of fighting.

A little reflection reveals the weakness of these proposals. A British observation screen is necessarily weak and may be unable to hold even the enemy armoured scouts (tanks and APCs) at bay. These move dispersed and will, in fact, be part of the enemy's nuclear target acquisition organization. They and the following troops could blot out our screen by nuclear strike, hit it on the run, or more likely, hook in behind it and run straight for the launcher sites. Nor should one be sure that anyone can necessarily break contact at will when faced with an enemy who is highly mobile by day and night. Once the enemy is among or behind your screen, your screen is lost, because it has not the necessary strength or tanks to fight its way clear. One can, as a despairing gesture, drop missiles on the screen, but the destruction of the enemy is not likely to be high, and it is doubtful whether it will affect the eventual outcome of the battle. Moreover, unless one has complete tactical air superiority, the chances of survival of the nuclear launchers are not high.

The conclusions are inescapable. Tactical air superiority is essential to success. With it, ground forces, markedly inferior in numbers, can give battle with every assurance of victory. But ground forces we must have, fighting men and plenty of them, on the ground, but not in it. These fighting men must be tactically mobile and armoured, with a very high proportion of tanks. The idea that the ground battle consists only of a nuclear fire fight must be corrected, because the adoption of such a theory can lead us to disaster.

Finally, let defence be based on offence. Shock tactics of the 'blitzkrieg' type are best countered by the violent fast moving and armoured counter-offensive.

A front view of the Soviet-made 9P-122 Malyutka tank destroyer. Photo US Department of Defence, Released.

Military equipment leaving the country. Withdrawal of Soviet troops from Hungary. Photo RIA Novosti archive, image #825492 / Miroslav Luzetsky / CC-BY-SA 3.0, Creative Commons Attribution-Share Alike 3.0 licence, Wikimedia.

The Size of the Soviet Army

This article by Brigadier J.V. Davidson-Houston, MBE, Military Attaché to Moscow, 1955-1957, was originally published in BAR 16, April 1963

It must be accepted that we in the West will never be as well informed about Russia as the Kremlin is about us. This is one of the military disadvantages from which all democratic states are bound to suffer as against dictatorships, which makes it all the

more surprising that the dictators always lose in the end. In peacetime the public of NATO countries insist on being kept fully informed as to how their money is being spent, and how their manpower is being utilized; the members of the Alliance discuss their respective contributions in public. Parliamentary Estimates, Questions in the House, and Service journals are all available to overt Intelligence. Freedom of communication and travel abroad facilitate the passage of information to potential enemies.

Behind the Iron Curtain the opposite is the case. Whereas the British principle is that information need not be withheld unless it is 'classified', the Soviet attitude is exactly the reverse: the Russian is chary of giving any information unless he is sure that he will not be charged with revealing 'state secrets'. This is carried to ridiculous extremes, where a local inhabitant may be afraid to tell a foreign traveler the name of his village, and where a photographer may have his film confiscated if he includes the town hall in his picture. 'If you look into a soldier's mess-tin', said the President of a Soviet Military Court, 'that is espionage'.

It is, therefore, hardly surprising that at the various disarmament conferences the Russians have consistently refused to agree to foreign inspection teams being stationed on their territory, an idea which to them is quite inconceivable. Moreover, complete control of broadcasting and the Press ensures that nothing is knowingly published which the Soviet regime wishes to keep to itself. One cannot buy maps in the USSR and even in the Army they are treated as secret documents. There is no freedom of travel across the frontiers: no Soviet citizen is allowed an exit visa except for some purpose approved, and indeed fostered, by the State; while any foreigner trying to travel in the Soviet Union independently of the State tourist agency will have great difficulty in even entering the country. Soviet citizens themselves cannot move long distances without producing their internal passports. As all correspondence is liable to censorship, the passage of information is subject to strict control.

At the end of World War II we were able to form a fairly accurate picture of the Russian Army. It is true that our Military Mission had been treated with a degree of suspicion rarely accorded to an ally, but one cannot supply war materials to a country without gaining some idea of its military organization.

It was generally agreed by the General Staffs of the NATO countries that the post-war Soviet Army consisted of about 2,800,OOO men and included some 17.5 'line' divisions (cavalry, tank, mechanized and infantry). There was also a proportion of supporting divisions, mainly artillery and anti-aircraft. These were 'first-flight' troops, as distinct from an almost equal number of reserve formations. For the next ten years there was no evidence of any material change in this establishment.

The Western Allies, on the other hand, rapidly reduced their forces, both for economic reasons and in response to that public pressure from which dictatorships are, of course, immune. Even in 1948, when Stalin's attitude had become openly hostile, NATO

decided to rely on the nuclear deterrent, rather than build up conventional forces on the Continent. Russia, having no nuclear weapons, continued to maintain her huge army and to work feverishly at nuclear research.

Two events then occurred, both of which pointed to changes in the structure of this army. Russia produced an atomic bomb of her own, which, of course, reduced the need for conventional superiority, while the enormous costs of nuclear and rocket development demanded economics elsewhere. Moreover, Stalin's death in 1953 removed a tyrant whose ideas had become fixed, and whom nobody dared contradict: new men were arising to challenge the doctrines of the sixty-year-old wartime generals, whose only military education was past experience. It must have become clear to the Soviet General Staff that the vulnerability of long rail communications, vast maintenance areas and numerous river crossings would make it impracticable to deploy and maintain anything approaching 175 divisions in a future European war.

There were several other developments, which called for a reduction in the size of the Soviet Army. It was unlikely that large land forces would be required even in a defensive role, for it must have been obvious to any well-informed Russian that the only country with a large enough army to invade the Soviet Union was China, but that geography and common interests made this a remote possibility. The modernization of the Soviet Army

A left rear view of a Soviet-built T-62A main battle tank underway. Mounted at the rear of the hull are two drum fuel tanks and an unditching beam. Photo US Department of Defence, released

since World War II also faced the High Command with serious administrative problems. Hitherto, Russian armies had consisted largely of cannon-fodder, men of great endurance but with a low standard of education. Welfare services were practically non-existent, and personal records were kept only of officers above the rank of major. The hordes of cavalry and infantry were based on horse transport, and there were often no radio sets below battalion headquarters. Living on the country was recognised as a principle of supply, and the low standard of living of the troops made this, to some extent, practicable. Much reliance was placed on the capture of enemy material. However, with modern armoured and mechanized formations this was no longer possible.

Two major consequences emerged. Firstly, the Soviet Army could no longer hope to live off the country, for the big tonnages were ammunition, petrol and engineer stores, not food. Secondly, trained soldiers are not replaced so easily as the masses of suffering humanity deployed in World War II.

The economic situation has an equally important bearing. The industrialization of Russia, which is still proceeding, involved an enormous increase in the urban population and a correspondingly greater burden on agriculture. Both these factors aggravated the manpower problem; more and more industrial workers were required in the declared effort to 'catch up with the West', while young people were being urged to work on the land and to help in opening up remote areas. New and very large items in the Soviet budget were the Rocket and Space programmes, which obviously absorbed many millions of roubles annually, in manpower, materials and transport. It may, therefore, be accepted that Khrushchev was telling the truth when he stated publicly that economic development called for a reduction in service manpower. He fully realized the advantages of 'peaceful co-existence' or 'war by proxy' as safer and more profitable alternatives to major hostilities, and very large sums were set aside for such Cold War exercises as bolstering up the East German Government, arming the Cuban regime and modernizing the Indonesian navy and air force. All these helped to reduce the tasks of the Soviet fighting services, and cause embarrassing diversions for the Western Powers.

The first Soviet official announcement that the armed forces were to be reduced was made in 1956, when it was announced that disbandments amounting to about one-third, or one annual call-up, were to be made in the total strength. As the existing strengths of the forces had never been officially revealed, this did not afford any comfort to the Western Powers, who had long ago reduced their own forces to a peacetime basis. Experience has shown that published Soviet figures, where they cannot be checked, are quite unreliable. This is particularly the case in the economic sphere, where, for example, the Kremlin asserted that Russia surpassed America in per capita milk production: any visitor can watch the queues at the dairy shops, which often close their doors before all the customers have been served. Khrushchev, himself, publicly castigated officials for falsifying their returns.

In trying to assess the size of the Soviet Army, therefore, we are compelled to fall back on our own severely limited powers of observation and deduction.

Any observer in the USSR will have noticed that since 1956 there has been no appreciable reduction in the number of uniformed personnel seen in the towns and cities, who are far more numerous in relation to the population than in the UK. Admittedly, the constant wearing of uniform by all ranks makes them more conspicuous, but this is counterbalanced by the fact that most Soviet garrisons are in remote areas, and so a smaller proportion is to be seen in the towns than in England. If, indeed, one-third of the army had been discharged, it would have been impossible, even in Russia, to hide the fact completely. Demobilized men continued to wear their uniforms without badges, and unusually large numbers of these would have been seen: there would have been exceptionally heavy movements of men and transport, and as there are few arterial roads these would have had a noticeable effect on the railway services. None of these things were in evidence nor have travelers observed any, barracks being converted to other uses.

The position of the Soviet steel industry may throw some oblique light on the problem. Although Russia is credited with being the second largest producer of steel in the world, the uses to which it is being put are not evident to the outsider. Despite the urgent programme, which has been launched to cope with the enormous lag in building construction, hardly any steel is used, and the work is being carried out almost entirely with prefabricated concrete blocks, although framed structures could be more readily erected. Moreover, the public was exhorted to save iron and steel scrap for collection by the authorities. One possibility is that a heavy proportion of the steel production is needed for replacing the wartime tanks with which the army was still largely equipped, and for other vehicles demanded by the modernization measures.

Lastly, the Soviet Government twice announced a check to the disbandment programme: once in 1961, during the period of international tension over Berlin, and again in September 1962 when Khrushchev said that 'the increase in the aggressive actions of imperialism' required the strengthening of Russia's defensive power. On balance, the foregoing evidence points to the probability of some reduction having taken place in the size of the army since 1956, but nothing approaching the disbandment of nearly a million men, which the Kremlin would have us accept. We are faced by an apparent paradox. The Soviet Government did not require the enormous land forces of pre-nuclear days, and urgently needed to divert military manpower into more profitable channels. On the other hand, at the time of writing, the Soviet Army was still probably over two million strong. There was no indication that this would not remain so. What were the reasons for this?

In the first place, we must appreciate that no Communist regime has been successfully established and maintained except by the use or threat of armed force, and the fabric of World Communism depended upon a secure and powerful regime in Russia.

US Army tanks face off against Soviet armor at Checkpoint Charlie, Berlin, October 1961. Photo USAMHI, US Army, Released

An illustration of the Party's reliance on a large regular army is provided by the crisis in Moscow at the time of Stalin's death. At first it looked as if Beriya, as Chief of Security and Home Affairs, would seize power by the use of his MVD (Ministry of Interior] troops, which are believed to have numbered nearly half a million. The other members of the Party leadership, however, with the support of Marshal Zhukov, succeeded in surrounding the capital with superior regular forces, and Beriya was arrested.

On a broader basis, the Soviet army provides a means of indoctrinating the whole youth of the nation. The great majority of senior officers belong to the Party, membership of which was important to them. Moreover, the Services were penetrated at all levels by political officers and clandestine members of the Security Service, so that the loyalty of the regular cadre would seem to be assured. In this environment the greater part of the male population spent two or three years of conscript service, a high proportion of which is devoted to compulsory political training.

The Army also provided a cheap and disciplined reserve of labour and transport, particularly for use in undeveloped or unreliable areas. Large numbers of soldiers could, at any time, be seen on building sites, on road and railway construction, or laying telegraph

Chief of staff General Major Matveev along with Brigadier Dorofeev inspect a Soviet unit in Berlin in 1981. Photo ALDOR46, Creative Commons Attribution-Share Alike 3.0 Unported Licence, Wikimedia

lines: they were also employed on agricultural work, especially during the harvest. Motor lorries designed primarily for military use, in peacetime could be switched from civilian to army purposes or vice versa, according to local requirements. Soldiers were offered inducements to settle in remote and uncomfortable areas on discharge, somewhat after the tradition of the Cossack frontiersmen of Imperial times.

We must also remember that the Russians, unlike the British, tend to over insure where military force is concerned. During the last War they planned on a numerical superiority of three or four to one before undertaking an offensive: a similar proportion was observed in the disposition of the Soviet Army in Western Russia and Eastern Europe. These forces were available not only to confront those of SHAPE, but to support the Communist regimes in the satellite countries. Some 26 'spearhead' divisions, for example, were garrisoned in Eastern Germany, Poland, Rumania and Hungary, and these could be rapidly reinforced by formations stationed near the frontiers of the USSR. No less than 15 divisions, including armour were concentrated in Hungary to crush the virtually unarmed revolt of 1956, and considerably more were held in readiness for any widespread trouble in East Germany.

The maintenance of a big standing army also paid dividends in the prosecution of the Cold War. Pay and welfare services were on a much lower scale than in the West, and by compelling its opponents to keep considerable land forces on the Continent, the Kremlin was imposing a relatively heavier burden on them. Nor did the Soviet government, with

its absolute control of all organs of publicity and all channels of information, take account of public opinion or the pressures that Democracies face when defence liabilities are under consideration. As the prospect of nuclear war recedes, the value of a large standing army as an instrument of policy correspondingly increases.

Although, as previously stated, public opinion in Russia hardly existed as a political force; the maintenance in peace of so many men under arms raises questions of morale among the rank and file, who need to be given a sense of purpose. This partly explains the bellicose speeches that were habitually made when the troops were addressed on ceremonial occasions. The soldier is constantly reminded that his country is threatened by the aggressive NATO bloc; and to the ordinary Russian, Germany, with her growing army on the frontiers of the Warsaw Pact countries, is still the real enemy. Much play was also made of the fact that Russia is a large country, and, therefore, needs a large army for self-defense. For, although the governing Communist Party was like all dictatorships, aggressive and expansionist, the instinctive attitude of the Russian masses is, and always has been, defensive.

Soviet Forces on parade in celebration of the October Revolution 1983.
Photo Thomas Hedden, Wikimedia, Released

A T-80U main battle tank of 4th Guards Kantemirovskaya Tank Division prepares for the final annual examination by the Western Military District commission. The complex examination consisted of assessing the training levels, unit actions and the Division's ability to carry out orders and instructions.
Photo Vitaly V. Kuzmin, Creative Commons Attribution-Share Alike International 4.0 Licence, Wikimedia

North West European Confrontation:

A Suggested Alternative to the Existing Plan of Defence

This article by Captain R.J. Murray-Jones, Kings Regiment, was originally published in BAR 39, December 1971

'Some of the men of the column began to see that though the scarlet line was slender it was still rigid and very exact.'

Invasion of the Crimea, by A.W. Kinglake

Introducing the Defence White Paper last year, the former Minister of Defence, Mr. Healey, described our Land Forces as 'unsurpassed in Europe. . . possessing a range of new equipment second to none.' He implied by this statement that the standard of our troops was of the highest quality; that the weapons with which they are equipped were the best available; and that viable strategic and tactical plans existed for the employment of these forces in the event of any conflict with the forces of the Eastern Bloc. This article deals with the second two points.

More than once in our history, we have allowed ourselves to be lulled into a state of false security and we should not allow it to happen again. We cannot afford to economise with the equipment of our armed forces; to do so is to place the security of our nation in jeopardy. Our forces must at all times have the best tools for the job. By the same token they should maintain a professional and self-critical approach to the tactical handling of these weapons and not, as happened in 1940 with the tank, accept blindly the official view.

The Opposition Plan

Nuclear: In Western Europe it is considered that the Communists will precede their all-out assault with a mass nuclear strike on such targets as our nuclear delivery means, tactical airfields, headquarters and known defensive positions. Their intelligence concerning the location of desirable targets is likely to be good, as they are believed to have a large network of agents in our sector. Up to a third of their total available warheads may be used in this initial strike; over a wide front this could mean as many as 30 warheads delivered over a period of four hours at depths of up to 250 miles from the FEBA.

Chemical: In addition, and complementary to the mass nuclear strike, they have announced their intention of using chemical weapons. It can be expected therefore, that non-persistent agents will be used prior to the attempted capture or neutralisation of

Tactical exercises of Russian Radiological, Chemical and Biological Protection Troops units at Shikhani training and testing ground in the Saratov region. Photo Vitaly V. Kuzmin, Creative Commons Attribution-Share Alike International 4.0 Licence, Wikimedia

ground vital to the success of their advance: obvious examples of targets are defended river banks and bridges, airfields, and minefields. The persistent agents would be used to a lesser extent and for strategic purposes: for example, the protection of their flanks and the blocking of our lines of communication and transit ports. It should be added that a chemical strike with a non-persistent agent is the obvious preliminary to an airborne landing.

Airborne: We should expect from the onset of hostilities that strong airborne forces will be dropped up to 30 miles ahead of their armoured echelons to capture important ground along the main axis of their advance. The initial parachute and helicopter landing by infantry troops may be swiftly backed up by a heavy drop of assault guns, anti-tank GM's, artillery and mortars. The Soviets have a large number of airborne and helicopter troops and give considerable emphasis to the deployment of forces up to battalion size well behind the FEBA. These units could easily prevent or deter the orderly withdrawal of our own forces, who must then be prepared to fight independently. To do this effectively they must have be aware of the main aspirations of their superior commanders and be able to employ themselves without further orders to support these plans.

In highly mobile operations, involving armoured forces, particularly when these forces are supported by nuclear weapons, a clearly defined front line may never exist. Troops must learn to accept this as a natural state of affairs and expect to operate for what may be long periods behind the enemy front. In a war of this nature the battle will be won by the side with the best intelligence of the enemy's whereabouts and the quickest reaction

Soviet Soldiers in Budapest. FOTO:Fortepan - ID 32051, Creative Commons Attribution-Share Alike 3.0 Unported licence, Wikimedia

to this information. Surprise is the one principle of war most likely to assist forces that are at a numerical disadvantage. It could give victory to boldly-led troops capable of operating independently within the main concept of the operation.

Operation

Air Reconnaissance: The success of the main thrust by the Soviet armoured forces will depend largely on timely information regarding our troop dispositions. To this end they will deploy a variety of intelligence means. The main source of information will come from visual and photographic reconnaissance aircraft: over a wide front this could mean as many as 40 to 70 reconnaissance sorties per day. In addition to gleaning original information, aerial reconnaissance will be used to substantiate information received from other sources. Soviet night air reconnaissance is believed to be inferior to Western means and the number of sorties is not expected to be very high.

Ground Reconnaissance: Moving 30 to 40 miles ahead of the main body will come specialist reconnaissance troops. Individual groups will vary in strength and composition and will often be supported by a company from a Tank or Motor Rifle Regiment. They will have, in addition, chemical reconnaissance troops to report on contamination, and engineer reconnaissance parties to give early warning of minefields and other obstacles. These forces will move over a very wide front attempting to locate our positions without becoming involved. Although they will generally attempt to bypass opposition the presence of tank and motor rifle troops in this reconnaissance screen may indicate their willingness to fight for information at times. The temptation to engage them will be very great but it must be avoided at all costs.

Electronic Warfare (EW): Considerable emphasis is placed on EW in peacetime as well as in war and we can expect heavy interference (jamming) on both radar and wireless from the onset of operations, with catastrophic effect to command and control. The Soviets also possess accurate electronic direction finding means and can be expected to locate and engage units within two hours of their first transmission. The inevitable consequence that must be deduced from this is that orders must initially be issued in broad outline only and junior commanders must be able to interpret these freely by independent action without resort to the use of radio. Personal contact and line telephone must be used at every opportunity.

Main Thrust: Reconnaissance forces will operate on a wide front. They will be well-deployed, moving across country, but the same will not be the case for the main forces. The tank and motor rifle regiments will advance along the roads in company and

battalion packets, one to five miles separating each packet. The length of a Regimental column advancing on one route will be as much as forty miles. One of our battle groups if confronted by one Regiment would have opposing it, either three Motor Rifle battalions or a Tank battalion in the case of Motor Rifle Regiments (MRR), or three Tank battalions in the case of a Tank Regiment (TR). A Tank battalion consists of 31 medium tanks and a MR battalion about 400 men mounted in 20 BTR 60 A PC's. It will be seen straight away that our own battalions are considerably stronger both in men and in vehicles than a corresponding Soviet battalion.

As soon as opposition is encountered or reported by the reconnaissance screen, a hasty attack will be mounted supported by artillery fire. This is carried out in accordance with a set drill; little preparation and few orders are necessary. Units will deploy quickly from the line ahead formation into a heavily concentrated attack formation in extended line. Tanks will lead the attack spaced at about one hundred metres, with the infantry (if they are supported by infantry) mounted in their APCs in extended line behind them. Covering fire will also be given by one third of the attacking force with the remainder, infantry included, firing whilst on the move. The infantry will seldom dismount.

Training: Soviet troops are openly criticised by their superiors in military papers following exercises. No one is considered too senior to be spared from rebuke. Much interesting information can be had from studying these reports. One point that is continually emphasised is that tank crews should not open fire during the assault at ranges in excess of 1,000 metres. Our own crews expect to engage armour at considerably greater ranges. Soviet units and formations down to platoon level are instructed to attack the enemy from the flank and rear at every opportunity.

On completion of an assault onto a position they do not halt to reorganise but continue through the objective and resume the advance as soon as possible. Infantry will fight from their vehicles throughout the engagement unless our forces are established in well-prepared positions. Conventional artillery and FGA aircraft supporting the first echelon forces are available in impressive quantities but, when considering their employment, one fact is common to both: the allocation is generous and potentially formidable, but they are employed in accordance with complex and detailed programmes laid down by senior formations, and it is very doubtful whether much independent action can be undertaken. FAC's are rarely allocated at battalion level and artillery is not capable of taking on opportunity targets with a great degree of flexibility and speed of reaction.

Soviet tactics are based on shock action. Their strategic aim is to win the war in 10 to 12 days; to do this they will try to achieve a daily rate of advance of 10 miles and are prepared to accept risks. It is their intention to break through our defences in the same way that the Germans broke through the French line on the Meuse in 1940. They will then release their armoured forces deep into the enemy rear. All their forces are armed and

equipped in keeping with this plan: the majority of their divisions in Europe are armoured divisions: their artillery is equipped with weapons that can lay down heavy concentrated fire for a short period of time; hence their large proportion of rocket launchers and heavy mortars. At the same time they have to make sacrifices: lip-service is paid to flank defence during their advance to contact and attack. Their Regiments are highly dependent on good intelligence of enemy positions from the reconnaissance forces ahead of the main body. Their junior commanders and soldiers are unlikely to know very much of what is going on and will not be able to undertake independent action. The whole essence of their success depends therefore on the use of mass, with maximum fire support, to smash a way by dynamic force through our line of defence; using speed and continual mobility to overcome the risk of presenting a nuclear target whilst concentrated. The effect of such penetration in strength is expected to demoralise our forces and throw them into such a condition of confusion that they will be unable to present an effective defence.

UK Troops from the Queen's Royal Hussars, lead Exercise VENERABLE GAUNTLET at the Sennelager Ranges in Germany. VENERABLE GAUNTLET is a validation exercise for the NATO Very High Readiness Joint Task Force (VJTF) spearheaded by 20th Armoured Infantry Brigade and part of the enhanced NATO Response Force. The VJTF comprises 16 countries from Europe and Eastern Europe. Photo Mr. Dominic King, Crown Copyright

The Western Defence Plan

Our answer to these tactics is to deploy within a battlegroup sector a number of combined tank and mechanised infantry combat teams, which will attempt to constrict the Soviet formations within Nuclear Killing Zones (NKZ). This will be achieved by a frontal holding action from behind an obstacle while flank attacks are mounted by other combat teams

as the enemy attempts to cross the obstacle or attack our position. Having contained the enemy formations within the NKZ a nuclear missile will then be dropped on them. This will immediately be followed by a counter attack in order to regain possession of the ground.

This plan has several considerable disadvantages: the Soviet attack plan is swift and their units will remain dispersed until the precise moment of assault. A regiment can be spaced out along the line of advance for as much as forty miles and it will achieve maximum concentration only at a point one or two miles from its objective. We also know that they will seldom mount a frontal attack against a known position once it has been identified. They prefer a flank sweep by their assaulting formations. This poses the question: 'which way will they come?' It is pointless relying on an NKZ if the enemy are not going to enter it. What is also possible is that a flanking enemy formation will deploy off its axis to take us in flank. In such a situation we would have to rely entirely on conventional weapons alone. The second aspect is that the firing of our nuclear delivery must coincide exactly with the time at which the enemy are crossing the NKZ: for this we will require very accurate intelligence of enemy movement, a difficult achievement without air superiority. The commander on the spot must have complete freedom to unleash his missiles at a moment's notice. Lastly we know that the majority of Soviet divisions in Europe will be tank divisions. How effective are tactical nuclear weapons going to prove against tanks? We can only make a guess at this; but even supposing we are able to achieve a direct hit at the moment of concentration, which is very unlikely, the casualties to tanks may not be very great.

The Combat Team in Defence

At this juncture we should take a closer look at the effectiveness of the combat team itself. Its composition varies, but basically it will consist of one to three troops of tanks and one to three platoons of infantry, with the possible addition of one or two Wombat detachments.

The Chieftain is undoubtedly the most powerful tank in the world today, but by employing them in penny packets we are contradicting the first tenet of tank warfare-concentration. The history of the last war is full of examples of this; nothing illustrates it better than the Battle of France in 1940. The Germans used maximum concentration and mobility and combined it with the fire power of the tank to produce surprise and shock action at the point where our defences were weakest. We did not, or would not, understand this principle and employed our tanks in small packets in support of infantry. Our tactics were the antithesis of the enemy's: too few and too slow.

In defence the pattern did not change. The Panzer Divisions would remain concentrated. Then deploying from behind the infantry positions, they would strike our flanks as we were advancing on their static positions.

It is worthwhile noting that the German infantry were able to withstand an armoured attack without the aid of tanks. This was because their organic antitank weapons were

supplemented by the very powerful 88mm anti-aircraft gun and a number of SP assault guns deployed right up in the front line, the latter being manned by the artillery.

Regrettably our own Infantry are not capable of such independent action, which is probably why the present Combat Team concept has evolved. Apart from the six battalion anti-tank guns there is nothing that can reach out to 1,000 metres, and even for the Wombat this would be employing it at its maximum range. Until enemy armour is as close as two to three hundred yards from us, when our large number of 84mm anti-tank weapons can expect to achieve hits, there is nothing that can touch them. Recoilless weapons are also very vulnerable. They cannot be fired from beneath cover and they are easily identified, once they have fired, because of their back blast.

Soviet naval infantrymen kneel with their AKS-74 rifles during a demonstration conducted for visiting U.S. Navy personnel. Two American ships, the guided missile cruiser USS PRINCETON (CG-59) and the guided missile frigate USS REUBEN JAMES (FFG-57), visited Vladivostok for a four-day goodwill visit.
Photo PHCS Mitchell, US Department of Defence, Released

The Russian infantry do not dismount from the APC's on the objective except under exceptional circumstances when the enemy has had time to prepare a position thoroughly. During the assault each APC will be firing one heavy MG, two light MG's and as many rifles as there are weapon-slits in the side of the BTR 60s. Whilst mounted in their own vehicles they are more or less impervious to our small arms fire. In that case there will be 400 riflemen in a British infantry battalion, at least until the arrival of the Rarden Cannon, who will be unable to influence the battle in any way. They might as well be armed with pea-shooters for all the damage they are going to do to the enemy. The Germans are said to

have lost the Normandy battle in 1944 because the allied air forces prevented their armour from moving. It was also very largely air power which won for the Israelis the 1967 war in Sinai. At no time has it been suggested that we could achieve air superiority in a war in NW Europe; yet throughout our army in Germany there is a remarkable deficiency in antiaircraft weapons. The Soviets, who confidently expect to have absolute air superiority have anti-aircraft weapons at all levels from Regiment upwards in large quantities.

A Suggested Solution

If our combat team remains concentrated in defence, the moment it is identified it will come under heavy artillery fire and will be largely neutralised. To prevent this happening, the combat team must split so that the integral parts, the platoons, are mutually supporting one another with fire, ie providing enfiladed fire across the front of the neighbouring platoon instead of shoulder to shoulder with them firing outwards at head-on targets. The dispersion of the platoons will make the job of identifying them more difficult. It will also be less likely that they will all be neutralised effectively by artillery fire.

The task of the commander in selecting ground best suited for defence, where the enemy are offered the minimum of covered approaches and his own forces good fields of fire, cover, and opportunity to manoeuvre, will remain unaltered. The line of defence will again be ideally sited behind a natural obstacle reinforced with minefields, but not to the extent that the armour is restricted or prevented from operating in front of this defensive line.

Because the combat team is deployed in a line across the enemy axis of advance instead of being concentrated on one dominant piece of ground astride the axis, there will be less opportunity for the enemy to outflank it. Whichever way they approach, they will be confronted by a chain of heavily defended platoon positions. In this way the formation commander will also receive more accurate intelligence of enemy movements.

Providing the infantry positions are able to hold the enemy thrust for long enough, and give early warning of its direction, the massed armour, dispersed and camouflaged at the rear, should have sufficient time to manoeuvre forward to hit the enemy in the flank when they are concentrated and about to make their assault. Here the shock effect of massed armour will be used in its correct role.

Such tactics will naturally depend for their success on the tenacity of our infantry. But as we have seen already they have very little chance, with the weapons they have at present, of achieving this, unless they are supported by tanks.

The latest APC under development for the Bundeswehr is a 24 ton vehicle which will be produced in a number of variants. There is the normal APC version, which itself is equipped with a cannon capable of knocking out APCs; a heavy mortar vehicle; an anti-tank missile launcher and finally an assault gun version known as the Panzer Kanone. These last two AFVs are tank killers, and when they are employed in static well camouflaged positions it

is not difficult to see that they will form a very formidable combination. Not only will they release tanks so that the latter will be employed in a manner to which they are best suited, but they will be able to engage enemy tanks on equal terms: the one having the range, the other the certainty of a first round kill. However, perhaps the most important factor in their favour is that their crews will be able to continue to operate even when under artillery fire and will have NBC protection.

These are the kind of vehicles that our infantry need; and, let us add at this point, that it is nonsense in this mechanised age to continue to expect the infantry to fight on their feet. Even in the attack phase of war, except under very exceptional circumstances, they should fight from their vehicles; the APC must become the platform for their heavy weapons, be they cannons, grenade dischargers or properly mounted machine guns behind armour plate.

Fortunately armoured vehicles similar to the new German APCs do exist or are coming into service. The Abbot gun, although an artillery piece, could be adapted to become a very formidable anti-tank weapon with its 105mm Hesh round. The Rarden cannon mounted on an AFV 432 will complement it. Ideally, therefore, in the opinion of the author, each infantry platoon should be equipped as follows: two converted Abbots, one AFV mounting the Rarden cannon and a command vehicle: a Ferret equipped with Vigilante. With these platoons sited a thousand metres apart, the combat team would become a very formidable opponent, particularly if they are given, in addition, some 20 or 30mm anti-aircraft guns that could also be used in the ground role. These vehicles would not be of any use in armoured Regiments however, where infantry are attached. Here the type of vehicle should be something similar to the American ACAV, the converted M113 developed for use by their forces in Vietnam. With a heavy machine gun, two light machine guns, an M79 grenade launcher and a section of infantry in the back, they would be ideally suited for operations in support of Armoured Regiments.

A US ACAV prepares to escort a truck convoy in Vietnam. Photo Donn A. Starry, Mounted Combat in Vietnam, U.S. Army, Released

Inevitably the time will come when, through reduction in our strength due to casualties or by sheer weight of enemy numbers, the main body of their forces will breach our successive lines of infantry combat teams. Essentially, it will be the task of the massed armour to plug such gaps and throw the enemy back. If they are unable to do this, however, the enemy must be contained within a corridor by flank attacks by our armour and later destroyed either by nuclear or conventional attack.

The breakthrough has always been the critical moment for the defence. Every effort must be made to prevent the enemy exploiting it. In particular, the forces that have executed the breakthrough must be immediately cut off from their supporting artillery and services following in their wake. In the past it has been the tendency for a defence, which has been over-run to become demoralised and, cut off from the main force, give up the fight. Experience has shown that in fast moving fights of the type that we can expect, the actual casualties to men and equipment are comparatively slight.

It is at this point that the junior commanders, thus cut off, must take the initiative into their own hands. Fortunately communications in modern war are good and they will normally have a fairly clear idea of what has happened. Having reorganised and, if necessary, regrouped, these forces must then embark on what might be described as the guerrilla stage of the operation. As long as it is possible for them to do so, small groups must endeavour to create, by ambushes, as much damage and confusion as is possible to the enemy's follow-up forces, particularly in the area where he has broken through. For this kind of operation it will be necessary to have a first class knowledge of the ground. Groups must concentrate on remaining intact themselves, moving from hide to hide at night and ambushing the enemy by day. There are of course, tremendous logistical problems to operations of this nature. Many of these could be overcome by providing secret caches of ammunition, food and fuel in buildings, woods, haystacks and so on, prior to the opening of hostilities.

A Russian BTR80 of the Rapid Deployment Regiment demonstrates counter attack tactics against an illegal armed group during tactical exercises of Internal troops and rapid deployment units at the ODON division training ground. Photo Vitaly V. Kuzmin, Creative Commons Attribution-Share Alike International 4.0 Licence, Wikimedia

All of this will cost money and the natural question to ask is whether we can afford the lavish scales of equipment that have been suggested in this article. The answer to this is surely: can we afford not to? If we are to have an army capable of defending our country's interests it must have the best of everything available. Perhaps it is worth noting the example in improvisation and determination set by Israel before the last conflict with the Arab States. It will be remembered that they produced over a thousand first class battle tanks from old Sherman hulks (it is not suggested that we do the same!), but once again David demonstrated that it was possible to defeat the formidable Goliath. Incidentally, it will be remembered that this biblical hero achieved his startling victory with long range firepower and mobility, and it cannot be denied that he possessed the weapon of decision also.

Paratroopers drop from an IL76MD transport aircraft during one of the stages of the tactical exercises of the 106th Guards Airborne Division in Russia, October 2011. More than 800 troops and 6 vehicles were included in the exercises. Photo Vitaly V. Kuzman, Creative Commons Attribution-Share Alike 4.0 International license, http://vitalykuzmin.net.

Soviet Airborne Forces

This article by Mark L. Urban was originally published in BAR 68, August 1981

In the sixty-three years since the founding of the Soviet state many elite groups have arisen in Soviet society. In the Armed Forces, the elite element is the Airborne Forces (VDV). These now constitute the Kremlin's most trusted front line troops, having spearheaded the invasions of Czechoslovakia and Afghanistan. They are not part of the Ground Forces but have their own C-in-C. The former Commander-in-Chief of the VDV described their purposes as 'to conduct operations in co-ordination with the main arms of the ground so as to ensure the high speed and continuity of the offensive'.

These operations are envisaged as taking place primarily in the enemy rear. The VDV are not the only forces earmarked for such operations (we shall look at the others later) but they do constitute the vast majority.

History

On 2 August 1930 a platoon of Soviet soldiers was dropped during a field exercise and disabled an 'enemy' corps headquarters. This exercise marked the official birth of the Airborne Forces. However, it is known that the first use of parachutists by the Red Army was in 1929 during operations against guerrillas resisting collectivization in Tajikistan. By 1932 they had been formally organised into permanent combat formations.

The Great Patriotic War (1941-45) saw a number of actions by Soviet paratroops. The most impressive of these was the insertion of a 10,000 strong Airborne Corps behind enemy lines in 1942. According to the Russians, the Corps operated independently in the enemy rear around Yuknov and Vyazma for six months. In 1943, Airborne units were dropped in support of the assault crossing of the River Dnieper.

The last use of Soviet parachutists in World War II was during the celebrated Manchurian campaign. This is usually held up as the model of a Soviet blitzkrieg such as might be practiced against NATO powers. Some twenty groups of thirty-five-to-forty men were dropped deep into enemy territory with the aim of causing as much chaos as possible.

Whilst these operations might sound impressive enough, it should be remembered that, compared to the vast scale of the conflict, they represent comparatively isolated and minor uses of Airborne power. In most instances the VDV ended up fighting in the line as normal infantry. Although the Soviets had been the first to form Airborne units they failed to use them to full advantage in the Great Patriotic War.

In the post war period better aircraft and techniques were developed and the relative importance of the Airborne Forces in the Soviet Army grew. Between July 1961 and January 1979 they were commanded by Army General V. F. Margelov. During those seventeen years he forged his men into a cohesive and elite force. This continuity and stability at the top was essential. Since the Great Patriotic War, parachute drops have been a feature of all large-scale Warsaw Pact exercises. During the YUG manoeuvres of 1971 the Soviets claim to have dropped an entire division in the space of half an hour. Large-scale Warsaw Pact air and sea landings have been staged on the East German island of Rugen. In Prague in 1968 they seized key locations and signposted the route for advancing Warsaw Pact forces. Their tasks included the capture of the renegade Czech government. In Afghanistan major elements of the 105th Guards Airborne Division were airlifted into Kabul in two days (24 and 25 December). Key points were seized and the Afghan leader Hafizullah Amin, his family and palace guard were killed in a fierce firefight.

Troops from 137th Guards Airborne Regiment take part in tactical exercises of the 106th Guards Airborne Division, October 2011, Russia. Here troops are supported by BMD-2 and Nona-S vehicles along with Mi-24 Helicopters from 378th Air Force Base in Vyazma. Photo Vitaly V. Kuzman, Creative Commons Attribution-Share Alike 4.0 International license, http://vitalykuzmin.net.

Manpower and Training

Colonel-General D S Sukhorukov, present C-in-C of the Airborne Forces, has nearly eighty thousand men under his command. Almost all airborne divisions are at full strength, and they all hold the honorary 'Guards' title. They have their own command structure and are employed only with the consent of the General Staff. Airborne soldiers are predominantly conscripts, the majority of whom have volunteered for Airborne training. All officers are professional, serving their entire career within the Airborne Forces. Officers selected for promotion to the higher ranks attend courses at the parachutists' own staff college, the Red Banner Airborne Forces Higher Command School at Ryazan.

Russian paratroopers march in Kazakhstan. Photo US Air Force, Released

As one would expect, Airborne training is strenuous and candidates are expected to be in the peak of physical and mental health. They must also show their ideological commitment to the Soviet regime. A very high proportion of parachutists belong to the Communist Party, whereas the proportion of Soviet citizens over eighteen belonging to the Party or Komsomol (Young Communists League) is no greater than twenty per cent. Many recruits will already have had military training at school or been members of DOSAAF (Voluntary Society for the Assistance of the Army Air Force and Fleet) whose curriculum includes parachuting. Sport parachuting is popular in the Soviet Union, and Soviet teams always do well in international competitions. Soviet Airborne and Special troops are expected to show qualities not normally exhibited by Soviet servicemen. Colonel-General Sukhorukov describes an action in World War II: 'Success was ensured by paratroopers having a high individual and team level of training. Combat operations being conducted in the enemy rear, the fighting men's best allies were courage, initiative, resourcefulness and military cunning.'

Deployment and Organisation

The exact number of Soviet Airborne divisions is unclear, largely because of the occasional practice of changing divisional numbers, and also because of the rapid transfers of manpower of which the Soviets are capable. The divisions are deployed within the Soviet Union, with the one exception of 105th Guards in Kabul. The relationship of Airborne divisions to their Military District commands is probably a casual one, most contact being direct with the Ministry of Defence in Moscow.

An Airborne division comprises approximately 7,500 officers and men. It is organised on the basic 'triangular' system with three platoons to a company, three companies to a battalion, and so on. Recent years have witnessed a substantial increase in the scales of heavy equipment, particularly at regimental level. Indeed, it would appear that equipment has been issued for every eventuality, and that not all of it would be used in any given operation. The number of BMDs in each division represents a considerable increase on the scale on which its predecessor, the ASU 57, was issued. The Divisional Artillery Group is equipped with D30 122mm guns, and BM14 multiple rocket launchers.

The most usual groupings for the assault would be the reinforced battalion and the regiment. The Russians often refer to brigades or Special Duties Brigades for use in the enemy rear. These are specially formed groups of men that do not correspond to the Western notion of brigades; they might number anything between two hundred and seven hundred men.

Russian Spetsnaz troops GRU (2008). Photo Aleksey Yermolov, Creative Commons Attribution-Share Alike 3.0 Unported license, Wikimedia

Other Special Soviet Forces

The VDV are not the only troops that would be employed in raiding in deep penetration operations. Indeed, Soviet doctrine does distinguish between them and other troops for deployment in the enemy rear, so it is as well to look at these others briefly:

- ***Naval Infantry:*** *These number twelve thousand, divided into four regiments, one with each of the fleets. Whilst this is not a massive force, compared, say, to the one hundred and eighty-four thousand men of the US Marine Corps, it would play a critical role in the Baltic, using landing craft, helicopters and hovercraft.*

- ***Reydoviki:*** *Best compared to the US Special Forces, or British SAS, they would be involved in diversionary operations, frequently adopting the dress and weapons of enemy forces. They might also be used to form and train local partisan groups. There are believed to be seven or eight Reydoviki brigades.*

- ***Long Range Reconnaissance Companies***: *An LRRC is attached to each full strength Soviet tank and motor rifle division. They carry out in depth reconnaissance and may also be involved in small ambushes and the snatching of lone enemy sentries. Their principle role remains however to see and not be seen.*

Other Warsaw Pact Airborne Troops

Poland fields the largest force in the shape of the 6th Pommorska Airborne Division, based at Krakow. Its organisation follows that of its Soviet counterparts with the exception that recent increases in the scales of heavy equipment have not been implemented. It is also known that the Poles use the BMP, which cannot be airdropped, instead of the BMD. In the light of the recent troubles in Poland, one wonders whether this unit could be employed in an offensive manner. The Czechs maintain an Airborne regiment, the 22nd, at Porznitz.

The most reliable of the non-Soviet Warsaw Pact Airborne forces are those of East Germany. The 5th 'Rudi Saenger' Airborne Special Forces battalion is based at Prom on the island of Rugen. A second battalion, the 40th, was formed in 1973, and is based at Cottbus. Rumania and Bulgaria have an Airborne regiment each, and Hungary a battalion.

Employment of Airborne Forces

Strategic

In war:

- *Seizing centres of government to disrupt attempts at organising resistance.*
- *Key reinforcement bases such as parts and airports might be taken*
- *Attack of major re-supply paints*
- *To stiffen defenses in critical situations on the front line, or to spearhead assaults.*

In Peace or Limited War:

- *As 'fast troops', with their full complement of heavy equipment to take advantage of a given situation, probably in the 3rd World.*
- *A threat of a strategic airlift may be used for political purposes e.g. the 1973 Mid East war, when the Soviet Union threatened to fly Airborne troops to Egypt's assistance.*

Operational:

- *Destruction or seizure of enemy nuclear and chemical delivery means and warheads.*

- *Assaults on enemy reinforcements.*
- *Attacks on enemy HQs.*

Tactical

- *Taking key demolitions, bridges and their like.*
- *Seizing ground of vital tactical importance.*
- *Preventing an orderly withdrawal of enemy forces.*

A Mi-24 helicopter from the 378th Air Force base provides air support after the landing of airborne troops during 106 Guards Airborne Division tactical exercises in Russia. Photo Vitaly V. Kuzman, Creative Commons Attribution-Share Alike 4.0 International license, http://vitalykuzmin.net.

Heliborne Operations

It is clear that many of the tasks listed above could be performed by heliborne troops. There are many advantages, including the use of non-specialist troops (there is no evidence that the Soviets have formed Air Cavalry type units), pinpoint delivery, and easier command and control, The new importance of helicopters in Soviet doctrine does not, however, alter the position of the VDV, at least for the immediate future, for a number of reasons. First, they remain a highly trained elite that can be delivered by parachute and helicopter, as in Afghanistan. Secondly, with the helicopters presently available, an Airborne formation can not be inserted with its vehicles. The mobility provided by the BMD and other vehicles means that parachute units can be dropped in an ideal landing zone, even if it is some distance from their final objective. The new importance of helicopters in Soviet doctrine may have its effects on the tactical, but not the operational and strategic uses of Airborne forces.

When warfare is waged under special conditions (in cities, arctic, mountainous, marshy regions etc) VDV may well be used because normal troops are not considered sufficiently competent.

Military Transport Aviation

At first sight it seems that Military Transport Aviation and Aeroflot (the difference is often ill-defined) are, between them, capable of massive airlifts. The AN12 exists in the greatest numbers. This Soviet Hercules can drop 60 paratroops and light equipment at a maximum range of 4600 km. The jet powered IL76 CANDID, which has a 44-tonne payload, would be used for heavier drops. During the recent 'BROTHERHOOD 80' exercises IL76s were observed dropping BMDs into a landing zone. Finally, there is the enormous AN22 COCK, which is capable of carrying heavy equipment (T54 ARVs and FROG TELs) and certain stores. Military Transport Aviation's aggregate lift capacity has increased from 11.4 million tons per mile in 1965 to 26.5 million tons in 1977. It should be remembered that, on the evidence of the 1945 Manchurian campaign, a maximum of twenty per cent of transport aircraft would be available for the paratroops in a full-blown conflict.

When we compare this situation with the airlift capabilities of the United States we begin to see that the Soviet Union's airlift capability, or lack of it, is their Achilles heel. Whilst they have more medium range aircraft than the US, their long range airlift force (50 IL76 CANDID and 50 AN22 COCK) is numerically inferior to that of the US (234 C141 STARLIFTER and 70 C5A GALAXY). More importantly, the Americans are far better at planning airlifts - the 1973 Mid-East war provided an example. In 930 missions, the Soviets flew 15 million tons of supplies to the Arabs. The US, flying 4.5 times the distance, delivered 22.4 million tons in 567 missions. Here we see a real limitation to the operational employment of Soviet parachutists.

Equipment

- ***Vehicles:*** *The BMD (Bronevaya Maschina Desantnaya, Airborne Combat Vehicle) is armed with a 73mm gun, SAGGER (AT3) anti-tank missile, and three 7.62mm machine guns. It has a maximum road speed of 73km/hr and is amphibious with a maximum speed of 10 km/h* in water. Its combat weight is 10 tonnes. The BMD provides high mobility to take the VDV from their landing zone to their assault positions, and, during the assault, a considerable amount of firepower. By the introduction of the BMD the Soviets have provided their Airborne forces with more firepower than the conventional mechanised infantry of most of their potential enemies. An Armoured Command Vehicle variant without a turret, but with additional radio equipment, has been introduced, and is currently seeing action in Afghanistan.*

A Russian BMD-2 airborne IFV, with SFOR markings, parked in front of several trailer units at the Russian Airborne Brigade in Tojsici, Bosnia-Herzegovina. The brigade supported Operation Joint Guard a peacekeeping effort by the multinational Implementation Force (IFOR), comprised of NATO and non-NATO military forces, deployed to Bosnia in support of the Dayton Peace Accords. Photo Sergeant Edward Cranick, US Department of Defence, Released

The ASU85 represented the solution to the VDV anti-tank problem of fifteen years ago. Its 85mm gun can penetrate 130mm of armour set at an angle of 90 degrees with an HVAP round out to 1000 metres. The vehicle is not amphibious. There is some debate about whether the ASU85 is air droppable. Certainly there is no photographic evidence to suggest that it is, but, weighing 14 tonnes, it is within the weight limit of the Soviet D3 parachute system. Perhaps the vehicle's suspension is too weak to risk in a parachute drop. We just do not know. However, it cannot be said that such risks would not be taken in war. In short, the future of the ASU85 does not appear to be a very promising one.

There is evidence that the ASU57 remains in service with the Soviet and other Warsaw Pact Airborne forces. Its 57mm gun can be dismounted and used independently, but its anti-tank capabilities are hardly stunning. By retaining the ASU57 it would seem that the Soviets have given their Airborne battalions rather more heavy equipment than they can actually use. It remains in service, perhaps, because it is the only AFV in Airborne use that can be employed in a heliborne assault.

A number of BRDMs are in the inventory of each Airborne division serving in recce and anti-tank roles. A substantial number of trucks and motorcycles complete the divisional motor pool.

- ***Parachutes:*** *The PD47 and RS1 are used for personnel drops. A minimum jump height of 300metres is necessary and a rate of descent of 5m/sec is normal. Cargo may be palletised and dropped with clusters*

of D3 chutes. A minimum drop height of 1000 metres is used, and the maximum droppable load is 15 tonnes (with or without retro-rocket braking). It is worth considering the vulnerability of an IL76 dropping BMDs at a height of 1000 metres: a situation of at least local air superiority is necessary if the drop is not to develop into a costly fiasco.

- ***Small Arms:*** *The standard range of squad weapons is used, including the new AKS 74 5.45mm assault rifle. Regimental infantry support weapons include: M1937 82mm mortars, MI1943 120mm mortars, and SA7 GRAIL SAMs.*

Conclusion

Since their formation in 1932, Soviet Airborne Troops have improved consistently in quality and firepower. Recent increases in heavy equipment are aimed at eliminating the Airborne soldier's traditional vulnerability to mechanised counter-attack and to improve mobility. Whilst few doubts can be cast on the fighting capabilities of the Airborne Forces, nevertheless, when compared with the US the Soviets are not well-equipped to transport them into action. Within the Soviet Army, the Soviet Airborne Troops represent the peak of professionalism and combat readiness.

Soviet Ilyushin Il-76 Candid transport aircraft loading paratroops, May 1984. Photo US Department of Defence, Released.

A German Army Leopard II tank, assigned to 104th Panzer Battalion, scans the battlefield at the Joint Multinational Readiness Center during Saber Junction 2012 in Hohenfels, Germany, Oct. 25. The U.S. Army Europe's exercise Saber Junction trains U.S. personnel and 1800 multinational partners from 18 nations ensuring multinational interoperability and an agile, ready coalition force.
U.S. Army photo Visual Information Specialist Markus Rauchenberge, Released.

Hammer, Anvil and Net

This article by Richard Simpkin that re-examines the conventional defence of the NATO centre was originally published in BAR 72, December 1982.

In setting out to write this article from within a self-imposed straitjacket of acceptability, I should be less than honest if I did not declare the view to which I myself have been led, on the one hand by analyses of future mechanised warfare and of the armoured threat,[1] on the other by observation of certain broader trends that became perceptible during 1980. It is a view which is gaining ground among analysts and commentators - that the time hinted at by General Sir Edwin Bramall in his lecture to the RUSI in 1982 [2] came with the published conclusions from CRUSADER 80, the American concept of theatre nuclear weapons, foreign policy rifts and divergent operational concepts among the major Allies, and mounting indications of weakness in the will or capability of minor NATO members.

Briefly, this hypothesis suggests that we should hold on our own side of the Channel instead of the other. We should distance ourselves from NATO and devote increased resources to the creation of a 'fortress Britain' defended mainly by a quasi-guerilla 'militia' and sheltering a *force de frappe* air-mechanised and light (Falklands type) intervention forces, and the highest level of special forces that can be sustained without dilution of quality.

This said, I shall return to the familiar NATO-centre scenario, taking this and the existing strength and organisation of BAOR as starting points. I introduced the more radical concept, though, not just as a matter of integrity but because it contains two of the planks on which my argument rests. First, we lack the resources to hold on both sides of the Channel; we must put all the eggs we have in one basket or the other.
That means putting an end to the doublethink that expects the same infantry to perform two if not three different tasks in different places at the same time, and providing the strength needed to do the job. Since we are unlikely to get away with another Dunkirk, collapse of the NATO centre would then leave Britain wide open. Yet all the evidence suggests that BAOR can no longer do its job at its present standing strength and the planned level and rate of reinforcement.

Second, with the sole exception of the Malayan Campaign, I cannot find a post-war example of revolutionary warfare movement that, even if contained, has not ultimately achieved its strategic aims. The Viet Cong's success diminished as they moved towards Mao Tse Tung's 'phase two' [3] (a quasi-organised posture); and the PLO has, at the time of writing, made the same error. But the Viet Cong's 'phase two' operations in conjunction with the North Vietnamese Army ultimately defeated American firepower. If guerilla and quasi-guerilla operations have defeated even the most flexible and skilled of organised forces, Afghanistan has left no doubt that the Soviet war machine is particularly vulnerable to them.

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1 Simpkin, Richard E., Antitank - An air mechanized response to armored threats in the 90s, Oxford, Brassey's Publishers Limited (Pergamon Press) 1982

2 Bramall, General Sir Edwin, British Land Forces: the Future, Lecture given at RUSI 17 February 1982, RUSI Journal, June 1982, in particular page 19, column 2, lines 22-31

3 Tung, Mao Tse, and Guevara, Che., Guerilla Warfare, forward by Captain Sir Basil Liddell Hart, London, Cassell, 1962

A detached observer is forced to the conclusion that NATO's principal members discount this approach because their leaders, wedded to tradition, still privately hanker after offensive military action as an instrument of policy. Unfortunately, it is very hard to draw the line between this essentially political hankering and the genuine military requirement for some counter-offensive capability, certainly at tactical and possibly at operational levels.

My third plank is the attitude, so frequently and excellently expressed by General Sir John Hackett, that the aim of a defence policy must now be to avoid war, but above all to avoid nuclear war. The run-up to the Falklands conflict demonstrated once again that there is a strong and growing voice of world opinion against war as a means of settling disputes - a voice that will assuredly be amplified by several orders of magnitude by the threat of nuclear war with the prospect of damage to non-participants. There is some evidence that neither superpower is any longer deaf to this voice, in fact that both may be readier to listen to it than ex-imperial powers, or than third world nations who have less to lose. To this extent the successful conduct of the defence lies in using the available space not so much to swing the relative strengths in the defender's favour as to gain time for diplomacy. The more one looks at Soviet military postures, the more likely it appears that the Warsaw Pact will either go nuclear initially or hold back until it faces a major frustration of its initial strategic aim.[4] Strategic success for the Western defence may thus come to lie not simply in gaining time but in doing so without placing the attacker in an unduly precarious position.

There are, then, four deep-seated objections to an air-mechanised mobile defence of the kind I recently deduced by deliberately using a mainly technological approach.[5] It lies well down the 'road to absurdity', so that even superpowers with a mind for offensive action are becoming unable to afford it; for smaller nations it is organisationally out of scale too. By using mobility to match or outpace the attacker, this concept contributes to the expansion of battlefield dimensions brought about by the attacker's mobility and firepower. The exploitation of technological advance by the attacker both expands the dimensions of the battlefield and weakens the classical power of the defence. An analogous response by the defender may carry these trends to the point where the depth between Elbe and Rhine becomes of only tactical significance; and where the defender needs a relative strength so high that, in purely military terms, he should not be on the defensive at all. To these drawbacks we must now add that a mobile defensive concept tends to accelerate the tempo of operations rather than slow it down.

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4 Losik, (Marshal of Armored Forces) (ed), (the build up and operation employment of Soviet armored forces in the Second World War), Moscow, Voenizdat, 1979; Also in Babadzhenyana, A Kh (Chief Marshal of Armored Forces) (ed), Tanks and Armored Warfare, new edition, Moscow, Voennoe, Izdatel'stvo Ministerstva Oborony SSSR, 1980

5 See Simpkin, Richard E., Antitanik, An Air-mechanised response to armored threats in the 90s

Slowing The Tempo

There are, perhaps, three broad approaches to the problem of slowing the tempo of the Warsaw Pact advance. One is to use means of mobility denial not only to strengthen the tactical defence but to do just what their name implies-to increase the 'time value' of an area of given depth. The second is to make some use of all the ground within the available depth. Both these aspects need to be reconsidered in terms of gaining time for its own sake; but they will produce only differences of degree. The way to achieve a difference in kind - a reduction of the attacker's rate of advance by an order of magnitude and a corresponding increase in his response times - is evidently to force him to bring up massed infantry, dismount them and deploy them on their feet. Most readers of this journal will be only too familiar with the dramatic effect on tempo of having to clear through even a copse or a village. It is an operation that takes almost as long if there is no, or just token, opposition as if the enemy is holding the area in strength. Once this threat exists, the attacker is faced with the choice of forcing a passage with armour or clearing through with a substantial force of infantry. The first option presents the risk not only of disproportionate losses but of the few available routes becoming blocked with vehicle casualties. Thus if the level of threat is high enough to make bouncing a bad bet and the area is too broad to bypass, the attacker has no real choice but to clear through it.

However, the local gain to the defence is just one side of this coin. The other is the effect on the attacker's movement plans. I have studied in detail the chapters on movement in the two latest inspired Soviet publications, *Losik*[6] and *Babdzhenyan*[7] apart from some rather more sophisticated mathematics, they contain nothing that was not in the Camberley precis' of twenty years ago. If the Pact deploys their airborne, and/or heliborne, forces for tactical clearance of close and urban terrain then these forces will not be available for their planned operational tasks. If the Pact uses that lift to bring in

6 See Losik
7 See Babadzhenyana

A Dutch soldier of Alpha Company, 42nd Infantry Battalion, 13th Mechanized Brigade provides security during exercise Allied Spirit at the Joint Multinational Readiness Center in Hohenfels, Germany, Jan. 15, 2015. Exercise Allied Spirit includes more than 1,600 participants from Canada, Hungary, Netherlands, United Kingdom and the U.S. U.S. Army photo by Specialist Justin De Hoyos/Released

normal infantry, its specialist troops will be grounded. And if the opposition moves the infantry required forward by road, these troops can only pass the choke points at the expense of follow-up mechanised waves or logistic support. The latest known figures for artillery ammunition norms, matching the more deliberate concept of operations now favoured, imply an enormous ammunition lift. The days of the Soviet Army living off the land and captured commodities are evidently past.

These arguments suggest four elements in the defence - a frontier obstacle belt, an anvil of positional defence, a net drawn across close and urban terrain, and a hammer - plus tactical and rotary-wing air and, increasingly in its own right, artillery fire. But before exploring these further, it would be well to test the realism of this approach by examining the ground along the likely thrust lines.

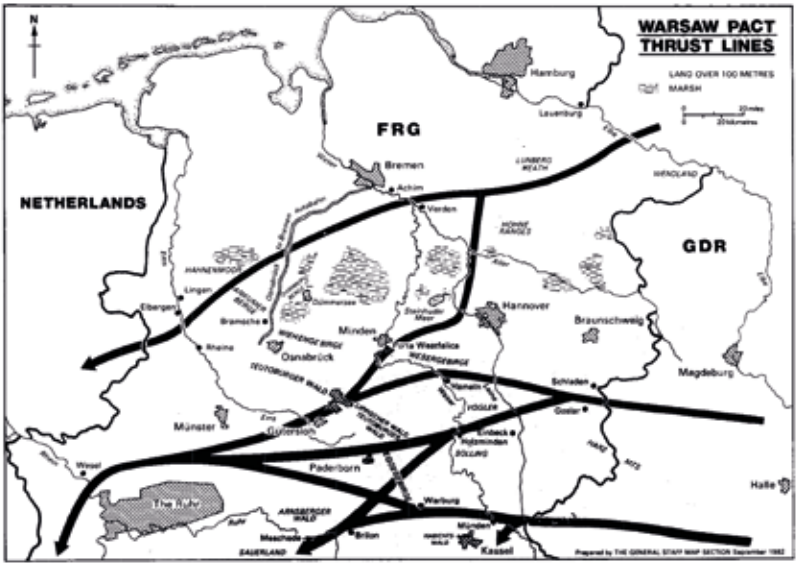

Figure 1: Warsaw Pact Thrust Lines

I shall, in fact, take the three northernmost thrust lines, the most familiar to readers and myself, as examples. But I know the southern half intimately too, and would ask the reader to accept that the situation there is analogous.

The North German Plain

The Pact has good approaches to the Elbe and owns the right bank between Lauenburg and the Wendland salient. The going on both sides of the river favours the northern

part of this sector, with debouchment on to Luneburg Heath. From there on the route is channeled by various bogs and the Aller on to the Weser between Verden and Achim. There is a southbound option across Hohne Ranges and between the Hanover conurbation and the Steinhuder Meer on to the Minden gap (Porta Westfalica), where it joins the next thrust line south. Westward, the path lies north of the bogs straddling the Dummer See, and the Dammer Berge, bypassing Osnabruck, on to the Ems between Rheine and Lingen and thence into Benelux territory.

This line forms part of the traditional route for military east-west movement, but I am not alone in questioning its importance today. Even a rapid advance along it would be too slow to reach initial strategic objectives. Prestige apart, there is little instant joy for the Pact in capturing Amsterdam or Rotterdam and the Dutch North Sea coast. It is a far cry still to Brussels; militarily this, too, is unimportant, and I find it very hard to believe that many, in Britain at least, would regard the storming of the Berlimont as an unmitigated disaster. The Channel ports proper are even further away.

Water obstacles apart, however, the only ground on this route that is of much help to the defender is the northern extremity of the Wiehengebirge (just north of Osnabruck) and beyond it, northwest of the Bramsche gap, the Ankumer Berge running into the Hahnenmoor. Even here advancing armour can go round to the north and swing down east of Lingen on to Elbergen, where the Dortmund-Ems canal and the River Ems adjoin.

Clearly neither a positional defence nor a classical delaying action, even over the whole depth, can be expected to gain enough time. Since much of the country is closer than the map suggests, an interesting option might be a defence based mainly on the 'net', seeking to stop the enemy turning south on to the Minden gap or the Rhine at Wesel, and perhaps complemented by a counter-attack on the axis of the Osnabruck/Bremen autobahn. But the only way to keep the enemy out of this area may well be a powerful air-mechanised mobile defence; and economy of force elsewhere might just make this feasible.

The Goslar Gap

The next probable thrust line to the south runs from the Halle-Magdeburg area, crossing the frontier between the Harz Mountains and the 'nose' at Schladen, from where there are two axes. One runs towards Hamlen and Gutersloh, north of the Ruhr, on to the Rhine at Wesel and thence towards Aachen. The other heads for the Weser ford at Holzminden (with other easy options further upstream) and thence astride Paderborn to join the first at Kamen. From the Holzminden area there is also a line passing roughly through Brilon and Meschede on to the easier, more plateau-like part of the Sauerland (between the higher mountains and the Ruhr industrial area) on to the Rhine astride Cologne.

This is clearly a feasible and important thrust line, offering easy debouchment, presenting no major water obstacle east of the Weser, and linking with adjacent axes on both flanks. This said, its eastern part is highly favourable to the defender. The ground

between the B6 and the Kassel-Hanover autobahn is messy. The Leine valley is difficult because of much soft going unsuspected until experienced; and getting south from the line of the autobahn to the good going of the Einbeck basin involves an uncomfortably tight turn round the out runners of the Harz. Astride the Weser, there are the dense and hilly Solling and Vogler forests to the east, and the even trickier Wesergebirge to the west. To the west again, and near enough to the Wesergebirge to be influenced by them, lie the defensively strong Eggegebirge, forming a horseshoe with the Arnsberger Wald and Briloner Hahen to the south and the Lippischer Wald and Teutoburger Wald to the north.

Stock picture of a SCUD missile launcher, at RAF Spadeadam circa 2011. The Scud is a Russian designed surface to surface missile with a range of approximately 300km carrying a 5,900kg warhead. Initially it entered service in 1962. Since then thousands have been built in Russia and abroad with large numbers being used in Afghanistan, the Gulf and various other conflicts. RAF Spadeadam attracts aircraft from the RAF, Army, Navy and NATO Forces. Photo Corporal L. P. Platfoot, Crown Copyright

The Kassel Gap

I have always regarded the Kassel gap as the key to the NATO centre. It offers the shortest route from the frontier to the Rhine; it faces Bonn, surely the Warsaw Pact's prime initial strategic objective. More important still, it divides at Munden, northeast of the Kassel conurbation, into one axis leading southwest to Frankfurt and another running west. The latter in turn divides at Warburg, just west of the Habichtswald, into a westward axis via Briton and Meschede (where it links with the southern route from the

Goslar Gap) and thence to the northern end of the Rhine Gorge; and another northwest, on the line of the autobahn between the Briloner Hohen and the Eggegebirge, on to the line north of the Ruhr to Wesel. Much of the terrain on all these routes has considerable defensive strength; but it is superb tank country under any weather conditions.

At the risk of boring the reader by asking him to tread familiar ground, I hope that I have established two points. Even within the northern half of the NATO centre, there are three different types of terrain, which call for different defensive postures, more precisely for a concept, which permits selection from a wide spectrum of postures. Second, all-round or at least wide-arc defence is needed, not just for the tactical reason of guarding against envelopment or bypassing, but for the operational one of inhibiting lateral and diagonal movements aimed at linking or switching thrust lines-a ploy still as strongly favoured by the Soviets as it was in the 'Great Patriotic War'.[8]

A Possible Outline Concept

The first element in a defence aimed at gaining time must logically be the checking of the enemy on the frontier. By the same token, he must not be allowed either free play across ground favourable to him or an easy passage through close country and built-up areas. Forest, bog and conurbation must be used to slow him down, thin him down and hamper his reinforcement before he encounters the main defence. This defence must be broad enough to block the thrust line on which it lies, strong enough to hold at least one major deliberate attack, and, if possible, deep enough to force the attacker to commit his third wave well before he reaches 'operational depth'.[9]

Within the broad concept of slowing tempo and lowering intensity - or at least confining high intensity operations geographically - the role of the counter-stroke is tactical rather than operational. An operational counter-stroke that fails will result in the destruction of the forces used as the 'hammer'; one which succeeds may well push the opposition over the chemical or even the nuclear threshold. On the other hand the classical counter-attack aimed at restoring a defensive position is not enough. The aim should be to reinforce defensive success by a counter-thrust in front of the anvil after an attack has been repulsed, catching the enemy off balance between the anvil and the 'net'; or better still, if the level of risk and the ground permit, by a hook onto his axis beyond the net area. The natural waiting position for the hammer force is in depth behind the anvil astride a good route and preferably a communications node. It is thus poised for a counter-penetration role if the anvil is pierced or turned; in this role the hammer force proper could probably be reinforced by infantry initially deployed in the net.

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8 See Losik; also in Radzievskii, A I, Offensive Armored Operations, Moscow, Voennoe Izdatel'stvo Ministerstva Oborony SSSR, 1977

9 Ibid

A battery of six Bundeswehr M109 155mm Self Propelled Guns lined up for inspection. At the end of the row can be seen two M113 Armoured Personnel Carriers used by the battery HQ section. © Crown copyright. IWM (CT 683)

Divergence From Allied Concepts

One problem about adopting a flexible concept of operations wedded to the realities of the ground, as opposed to a preconceived one based on dogma, is the inevitable widening of divergences between the major Allies. After something of a mystical transfiguration of 'mobile defence' into General Livesey's 'active defence', the United States has moved on through the Richardson 'extended battlefield' to the Starry (Capital 'S') 'air/land battle'. This doctrine might be summed up as an anvil with a dual operational hammer - an air-mechanised manoeuvre force on the one hand and fixed-wing tactical air on the other. The philosophy on which it is based reflects the ideological aggressiveness and readiness to fight a nuclear war in Europe that characterise current United States policy. It patently aims at obtaining a military decision rather than re-opening the door to diplomacy. On the operational level the concept seems to be geared to the creation of interdiction and attrition targets for tactical air, a bias that has three drawbacks. It may force the main ground defence into positions that do not make the fullest use of ground; it leans heavily on USAF assessments of the air situation, which lie well on the optimistic side of the mass centre of NATO and independent opinion; and it ignores the view widely held among aviators that not even Warsaw Pact pilots will care to overfly the Soviet tactical air defence.

Meanwhile, the Bundeswehr, while it preaches pre-emptive armoured thrusts to the Oder and the holding of a good deal of amour and the bulk of rotary-wing capability in army operational reserve, is increasingly constrained to practice a linear positional defence, dangerously far forward, with most of its reserves in counter-penetration and/or counter-attack roles at tactical level. The German situation is not an enviable one. For a

long time analysts and peace campaigners alike have been stressing the growing intensity of modern conflict, and recent events in the Falklands and the Lebanon have provided indisputable evidence of this. Such evidence cannot have escaped the FRG's authorities, or her electorate. One cannot but wonder how long a democratically elected West German government can uphold that country's present foreign policy or sustain a realistic military posture within it, as opposed to a 'thin grey line'.

In the shorter term, it is fascinating, if alarming, how deep-seated divergences in the foreign policies of the United States, Britain and the Continental members of NATO and the EEC are producing new and equally divergent trends in military thinking. The convergence of operational and tactical concepts so painfully achieved in the seventies has been reversed by the turbulence of the eighties. Once again BAOR will be faced with a compromise between fighting the battle it believes it can win and one, which will retain the essential minimum of coherence with its Allies. Having highlighted this problem, I shall switch the focus back to the 'best battle' from the military point of view.

Figure 2: Elements of the concept

Frontier Obstacle Zone

For thirty years I have wondered why a thorough-going permanent obstacle zone, in a state allowing immediate arming, has never been established along the Iron Curtain from Liibeck to Passau. Now that efforts to steer clear of the 'road to absurdity' are making 'fortifications' a printable word again, one ventures to moot this question. In fact there seems little advantage in creating manned fortifications, or even in covering

the zone with direct fire, The need is for meticulous electronic surveillance backed up by visual observation, with a view to calling down indirect fire and fixed and rotary wing air support. As we shall see, the provision and protection of these OPs matches the notion of the 'net'.

The only conceivable case against having an obstacle zone of this kind rests on German political considerations. Given remote and instantaneous arming and the maintenance of an element of covering force, artillery and air at high readiness, a physical obstruction of this kind would provide the greatest possible deterrent to the surprise attack over an NBC carpet favoured by one Soviet school of thought. In a permanent obstacle the use of sophisticated attack mechanisms and anti-clearance devices would be both feasible and cost-effective. Against the full-scale attack of the standard scenario and recent variants on it, this zone might achieve better than twelve hours of delay. More important still, it would impede debouchment from bridgeheads across the Elbe and from the relatively narrow 'gaps' to the south, thus creating targets; produce a concertina effect reaching back down the advance routes to the known choke points, creating more targets; and, over a rather longer period, impose a more enduring constraint on logistic movement. These advantages hold for any defensive concept; they would be enhanced by a concept of which they formed a coherent part.

A Bulgarian soldier with the 61st Mechanized Infantry Brigade calls out enemy movement during a decisive action training environment exercise at the Joint Multinational Readiness Center in Hohenfels, Germany, Oct. 25, 2012, during Saber Junction 2012. U.S. Army photo by Sgt. Paul Sale/Released

The Anvil

If one is serious about gaining time while ceding a minimum of depth, one is forced to think in terms of a positional infantry defence from prepared positions on the strongest possible ground, with traditional artillery support and anti-tank support from artillery, tank destroyers armed with guns and guided weapons, and a substantial anti-tank helicopter force. If troop density is to be high enough to withstand conventional attack, nuclear attack must be accepted as a calculated risk; all the indications are that the Pact will go nuclear either initially or in extremis. On balance, the chemical threat appears to be considerably easier to cope with in positional warfare than it is in mobile operations. In analyses I have done elsewhere I suggest that an infantry anvil of this kind can hold only about one third of the frontage covered by an air-mechanised anvil of similar strength in men; but against this the positional concept should offer greater endurance and thus require less back-up in depth.

This is really the nub of the argument. Given a purely defensive role, a piece of territory of fixed size and shape, a certain number of men and a ceiling on equipment cost, which approach can gain more time? While the three main elements of this concept (anvil, hammer and net) are essentially complementary, their relative merits evidently depend on the ground.

Fundamentally, the infantry anvil (as opposed to the air-mechanised anvil, which can also serve as a hammer) needs good defensive ground in the classical sense. But it needs rather more than this. With the rifle (or machine carbine), machine-gun and rocket launcher as the primary direct fire weapons, the length of close-in fields of fire and the relationship of forward positions to close artillery DFs has changed little since the Second World War. But these deliberately limited fields of fire must be combined with fields of observation and fire of an order of magnitude greater for surveillance systems and the primary anti-armour weapon systems. Beyond these longer fields again, but close enough to influence the main defence, there should be a stretch of bad tank country in which the 'net' can operate. Even more important than deep frontal protection is the need to avoid being bypassed or enveloped. The main position must, in effect, block a tactical defile. This may either be a topographical defile, such as the gap between the Eggegebirge and the Briloner Hiihen, or or the converse: high, open ground between two steep-sided wooded valleys such as one finds in the Sauerland or the Black Forest. The point is that the net, like a more conventional screen of light forces, must be able to seal the flanks of the main position as well as covering its front. We shall see that this is doubly important because it also provides the net with a means of withdrawal and redeployment.

The Hammer

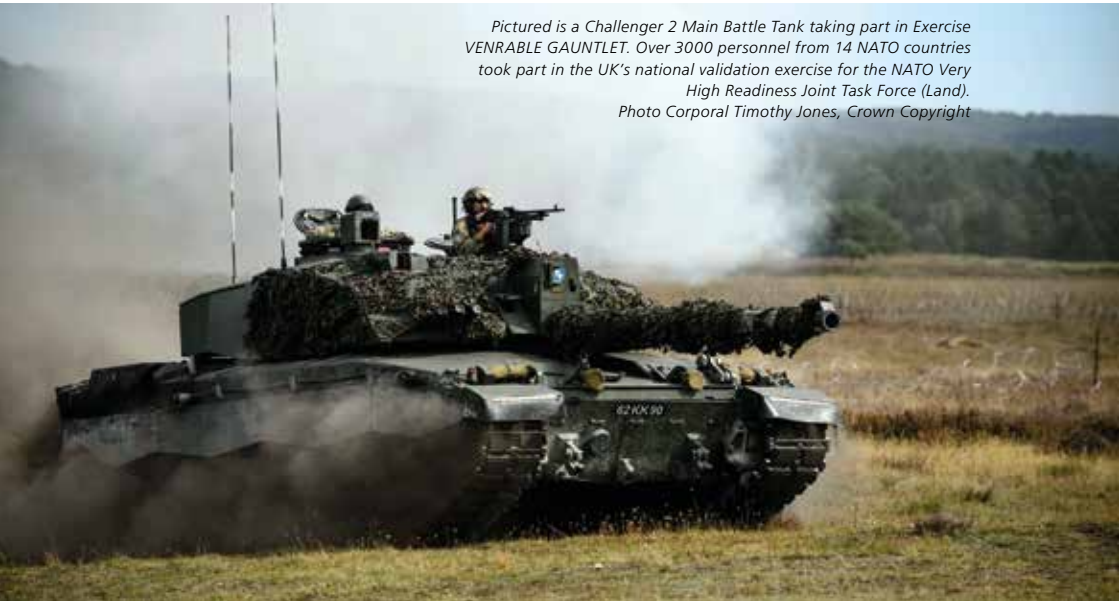
I shall say little about the hammer, because its roles and composition are classical. The roles are to pass through or round the main position and attack the enemy either in the

gap between this and the forward net area or, at greater risk for higher return, beyond this area. The hammer should not be frittered away by regiments or squadrons in limited counter-attacks to restore defensive positions; the positional force must, and in fact can, contain enough armour for this. Similarly the hammer's minimum composition is the classical armoured brigade with the addition of a rotary-wing element and mobile air defence, both permanently assigned.

Apart from, and even more important than, the nature of its main AFVs (of which more below), the crunch point about this force is the proportion of infantry in it. No-one will, I think, question the need for an I to 3 ratio of 'in-house infantry';[10] the argument lies between this and a balanced force. For reasons I have flogged to death elsewhere, I remain absolutely convinced that, in general terms, a balanced amour-infantry force is theoretically more powerful than any other combination; but I am equally convinced that such a force in turn requires to be balanced by an equal and separate force of dismounted infantry. Within the known constraints and in view of the need to provide men for the net, a classical armoured brigade structure is probably acceptable provided first that its role is tactical, not operational, and second that it is operating within easy reach of back-up from infantry formations.

Ability to launch the hammer blow depends on the anvil holding. As mentioned earlier, the secondary role of the armoured brigade will inevitably be counter-penetration if the anvil battle goes badly. It is woefully short of infantry for this task. But there would be reasonable hope of the forward 'net' troops joining the armour in time to form a regiment/battalion/motor company group as a mini-anvil or pivot round which the rest of the armour could operate.

10 See Simpkin, Richard E, Mechanised Infantry



Pictured is a Challenger 2 Main Battle Tank taking part in Exercise VENRABLE GAUNTLET. Over 3000 personnel from 14 NATO countries took part in the UK's national validation exercise for the NATO Very High Readiness Joint Task Force (Land). Photo Corporal Timothy Jones, Crown Copyright

The Net

Theoretically again, there seems to be little evidence that any compromise between full air-mechanisation on the one hand and a mainly quasi-guerilla concept on the other is preferable to either extreme or that, in defence, the quasi-guerilla solution is not the correct one. However, political, economic and tribal realities - notably the need to fight in somebody else's country - both impose compromise and go a long way towards determining the scope for it. In terms of gaining time, the essential complement to the anvil and hammer described earlier is a means of getting the best out of terrain that is unfavourable either to the defence, or to the attacker and defender alike. This element I have called the 'net.'

I see it as consisting of infantry on manpack scales with, attached down to platoon level, forward observation and mobility denial parties. Two factors dictate that the platoon should be the key unit here. One is simply the troops likely to be available for this role and the ground to be covered. The second is that only in the way can one get away from the notion of 'holding ground'. The aim is to inflict delay and casualties on the enemy to the point where he is forced to clear through the area with dismounted infantry. There are perhaps four means of achieving this aim:

- *Calling down artillery fire and fixed and rotary-wing air attack*
- *Using engineer techniques (in the simpler of which this infantry must be trained) to block, mine and booby-trap minor defiles such as forest rides*
- *Ambushes, in conjunction with both fire support and mobility denial, at communications nodes or critical defiles*
- *Tank hunting by small mobile parties equipped with both anti-armour and man-killing weapons.*

A platoon reinforced by observation and firing parties could find one ambush (headquarters plus one section); six three-man tank-hunting parties; and protection for a separate OP if needed. Each small party must have a radio, to receive warning of fire or an air strike being called down. Groups so small will have no option but to hit and run. An average density of one element per two square kilometres or two map squares looks about right and gives a platoon sound depth on, say, a two kilometre frontage. Larger parties would not only be more conspicuous; they would inevitably become over-committed and be overwhelmed. If each ambush accounted for, say, a motor rifle platoon and each rank-hunting party for one tank, the effect on the battle would be rather dramatic. In fact, given proper training and equipment, tank-hunting parties should do considerably better within any one area; both they and the ambush force should mostly live to fight again. The clue to this whole business lies in attitude of mind and training. Junior officers must have the character, skill and knowledge to take sound decisions; specialist NCOs must perform tasks traditionally reserved for officers; and above all men

must be trained to operate clandestinely in small groups with complete confidence, and if needs be to survive, evade and escape on their own.

Those who favour the net concept are understandably pre-occupied with the problem of the redeployment of these forces, particularly their operational redeployment. It may help to narrow this problem down a little. There is no point in deploying a net where it is unlikely to encounter the enemy and where its operations do not form a part of a coherent defence. While the Ardennes lesson must not be forgotten, detailed coverage of unlikely and potentially unfruitful approaches, as of urban areas, is essentially a job for the locals in the shape of some kind of militia. Given this restriction, a net force is likely to 'fulfil its norm' in its initial area. Most of the men may well escape, but the immediate availability of the force for redeployment is a bonus.

I looked at the idea of providing a light APC as an escape vehicle in *Mechanized Infantry*[11] and remain convinced that this is a pitfall. Provided that numbers are kept down, recovery by helicopter from a pick-up point in really difficult country just clear of the thrust line should often be possible, particularly in wooded and broken hilly terrain such as the Wesergebirge.

But provided that enough troops are allocated to the net and they are deployed at suitably low density, the net can become a network. The small parties would be isolated in detail but within an hour or two's march of other net forces. For this reason as well as the need for a special modus operandi, I do not see these net forces as a kind of fighting patrol or raiding party sent out by forward units of the main positional force. I see them as separate units, or indeed formations, linked to the anvil and the hammer at whatever level coordinates the defence - probably divisional. Suppose, for instance, that one has two layers of an anvil position, and a net on the shoulders of the defile to either side of it. Then the foremost layer extricates itself into the second forward layer and thence to one or both flanks of the anvil, while the second layer, which may stay in position rather longer after contact, breaks sideways clear of the thrust line and thence to the flank nets. From there it can be extricated and redeployed by vehicle or helicopter.

Application of Concept to Ground

We can now consider these three movable elements - anvil, hammer and net - in terms ofthe three thrust lines depicted earlier. The northern one is just about as awkward under this concept as it is under any other. The risk of the enemy breaking through and away is high. On the arguments I have been deploying, the best way to slow the enemy down would be the quasi-guerilla technique backed by a small hammer to regain ground - and thus time - if opportunity offered. The only smell of an anvil position is the Bramsche defile, with forward and flank nets in the Dammerberge, Ankumer Berge and northern end of the Wiehengebirge.

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11 See Simpkin, Richard E.

The missile pod of an M270 227 mm multiple launch rocket system from B Battery, 1st Battalion, 92nd Field Artillery, is raised into the firing position during SPEARPOINT '84, a phase of Exercise REFORGER '84. U.S. Department of Defense Photo, SSG Richard Hart, Released

By contrast the other two lines are naturals for the concept I have outlined (which is not surprising, since I modelled it on them). A frontier obstacle zone extending almost to the Salzgitter Zweigkanal and a net operation in the Leine valley would link back to another in the Vogler and Soiling forests, with a further layer west of the river in the Wesergebirge southward to the Reinhardswald. The Wesergebirge net would also provide flank cover to an anvil position southeast of Detmold, while a further net in the Eggegebirge would close the Bad Driburg pass and link to another anvil on the gap west of Warburg. I will leave the reader to locate the analogous layouts to close the 'old autobahn' gap between Bielefeld and Detmold, to position the hammers within the horseshoe, and to envisage the lie-back position astride Meschede.

Organisation and Strength

Reaction to what I have written in these columns[12] and elsewhere about the regimental system suggests that, despite acceptance of versatility, there is a kind of philosophical link between role and regimental tradition. When roles have to change, they should as far as possible be redefined in terms of some element in the regiment's or arm's history. I have tried to respect this constraint in what follows:

- ***Divisional Organisation:*** *As I found in Anti-Tank the introduction of an additional element (in this case the net) leads to a conflict between unwieldiness and coherent control. Short of turning enamel into hair by making BAOR an army of two corps with specialised divisions,*

12 Simpkin, Richard, A Farewell to Arms, British Army Review 68, August 1981, 11-14

the solution seems to be a division of four brigades--one armoured (hammer), one light (net) and two infantry (anvil) (Fig 3). With suitable support, this structure enables a division to find a complete defensive system of the pattern described. This leaves some flexibility in that the light brigade could be used as a depth or counter-attack formation; and in terrain like that of the northern thrust line an infantry brigade less its support weapons and vehicles could be used in a net role.

- ***Armour:*** *While there is a role for light armoured regiments outside the NATO centre, I believe we must now accept that medium armoured reconnaissance as such has been supplanted, on the one hand by the helicopter and on the other by electronic devices and specially trained and equipped men on their feet. The concept described calls for something very like the present armoured regiment in the armoured brigade and for a tank destroyer squadron in the infantry brigade, In a division containing only two 'anvil brigades', this need could be met by a 'divisional regiment RAC' of two tank destroyer squadrons and one armoured squadron for the support of counter-attacks. The tanks for this squadron would not need the same mobility as those in the armoured brigades.*
- ***Divisional Artillery:*** *There must be a divisional air defence regiment of four batteries, one of them suitably equipped to support the armoured brigade and another allocated to the protection of divisional headquarters and logistic units. To my mind the anti-tank regiment should have two ATGW batteries and a mobility denial rocket battery. The armoured brigade evidently needs a self-propelled medium regiment in direct support. To contain the number of major units at four, I believe it would be acceptable to add just one medium regiment and equip the whole of the battalion's support weapons company with mortars (see below).*
- ***Engineers:*** *A four-brigade division requires an engineer regiment of five squadrons-armoured, light (for the net role), two field, and field park. The light squadrons would parallel commando squadrons as a recruitment and selection incentive for the Sappers.*
- ***Infantry:*** *The concept calls for not two but three types of battalion. This is an issue, which must not be fudged; it need not be, for at least the two types that fight dismounted are paralleled by requirements outside the NATO centre. It would seem to me (admittedly as an outsider) entirely natural for the Foot Guards and the line infantry to provide the standard infantry battalions of the anvil. These battalions*

would have a support weapons company consisting entirely of mortars (with an anti-armour capability, see below) and be trained and scaled for a minimal APC such as FV4333. In no sense however would they be mechanized battalions.

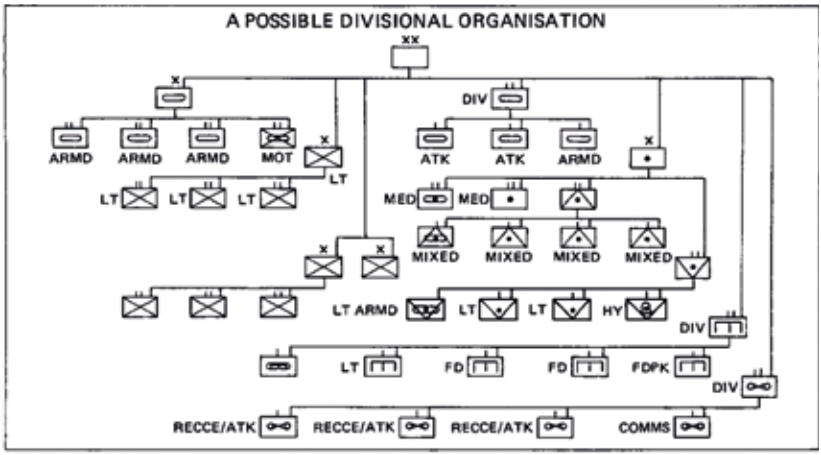

Figure 3 A Possible Divisional Organisation

Just as naturally, I should have thought, the Light Division, plus a complete brigade of Gurkhas (and the Parachute Brigade if available) would find the light battalions of the net. By the same token, spearheaded by the splendid tradition of the Royal Green Jackets, the Light Division would find the motor battalions (let us use this honourable name) for the armoured brigades of BAOR and any light armoured brigade established for the intervention role. The Gurkhas and the Paras would have enough variety anyway; and the Light Division could be given the variety essential in a professional army by trickle postings between motor and light battalions. The organisation of these light battalions requires expert study; my layman's feel is that the manpower of the support weapons company should go to the rifle platoons, enabling their headquarters to hive off an OP protection party, and each section to have a battle strength of nine (three patrols of three).

It is most striking how abandonment of the fundamentally unsound concept of 'mechanised infantry' slots infantry traditions at a stroke into the context of the future battle.

- ***Rotary Wing Air:*** *While one of the major factors in this discussion is the need to steer clear of the 'road to absurdity', the Falklands operation has established the helicopter once and for all as the workhorse of the modern battlefield.*

A rotary-wing scout and attack capability organic at the highest tactical level (here division) is the only way of ensuring the rapid detection of enemy thrusts and instant shock action against them. Similarly the ability to move men, equipment or key commodities in rotary-wing tempo may make the difference between success and failure. Cost will determine numbers of machines and thus level of unit, but in principle each armoured and infantry brigade needs a scout/attack sub-unit. And the division needs a transport sub-unit capable of lifting the essential combat manpower of a battalion at minimum scales. This should contain a few light communications machines for the insertion and extrication of small parties, and, if possible, a few machines of Chinook lift. Sadly, economy dictates that the versatile operational rotary-wing capability should be at corps level. One thus arrives at, say, a 'divisional regiment AAC' with three scout/attack squadrons and one communications/transport squadron. Even if the sub-units are small, the senior headquarters must be capable both of handling any rotary-wing troops allocated, and of coordinating all aspects of fixed-wing support.

- ***Strength and Peacetime Location:*** *Purely as a staff check on feasibility in terms of manpower and manpower costs, I roughed out a plan based on three divisions, each of twenty organic major combat units, excluding army/corps troops and services. It came out like this and can speak for itself.*

Table 1: Rough strength and location plan (major divisional combat units only)

Type	**Number**		
	BOAR	UK Assigned	Total
Armoured Regiments	9		9
Divisional Regiments RAC	2	1[13]	3
Artillery Regts (medium, Anti-tank, AD)	9 [14]	3[15]	12
Engineer Regiments	2	1	3
Mot Battalions	3		3
Light Battalions	6	3	9
Standard Battalions	12	6	18
(Total Infantry)	(15)	(15)	(30)
Divisional Regiments AAC	2	1	3
Total	**39**	**21**	**60**

13 Duplicate major equipments in BAOR with Division's armoured brigade
14 One SP AD Battery in BAOR with third division's armoured brigade
15 Could be TA

Equipment

There is no space here to have the equipment argument, and I believe a considerable tide of opinion is gathering force and coherence on this topic.

1. ***Armour:*** *Existing vehicles with predictable improvements will meet any foreseeable requirements for light armour; there appears to be a growing need for extended Spartan (FV4333) as a basic APC for standard infantry battalions and as the parent vehicle of a workhorse family. As the Chief of Defence Staff observed[16], the half-fleet introduction of Challenger keeps our options open for the nineties, particularly as Challenger should do very well in the longer term both as a tank destroyer and as an infantry-support tank for the 'divisional regiments RAC' suggested here. The requirement for highly mobile armoured brigades and a strategically mobile air-mechanised intervention force cry out for a Cl40 tank. By the nineties this should be feasible,[17] though the electronics will be appallingly expensive. On the other hand the real net saving achieved by going even to Cl40, let alone to Cl18 [18], instead of CI60 and a three-man crew (in place of four) is 55 to 60%; and the electronics have substantial spin-off for helicopters, surface-to-surface surveillance/artillery observation, and sighting for other weapon systems. By contrast MCV80--a dubious project even with the existing structure of BAOR-goes way beyond the needs of anybody bar the three motor battalions of this concept. Given a Cl 40 tank, it could well be cheaper in terms of real system cost, as well as operationally and logistically preferable, to base a small number of infantry fighting vehicles on this.*
2. ***ATGW***: *Evolutionary improvement is acceptable, except for warheads. Compound armour calls for ATGW to have larger warheads if they will carry them and more efficacious ones if they will not.*
3. ***Artillery:*** *Copperhead (the US 155mm terminally guided HEAT shell) is very expensive and ties down guns needed for other tasks. I remain convinced of the requirement for a rocket system carrying minelets (and possibly later 'smart' bomblets or mini-missiles) in a free-flight mode, and perhaps providing a successor ATGW with a ballistic trajectory.[19] Medium guns remain indispensable* both in face of and in

16 See Bramell, General Sir Edwin

17 Simpkin, Richard E., Armour Magazine, Closing the Survivability Gap, Nov/Dec 81, 19-24, Sweden Points the Way, July/August 82, 00-00

18 Simpkin, Richard E., The light tank - a viable proposal?, Military Technology 10/1982, Bonn, Monch Publishing Group

19 See Simpkin, Richard E, Anti-tank

Camouflaged netting covers a Roland II surface-to-air-missile system during Exercise REFORGER '85. U.S. Department of Defense Photo, Released

support of mechanised forces; but the most interesting future seems to lie with mortars (below).

4. ***Air Defence:*** *The Falklands operation must have opened even the most obscurantist eyes to the imminence, weight and lethality of the fixed-wing air threat. The British just as much as any other army needs a three-element tactical air deface--Blowpipe, Rapier (including tracked Rapier) and a gun with on-mounting radars bridging the two.*
5. ***Infantry Anti-armour Weapons:*** *Mortars seem destined to play an increasing role in close support. They now have a major anti-armour capability at the 120mm caliber, which the infantry of some armies seem happy with. It remains to be seen whether this effect can be attained at handier calibres. This same technical trend bears heavily on the light anti-tank weapon (LAW) too; but any such weapon used by light battalions in the net must have the physical characteristics of the RPG7V rather than Carl Gustav.*
6. ***Helicopters:*** *Rotary-wing machines and their pilots are at once so important and so expensive that I suggest there is only one way to approach the problem-to decide on the true essential minimum and then set about providing that as a matter of priority. I believe it will remain possible to get away with three classes of helicopter-armed scout/communications (which must be Army-flown); utility (Sea King-sized) capable of filling tactical troop transport/lift, anti-tank, 'gunship' and assault roles; and a Chinook-class medium lift machine.*

There appear, then, to be four fields in which development for the nineties should now be concentrated. As inseparable top priorities come a radical new design of tank, anti-armour mortar ammunition and helicopters. Behind them, but ahead of everything else, comes

an anti-armour rocket artillery system, initially as an area weapon for mobility denial and harassment, perhaps later as a pinpoint weapon for the destruction of armoured vehicles.

Conclusion

The first strategic objectives for a Warsaw Pact thrust must be Bonn and the Channel Ports. Belgium, the Netherlands and the North Sea Ports are of political rather than military significance. By the same token, on the advance route over the North German Plain, it may well take an air-mechanised defender militarily strong enough for the offensive to hold the potential weight of a Warsaw Pact thrust. These two considerations suggest a lie-back defence aimed at stopping the enemy swinging south on to the Minden Gap, the Rhine at Wesel or, further on, the Channel ports proper. Further south, the defence best calculated to gain time without impelling the Pact to go nuclear, would appear to be a frontier obstacle zone with a coherent three-element defence operating on chosen ground, possibly at considerable depth, behind it.

These three elements are the light infantry net (in classical terms a forward and flank screen), aimed at forcing the Pact to bring up and dismount massed infantry; the anvil based on standard infantry in a positional defence posture; and a powerful, highly mobile air-mechanised hammer, which must probably confine itself to counter-strokes at tactical level.

This concept and the related force structure could well be the most cost-effective for a force of limited size based on the FRG and facing the predictable Warsaw Pact air mechanised threat of the nineties with the task of gaining time. This is not to say that they surpass or even equal in general fighting power or flexibility the balanced air-mechanised manoeuvre force which it would be militarily and technologically possible to develop from the existing concept and structure of BAOR.

The United Kingdom's Bravo Company of the 3rd Mercian line-up Warrior Infantry Fighting Vehicle's at Grafenwoehr Training Area's calibration range. Forces from the United Kingdom were among 19 multinational nations training as part of NATO's Saber Junction 2012. During U.S. U.S. Army photo by Specialist Franklin R. Moore/ Released

Port beam view of the Soviet Kiev class carrier MINSK (CVHG) underway with four Forger VTOL Yak-38 aircraft on its flight deck. U.S. Navy Photo, Wikimedia, Released

Soviet Power: No Easy Answer

This article by Captain C.J.G. Thwaites 4/7th Royal Dragoon Guards was originally published in BAR 76, April 1984. It also won First Prize in The Bertrand Stewart prize Essay Competition 1983.

Some Western political commentators have said that the major Soviet achievement since 1945 has been to turn the Soviet Union into a military superpower. They have generally qualified this statement by pointing out that, great though Soviet military power is; it is based on an inherently inefficient economy and a sterile political system, which cannot continue to fulfil the aspirations of its people. The consequent temptation is to exploit

these two basic weaknesses. While avoiding confrontation at the military level, they argue that Soviet power could be undermined by the Western Alliance, who should increasingly challenge the political and economic authority of the Kremlin. As its domestic authority crumbles, the argument concludes, so its defence and foreign policy options will be reduced.

Such exploitation has been tried in the past and has failed. This essay will examine the history of those attempts to capitalise from the two apparent basic weaknesses of the Soviet Union, and demonstrate how the Kremlin has successfully countered them. It will then examine why the very nature of the Soviet State makes it difficult to challenge Soviet influence in any one sphere without, sooner or later, being confronted by Soviet military power. Finally the essay will conclude that, impotent though the Western Alliance might seem in exploiting these weaknesses, changes have been forced on the Soviet Union in the past, and greater changes, resulting mainly from the social evolution of its people, are likely to take place in the future.

The Western Alliance has tried to exploit four perceived political weaknesses of the Soviet Union, all of which have been countered with some measure of success.

Perhaps the most obvious means of reducing the power of the Soviet Union is to exploit its disadvantageous geo-political position. Since 1945 and as a continental country surrounded by numerous anti-Communist states, the Soviet Union has been the target of a continuous Western encirclement policy. The most dramatic example of an attempt to influence Soviet power by a relationship aimed at increasing its feeling of encirclement came about with the Sino-US political rapprochement in 1974. In the words of the American commentator William G Hyland:

> *The Nixon Administration now began the intricate exercise of improving relations with China, in order to push the Soviet Union towards a more accommodating policy with the United States . . . It sought to devise a framework for the conduct of Soviet-American relations and thus encourage growing Soviet power to adapt to the existing international system.*[1]

At first the improved relationship with China had the desired effect on the Kremlin, forcing a reappraisal of Soviet-US confrontation. But the use of third powers as allies of the Western Alliance in an encirclement policy has not always been successful. In his first act of statesmanship on becoming First Secretary of the Communist Party of the Soviet Union (CPSU), Mr Andropov made overtures to the Chinese to improve relations between Peking and Moscow. Although his success in this field is hard to measure, it is clear that, on her own account, China has retreated from her earlier friendship with the United States. The complete wooing of the Chinese from the anti-Soviet camp would be as serious a blow to Western encirclement policy as the fall of the Shah in 1979.

1 *Hyland, William G., Soviet/American Relations: A New Cold War?, pp 21-22*

The extra forty divisions, which theoretically could be released from the Chinese front is evidence of that. Moreover, attempted geo-political exploitation has not been the sole preserve of the Western Alliance. The Soviet Union has fully exploited its relationship with Cuba to the consternation of the United States. Current Soviet policy in Central America appears to confirm that the Kremlin, just as the West, sees the value of creating 'backyard uncertainties'. Furthermore, it could be argued that the Western system of alliances and agreements that form the backbone of the encirclement concept are mainly concerned with maintaining the military status quo between West and East. Experience of the last twenty years suggests that the allies of the Soviet Union, on the other hand, are revisionist governments or revolutionary movements. This phenomenon is, perhaps, a potentially more worrying challenge to the Western Allies than the uncertain encirclement policy is to the Kremlin.

A U.S. Navy Grumman F-14A Tomcat intercepts a Soviet Tupolev Tu-95RTs (Razvedchik Tseleukazatel) - Nato reporting name Bear D - reconnaissance-bomber over the Pacific Ocean on 21 November 1984. U.S. Department of Defence, Wikimedia, released

The second political weakness is seen to be Soviet vulnerability to political change, especially in the area of increased democratic rights and privileges. If Soviet citizens were to be exposed to Western democratic influences by means of cultural and political exchanges, so:

> *The Kremlin might be persuaded, in return of Western concessions, to pay lip service to human rights, to tolerance to free speech, to freedom and liberty of peoples to move about within their own countries and*

> *across frontiers unhindered. Once they admitted the value of such rights, might they not also gradually be persuaded into permitting greater freedom in Eastern Europe and the Soviet Union itself.*[2]

This process was expected to lead naturally to the democratising of the Soviet Union, and the debunking of the CPSU from its central position. The most concerted attempt by the Western Alliance to force the issue of human rights on the Soviet Union was at Helsinki in July 1973 and was enshrined in the Final Act. But by its very nature:

> *The present Soviet ... political system could not survive any great reduction in the secrecy surrounding its activities, any far-reaching emphasis on human rights, or indeed any extensive opening of Soviet society to the world outside. Thus) the Russians immediately set out to prevent the Final Act from being used to undermine socialist 'unity'. As Mr Brezhnev put it: 'no, the socialist system is not a closed society', we are open to everything that is truthful and honest ... but our doors will always be closed to publications propagandising war, violence, racism and hatred'.*[3]

Some measure of the Soviet attitude to the issue of human rights can be gleaned from their reaction to differing circumstances. In the mid-1970s the Kremlin was anxious to obtain Western technology. To secure it they relaxed religious persecution in and emigration from the USSR. By the early 1980s, threatened by the crisis in Poland, they defied both the spirit and letter of the Final Act by jamming BBC World Service broadcasts to the Soviet Union. Moreover, all attempts by the West to prevail upon the Soviet Union to encourage the Polish military regime to recognise human rights in that country failed. The evidence suggests that Western attempts to democratise the Soviet Union have failed.

Observers then point to the instability of Soviet satellites as an area of potential political weakness. It appears to the West that an alliance, in which loyalty is maintained by the threat and use of force, must be strategically suspect and thus ripe for political subversion. In three of its allies, Hungary, Czechoslovakia and Afghanistan, the Red Army has reinstalled communist rule by force. In a fourth, Poland, the threat of its use was decisive in forcing the Polish military leadership to repress the free trade unions. It is sometimes felt that if the edifice can be made to crack in any one aspect, the whole structure will break up eventually.

There are a number of reasons why a monolithic break-up might not take place. First, the West finds it technically very hard to subvert Eastern European satellites. At the field level, organizations such as the Abteilung and STB (the East German and Czechoslovakian

2 *Towle, Philip, Arms Control and East-West Relations, p 35*
3 *Ibid, p 38*

counter-intelligence services) supported by the 11th Department of the KGB's First Chief Directorate, are effective in breaking up dissident groups. Notably they are particularly ruthless if: 'internal counter revolution is supported by imperial subversive powers.[4]'

At the international level, 'white' propaganda from the Western sponsored BBC World Service, Radio Free Europe and Radio Liberty may have a transient effect on a country's expectations at a time of crisis, but there is no evidence that such mouthpieces make any lasting dent in the national morale of the target state.

Second, Eastern European countries themselves resist exploitation by the Western Alliance. Those countries that have attempted 'renewal' have, with the exception of the last desperate days of the Budapest uprising in 1956, generally distanced themselves from Western contact. They have been at pains to demonstrate that the liberalisation process has been an internal social development. For example, in his celebrated tour of Western capitals from Tokyo to Paris in June 1981, Lech Walesa repeatedly warned the West not to interfere in the domestic politics of Poland.

Even if a Western attempt to crack the edifice of Eastern bloc unity were to be supported by one of the satellite countries, such a concerted move would inevitably strike the bedrock of the Brezhnev Doctrine. An article in Pravda in September 1968 explained the doctrine as follows:

> *Every Communist Party is responsible not only to its own people but also to all socialist countries and to the entire Communist movement. Whoever forgets this in placing sole emphasis on the autonomy and independence of Communist Parties lapses into one sidedness, shirking his internationalist obligations . . .The sovereignty of individual socialist countries cannot be counter-posed to the interest of world socialism and the world revolutionary movement.*[5]

This doctrine provides a theoretical justification for the Soviet Union to intervene in socialist countries, by threat or use of force. In reality such a doctrine has existed throughout the thirty-eight years since 1945. No Eastern bloc country has successfully changed its allegiance as a result of Western pressure.

The final area in which Soviet political weaknesses are seen as ready for exploitation is in the Third World. Soviet foreign policy set-backs in the Third World are generally considered to be the result either of the bankruptcy of its socialist cause, its inability to give large-scale economic aid or the bungling of its diplomats. There are examples of these set-backs being to the eventual advantage of the Western Alliance. Soviet advisors have been expelled from Egypt, Iraq, Somalia and China, to be replaced by greater

4 Letter sent by Central Committee of the CPSU to Central Committee of the Polish Workers Party, 5h June 1981
5 Pravda, 26th September 1968

A right front view of a Soviet-built T-62 main battle tank. Photo U.S. Department of Defence, Wikimedia, Released

Western influence. Moreover, the Third World climate of opinion has become much cooler for the Soviet Union since her intervention in Afghanistan in 1979.

Such an analysis, however, is too narrow in timescale. It fails to take into account the Soviet view of world security and the long term nature of events. As one commentator put it:

> *. . . . Soviet leaders have traditionally given more weight lo physical guarantees of security than to the less tangible factor of international opinion, and the former may well prove more durable in this case than the latter. The present Soviet leaders apparently believe that their foreign policy problems are manageable, and that they can rely on Soviet power to ward off any dangers. They have an almost Burkean conception of politics seeing it as a compact between the present generation, past generations and generations yet to come. They seem intent on passing on to the next generation of leaders a powerful and secure state and leaving to them any major choices about the direction of policy.*[6]

It would appear that while the Western Alliance might be able to capitalise on Soviet mistakes and omissions in the Third World, it is not clear that these successes have proved to be any constraint on Soviet power. Indeed, to the Kremlin, any foreign policy set-back, but particularly in an inconsistent Third World, is likely to be viewed as temporary.

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6 Holloway, David, The Soviet Union and the Arms Race, pp 98 and 107-8

The lack of influence that the Western Alliance has over the Soviet Union, as a result of the latter's political weaknesses, are mirrored in the economic field.

At first it appears that the high level of military spending currently pursued in the Soviet Union (estimated to be between twelve per cent and eighteen per cent of GNP in 1980)[7] is likely to lead to an unbalanced economy. This imbalance, with important production areas being denied resources, could lead to a slowdown in rising living standards which might affect the social cohesion of the state. Indeed, some have argued that the Western Alliance should rearm itself in an attempt to 'arms race the Soviet Union to death', working on the principle that the Western economies could stand the resultant increases in defence expenditure more easily than the Soviet Union. Although this argument is seen by most as suicidal, it underlines the ignorance in the West of the Soviet economy, and particularly the position of the Soviet defence industry. Although the balance of economic priorities has changed from time to time, in essence the Soviet economy has always been a 'war economy'. In 1931 Stalin referred to this traditional emphasis:

> *Do you want our Socialist fatherland to be beaten and to lose its independence? If you do not want this you must put an end to its backwardness in the shortest possible time and develop genuine Bolshevik tempo in building up its Socialist system of economy. There is no other way. That is why Lenin said during the October Revolution: 'Either perish, or overtake and outstrip the advanced capitalist countries'. We are fifty to a hundred years behind the advanced countries. We must make good this distance in ten years. Either we do it, or they crush us.*[8]

The structural basis of the Soviet Union's war economy has not fundamentally changed over the years. In 1956 the Pole Oskar Lange conducted an extensive study of the Soviet economy. He concluded that the instruments of economic management were the same as those used in capitalist economies in wartime, and that the requirements of defence had an important influence on the whole pattern of industrialization. Beside specific plants for producing weapons, military production needed the support of a strong industrial base, in particular of the metallurgical, fuel, machine tool, electrical supply and chemical industries. The defence industry, as well as receiving the highest economic priorities, was pre-eminent in its choice of technicians, skilled labour resources and means of distribution.[9]

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7 The Military Balance, 1982
8 Stalin, J.V., Problems of Leninism, p 213
9 Lange, Oskar, Papers in Economics and Sociology, p 102

A Soviet PT-76 light amphibious tank moves down the ramp of an Aist-class (NATO-Code) air cushion vehicle. From Soviet Military Power 1985. Photo U.S. Department of Defence, Wikimedia, Released

It might not be true to say that the Soviet Union needs an arms race to allow its defence industry's requirements to pull other economic sectors along. Nevertheless, the predominance of the defence economy, justified by the arms race, might well be politically more convenient to the Kremlin than any sort of free market version. For example, the Czechoslovakian crisis in 1968 set back the cause of economic reform in the Soviet Union begun two years earlier. Such reforms seemed to produce pressure for political change.

There are some sectors of the Soviet economy that are weak by Western standards, notably in the areas of technology and agriculture. Since the era of detente in the 1970s, even through the cooling of the East/West relations in the early 1980s, the Soviet Union has been benefitting from Western exports of both. It has been said that regulation of the flow of these exports would allow the Western Alliance to exert some influence over the Kremlin. In an address to the British National Association for Soviet and East European Studies in March 1983, Philip Hanson posed two rhetorical questions in connection with technology and agriculture. First, could Western measures affect the Soviet economy sufficiently to influence Soviet policies on issues of major importance? And second, can Western measures be fine-tuned so as to switch from sticks to carrots and back and thus nudge the Kremlin into specific policy decisions? By and large his answers were pessimistic:

> *Soviet hard-currency importing since 1976 shows a propensity to maintain or increase food purchases while cutting machinery purchases. At the margin, therefore, technology promises little leverage, since the behavioural evidence is that Soviet policymakers prefer food. In the mid-70s, according to a rough estimate, Western machinery imports were contributing directly and indirectly perhaps 0.5 per cent a year growth in Soviet industrial output. This is probably not enough leverage to influence crucial policies, though it might influence policies which seemed secondary to the Politburo - such as emigration policy. The fine-tuning of sanctions, at least in the area of technology, and of agricultural trade, is difficult to arrange. Lt has proved extremely hard to arrange any sanctions of this kind at all, so the ability of the Western Alliance to fine-tune such sanctions must be doubted. Moreover, any impact of technology sanctions on the Soviet economy will be relatively long-term and slow-working (through the investment process), which makes fine-tuning particularly tricky. Food trade may offer a little more scope. It should be remembered that the US partial grain embargo in 1980, while it did not achieve its declared aim of significantly reducing total grain supplies to the USSR, it probably did raise the cost of the Soviet grain import bill.*[10]

He went on to conclude that two further problems stood in the way of the Western Alliance exploiting the technological and agricultural weaknesses of the Soviet Union:

> *Attempts to damage the Soviet Union economically will be perceived as a form of aggression, and possibly destabilise East-West relations; that a lean Bear is hungrier than a plump Bear . . and that the West as a whole has in any case shown itself incapable of concerted acts of policy towards Moscow.*[11]

Finally, some Western European countries have maintained that confrontation at the economic level, concentrated on perceived Soviet weaknesses, is not necessarily the best way to influence decision-making in the Kremlin. These countries have argued that a high level of interdependence in trade and finance between East and West is the best way to rein in Soviet power. They maintain that while the West always appears to give and the Soviet Union has to take (or buy), as in the case of technology and agriculture, confrontation is bound to exist. If, however, the Soviet Union had a substantial stake in Western economic stability, that very investment would deter it from using its military power to change the

10 Hanson, Philip, Address to B.N. Asees, 28th March 1983
11 bid

status quo. It is partly for that reason that the Western governments have allowed their banks to extend loans to Eastern bloc countries to finance their purchases of Western manufactured products, and the Soviet Union to sell them Siberian gas.

A starboard amidships view of the Soviet helicopter/dock landing ship Ivan Rogov with soviet military equipment underway. Photo U.S. Department of Defence, Wikimedia, Released

This 'interdependence' approach may produce longer term results in binding in Soviet ambitions than confrontation, but putting the approach into practice has difficulties. In the 1970s the Soviet Union was happy to allow its Eastern bloc satellites to borrow from the Western Alliance, while itself remaining relatively free from Western debt. The Soviet Union only began borrowing heavily in 1979 to finance the Urengoi pipeline, using the gas itself as security. Other nations, such as Rumania and Poland, borrowed against minimal security. With the recession of the 1980s, their centrally planned economies were particularly badly hit. In staving off default of payment, governments allowed living standards to drop rapidly. In the case of Poland, this was particularly traumatic. Thus, at the 1982 Comccon session Mr Tikhonov attempted to strengthen the economic links of the Community of Mutual Economic Assistance and prevail on Russia's neighbours to reduce their Western debts.

Trade, as well as financial links, has met with similar problems of trust. The largest commercial deal between the Soviet Union and Western Europe has been the agreement to sell Siberian gas to certain Western countries via the Urengoi pipeline. Some members of the Western Alliance fear that the hard currency and technology acquired by the Soviet Union would be indirectly channelled into increased military spending. Also there is the long term concern that Soviet dependence on the sale of such a finite commodity as gas is inherently dangerous, The Kremlin may be financing short term increases in Soviet living standards by mortgaging irreplaceable energy sources. When these indigenous energy sources do run out, the Soviet Union will compete with the West for Third World supplies.

This examination of recent Western attempts to exploit Soviet political and economic weaknesses has revealed that they have met with downright failure or, at best, only marginal success. The prospect for future success in these fields looks equally bleak.

The reason for this is the totality of the communist system. The twin pillars of the Soviet state are first, the pre-eminence of the CPSU, particularly in its higher chambers, as the central decision making body and second, the physical security of the state. All the examples given in this essay of Western attempts to exploit Soviet weaknesses in the political and economic dimension have met with rebuttal because they have been perceived to undermine one of these pillars. For instance, the emphasis on human rights in the Helsinki Final Act was viewed as a thinly disguised attack on the moral basis of the CPSU, while any form of economic warfare was a threat to Soviet military capability and therefore to Soviet physical security. In Soviet eyes, Brezhnev's words to the 1969 Communist party conference still hold true:

> *Mankind has entered the last third of our century in a situation marked by a sharpening of the historical struggle between the forces of progress and reaction, between socialism and imperialism. The clash is worldwide and embraces all the basic spheres of social life: economy, politics, ideology and culture.*[12]

This was early recognition in an era of 'peaceful co-existence' that, although the struggle would be at the sub-military level, the aims of both sides remained the domination of the other. Yet behind this facade lay the ominous threat of Marshall Ustinov, 'Sometimes the West forgets that we have great military power'.[13]

The inevitable conclusion is that little exploitation of the Soviet Union's political and economic weaknesses is possible without striking the bedrock of Soviet military power. Yet it is incorrect to view the Soviet Union as monolithic, unresponsive to Western actions. For major changes in Soviet internal policy have been due to Western initiative. In the main these have been exclusively the result of military developments, and not as a result of the sub-military confrontation. Because of the nature of the Soviet State, with its preoccupation with military power, American military decisions on atomic weapons in

12 Rositzke, Harry, The USSR Today, p 89
13 The Times, 20th May 1983

A left front view of a Soviet SS-1 (SCUD-B) battlefield support missile on a MAZ-543 launcher/ erector vehicle. U.S. Federal Government Image, Wikimedia, Released

Typhoon Replenshing in the Artic, by Edward L. Cooper from The Threat in the 1980s (Series 2). Photo U.S. Defence Intelligence Agency, Wikimedia, Released

the mid-1940s, on the thermonuclear weapons in the late 1940s, on strategic forces in the early 1960s, on arms limitation in the 1970s and on intervention forces in the 1980s, have all had a correspondingly much deeper and pervasive effect within the Soviet Union.

Moreover, although exploitation of Soviet economic and political weaknesses will continue to prove unproductive for the Western Alliance, pressure for change within the Soviet Union continues. As more and more economic impetus is required to sustain the Soviet position in the world, so the bias of military expenditure will begin to hinder progress:

> *In the 1930s the 'war economy' enabled the Soviet Union to build up its industry and its military power by concentrating high levels of investment and rapidly growing industrial labour force in key sectors. Now, however the planning system, which is unchanged in its basic functions, has become a brake on economic progress, and in particular on technological progress. This is a serious problem because innovation has become a more important factor in economic growth as the opportunities for increasing the labour force and capital investment have diminished. In the 1930s the planning system served both industrial and military policy equally well. But now a contradiction has emerged between the two.*[14]

The contradiction is that whereas in the 1930s the industrial and military objectives of the state were viewed as necessary by a threatened people, today the population requires some measure of material reward for the years of sacrifice. Yet a redefinition of economic priorities would have far-reaching political results, particularly as such a redefinition would adjust the position of the CPSU and the armed forces.

If this is indeed a turning point in Soviet history, and a major redefinition of priorities is about to take place inside Russia, the Western Alliance would do well not to try to exploit the situation. If the past has any lessons for the future, it is that any such exploitation of the Soviet Union, at whatever level, would be viewed as aggression aimed at the security of the state. History has shown that there is no stronger binding force within Soviet society.

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14 Holloway, David, The Soviet Union and the Arms Race, p 171

British officers use an improvised briefing model in the woods to plan their next move during Exercise BRAVE DEFENDER. © Crown copyright. IWM (CT 341)

The Soviet Strategic Offensive Operation

This article by Captain J.S. Hyden Intelligence Corps that outlines the implications for UK Home Defence against the Soviet Strategic Offensive operation was originally published in BAR 84, December 1986

One of the most efficient ways to develop a coherent and rational military force structure is to construct it by reference to the likely threat it may have to face. Exercise Brave Defender held in September 1985 was the largest home defence exercise held in

the UK since World War Two, its purpose to test home defence forces in coping with the perceived threat from the Warsaw Pact to the UK home base. Given that the bulk of the UK's land forces will be deployed to the continent in the event of war, it is only recently that home defence has been a topic of interest to the Services. This has been because of perceived changes in Soviet strategy and discoveries of particular Soviet capabilities that increase the threat to the home base. The purpose of this paper is to examine some of those perceptions of the Soviet threat and to draw some conclusions regarding their coherence and rationality.

> *... If the Soviet leaders choose to start a war in Europe (or China} they must be absolutely certain of a very quick and complete victory.*[1]

If speed is perhaps the most important principle for any Soviet offensive on Europe it may seem at first sight that major assaults on the UK are unlikely. Though it is impossible to be certain of Soviet war aims, the deployment of their forces in peace suggests that the main effort must be on Continental Europe, with the destruction of NATO's forces there a high priority if victory is to be achieved rapidly. Russian and Soviet history militate further in favour of this conclusion; though the Soviet Navy played an important supporting role in the Baltic and Black Seas during the Great Patriotic War, obviously the enormous land conflict between the USSR and Germany dominated Soviet wartime experience and is vital historical background to current conceptual thinking. As the UK has found out on several occasions, a considerable amount of expertise and capability for amphibious or airborne operations has to be developed over a period of time for such operations to be successful, and such experience the Soviets do not have. Soviet paratroops were used hardly at all[2] in the Great Patriotic War, except as straightforward infantry, and though some amphibious operations took place, they were relatively minor. Of course, capability is clearly there and increasing, but the experience and expertise is lacking. Taken together, these factors may suggest that if a war is won rapidly in Continental Europe, there will be very little time and very little need for the Soviets to mount assaults on the UK home base as part of any immediate onslaught on Europe.

Though such a conclusion might, on the face of it, appear entirely reasonable, it ignores significant recent developments in Soviet military thinking. To appreciate the importance of these developments, it is necessary to examine some of the fundamental concepts on which Soviet military thinking rests and how they are related. At the very heart of the Soviets' system of thinking about war are two apparently different but

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1 Donnelly, C.N., The Soviet Operational Manoeuvre Group: a new challenge for NATO, International Defence Review, September 1982, p. 220.

2 Brykin, E.G., Bridgehead Operation, September 1943 in J Erickson, 'The Road to Berlin' London 1983, pp. 127-128.

related concepts, Military Doctrine and Military Science. Soviet Military Doctrine is 'a system of guiding principles and scientifically substantiated views of the CPSU and the Soviet government on the essence, character and methods of waging a war which might be forced on the Soviet Union by Imperialists, as well as the military organisational development and preparation of the Armed Forces and the country to crush the aggressor.'[3] Military Doctrine has remained more or less constant since the early 1960s when public discussion of military affairs began in earnest in the USSR after the death of Stalin. In 1961, Marshal Malinovskiy, in a report to the TwentySecond Congress of the CPSU, analysed Khrushchev's speech in 1960 to the Supreme Soviet and said,

> *In that speech, a thorough analysis was given to the nature of modern war, which lies at the base of Soviet Military Doctrine. One of the important positions of this doctrine is that a world war, if in spite of everything it is unleashed by the Imperialist aggressors, will inevitably take the form of a nuclear rocket war ... we also consider that, in contemporary circumstances, a future world war will be waged, in spite of enormous losses, by massive, multimillion armed forces ... the fact is ... any armed conflict inevitably will escalate into general nuclear rocket war if the nuclear powers are involved in it. Thus, we must prepare our Armed Forces, the country and all the people for struggle with the aggressor, first of all and mainly, in conditions of nuclear war.*[4]

A right front view of a vehicle-mounted Soviet Galosh anti-ballistic missile launcher. Photo U.S. Department of Defence, Wikimedia, Released.

3 Ogarkov, Vsegda v Gotovnosti, p 55 in H.F. and W.F. Scott, The Armed Forces of the USSR, 3rd ed., 1984, p 64
4 Scott, H.F., and W.F., The Armed Forces of the USSR, 3rd ed., 1984, pp 44-45

Military Doctrine has been developed since 1961; it now readily admits the possibility of conventional action, but this the Soviets agree is not in spite of, but because of, nuclear missile weapons.[5] Furthermore, since the late 1970s, the greater importance of the external function of the Soviet armed forces has been emphasised, defending not only the Soviet motherland but, with other socialist armies, the whole socialist system, helping struggles for freedom and independence and defending the peace of the whole world.[6] Most recently, Colonel General Garayev, Deputy to the Chief of the General Staff, has' revised the classical view of Military Doctrine to give pre-eminence to conventional and, perhaps, theatre nuclear weapons, stressing the importance of theatre operations in areas on the periphery of the USSR.

In contrast to doctrine, Military Science is defined as 'a system of knowledge on the nature and laws of war, the preparation of the armed forces and the country for war and the methods of its conduct'[7] and is a more objective concept. Military Science is subdivided into a number of component parts, the most important of which is Military Art, and this is further subdivided into Strategy, Operational Art and Tactics. It is Military Strategy, current thinking regarding its meaning and the implications flowing from that, which should concern us most.

In 1974, Colonel General Lomov wrote in his study Scientific-Technical Progress and the Revolution in Military Affairs that:

> *… the basic provisions (principles) of strategy are based on the conclusions of Soviet Military Doctrine and at the same time develop and concretise these conclusions, giving these the character of theoretical and practical rules for solving various problems involved in the preparation for and conduct of armed forces.*[8]

Strategy is defined as 'the part of military art that studies the foundations of the preparation and conduct of war and its campaign as a whole. In practice it is policy's direct weapon. With respect to strategy, policy plays the leading and directing role.[9]' In September 1979, Volume Seven of the *Soviet Military Encyclopaedia* carried an entry on 'Military Strategy' signed by Marshal Ogarkov, then Chief of the General Staff, and this is perhaps the most recent authoritative statement on the subject. In many respects, Ogarkov's views mirror earlier discussions on doctrine:

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5 Bondarenko, The Modern Revolution in Military Affairs and the Combat Readiness of the Armed Forces, in Communist of the Armed Forces, December 1968, p 29, in Scott The Armed Forces of the USSR, 3rd ed, 1984, p 53

6 See Scott, The Armed Forces of the USSR, 3rd ed., 1984, p 61

7 Ibid, p 74

8 Ibid, p 57

9 Ibid, p 75

Soviet military strategy views a future world war, if the Imperialists manage to unleash it, as a decisive clash between two opposed world socio-economic systems - socialism and capitalism. In such a war, simultaneously or consecutively, the majority of the states of the world may become involved. Future war will be a global opposition of multimillion coalition armed forces unprecendented in scale and violence and will be waged without compromise for the most decisive political and strategic goals.[10]

The close connection between Doctrine and Strategy is clearly enhanced by such a view; in one vital respect however, Ogarkov's contribution goes far beyond previous discussions in developing the concept of strategic operations.

In evaluating the strategic content of war, Soviet military strategy considers war to be a complicated series of interrelated major simulations and consecutive strategic operations, including operations in Continental TVDs. The common goal of each such operation will be one particular military-political goal of the war, connected with the defence and retention of important regions of its territory and, if necessary, also with destroying actual enemy groupings. Characteristic indicators of the scale for each operation will be conditioned by the possibilities of the sides, the range of the means of destruction, the ability to support troops (forces) materially, and also the actual conditions of the TVD. In the framework of strategic operations in Continental TVDs might be conducted: initial and subsequent operations of fronts and in coastal areas, also initial and subsequent operations of fleets; air, anti-air, airborne, sea-landing, combined landing and other operations; and also the delivery of nuclear rocket and aviation strikes.[11]

It is the development of the concept of the strategic operation which marks Ogarkov's contribution to the definition of military strategy as a landmark in current Soviet military thinking. This concept is the result of the Soviets' own perceptions of technological changes and their implications. They 'have concluded that not only the constant threat of nuclear attack but also significant changes in the range and destructive power of conventional munitions will preclude the concentration of forces as occurred in past wars. The increased capability of weapons, across the span of

10 Ibid, p 89

11 Ogarkov, Strategiya Voyennaya, p 564, also in Scott, H.F. and W.F., The Armed Forces of the USSR, 3rd ed., 1984, p 90

A starboard quarter view of a Soviet BDK Project 775 (NATO - Ropucha class tank landing ship) BDK-14 underway. Photo U.S. Navy, Wikimedia, Released

means available, also has necessitated military planning on a larger scale - the strategic operation in the theatre of military operations. Thus, in the Soviet view, because of modern technology, war has outgrown the front both for planning and execution. The focus is now on a larger scale of command-the High Command in the TVD which will control several fronts.[12]

This view has bene reflected in recent and continuing changes in the organisation of the higher levels of the Soviet command structure. Though it is difficult to obtain official information concerning these changes, a number of Western commentators and sources have recently examined what evidence there is and it is important for our argument to review their conclusions. Victor Suvorov in his December 1984 article in *International Defence Review* entitled Strategic Command and Control-the Soviet Approach first of all explains what a TVD is, using Soviet sources. The Russian is '*Teatr Voennykh Deistvii*', which Suvorov says means 'a theatre of actions on a strategic scale.'[13] A TVD is defined as 'part of a Continental territory with its coastal waters, inland seas and airspace (Continental TVD), or the water areas of the ocean, including islands, adjoining seas and coastal land belts (Oceanic TVDs) within the boundaries of which strategic groupings of armed forces may be deployed and military operations carried out.'[14] Suvorov says there are sixteen such TVDs, including ten Continental, four Oceanic and two Maritime. Of most importance, he says, is one Western TVD that covers all of Europe and says that this Western TVD has two 'strategic directions'.

This term is defined by Suvorov as the breadth (sometimes in the Great Patriotic War only 300-400km) of operations conducted by fronts. He concludes his paper with an examination of the High Command structure of the Soviet Forces during the Great

12 DIA Research Paper, The Soviet Conventional Offensive in Europe, 1983, p 2

13 Suvorov, V., Strategic Command and Control - The Soviet Approach, International Defence Review, December 1984, p 1815

14 Ibid, p 1813, quoting The Military Encyclopaedic Dictionary, Voenizdat, 1983, p 732

Patriotic War and suggests that the modern structure is simply a development of that with a High Command commanding a number of fronts, a fleet or part of it, one PVO front or army and other formations, and a Supreme High Command. He discusses the concept of the *Stavka*, that is a tiny body of the higher political and military leaders at both the High Command and Supreme High Command levels whose purpose it is to take all the important decisions during war, and suggests that this body still exists. He finally suggests that at present there are two High Commands (*Glavnoe Komandovanie* or GK) in the Western TVD; one at Wunsdorf commands the Western strategic direction and the other at Kiev the Southwestern.

Though Suvorov's views must be given some weight, other sources suggest different conclusions that throw some doubt on his assessment. The 1985 edition of the authoritative US Government publication *Soviet Military Power* identifies three TVDs in the NATO area; a Northwestern one, taking in Scandinavia, a Western, taking in Western Europe, and a Southwestern, taking in Southeast Europe, the Central and Eastern Mediterranean and Western Turkey. The US defines a TVD as being a 'theatre of military operations.' In the magazine *Military Technology,* the conclusions of *Soviet Military Power* are accepted and extended; the term 'Theatre of War' or TV is introduced, and it is suggested that this TV covers all of Europe, including Norway and Morocco and the bordering sea regions. This would seem to equate with Suvorov's definition of the Western TVD. The TV is an intermediate High Command level above that of the three TVDs and below the Supreme High Command.[15] More recently still, an article concerning the fate of Marshal Ogarkov since his removal as Chief of the General Staff has suggested that *'normally well informed East European sources had reported that the final step in the reorganisation of the Soviet Strategic Command was to be the establishment of a separate Western Supreme Command responsible for the direction and coordination of all strategic operations in the Western 'Theatre of War'. The Western TV was to contain the three wartime 'theatres of military activity'* (TVDs) in the West and to provide a link between the individual Theatre Supreme Commands and the office of the Supreme Commander-in Chief at Stavka (Supreme Headquarters).[16] The article concludes that Ogarkov may be the Western TV commander and that in this respect he equates with the individual representatives of the *Stavka* sent out to help coordinate fronts in strategic operations during the Great Patriotic War.

This body of opinion would seem to cast doubt on some of Suvorov's basic conclusions. It does appear that there are to be three Continental TVDs in Europe, commanded by a TV, rather than one TVD for the whole as Suvorov suggests. The term 'Strategic Direction' is

15 Schulz-Torge, Joachim Ulrich, The Soviet Military High Command (Part II), in Military Technology, Vol IX, Issue 9, 1985, p 102

16 Weiss, P, Room at the top for Ogarkov again, International Defence Review, October 1985, p 565

interesting. More recent efforts to define it suggest that it has a different meaning to that suggested by him. J G Hines and Philip Petersen[17] believe that it is a wide strip of land, including contiguous coastal waters and airspace, leading the armed forces of one warring party to the other's most important administrative, political and industrial/economic centres. However, of most importance is the recent change in Soviet strategy and the development of the concept of the strategic operation. This must be seen in tandem with these complex developments in the command structure. *The contemporary Soviet concept of the theatre strategic operation has expanded in scope and complexity. The Soviets now plan a theatre operation to consist of several fronts conducting dynamic, fast-moving operations to seize strategic ground objectives located 600-800 kilometres away.*[18] If the Soviets are right and this change of concept has come about largely as a consequence of the technological improvement in conventional weapons systems, this must be an interesting example of weapons systems, the 'nuts and bolts' of military affairs, having strategic and political effects and implications far beyond their technical capabilities.

A view of a Soviet FROG-7 tactical nuclear surface-to-surface missile. Photo U.S. Department of Defense, Wikimedia, Released

17 Hines, J.G., and Petersen, Philip A., Changing the Soviet System of Control: Focus on Theatre Warfare, International Defence Review, March 1986, P 281
18 US Government, Soviet Military Power, 4th ed., 1985, p 13

Amid the byzantine discussion of Soviet military thinking and command and control, it is easy to forget our original purpose, that of examining British perceptions of the Soviet threat to the UK home base. What are the implications of our foregoing discussion? First, clearly, Soviet thinking has changed recently, with the development of the strategic operation. The question is, has this increased the threat to the home base?

Recent analysis of Soviet operations would seem to suggest that the concept of the strategic operation is complemented by force structures in existence, particularly with regard to operations in the enemy rear, which, of course, operations against the UK must be. The two most important freely available studies for our purposes are Christopher Donnelly's *Operations in the Enemy Rear: Soviet Doctrine and Tactics* and Victor Suvorov's *Spetsnaz-The Soviet Union's Special Forces*, both published in *International Defence Review*, in 1980 and 1983 respectively.

Donnelly examines the organisation and equipment of the eight (now reduced to seven)[19] airborne divisions and the fifteen thousand naval infantry available to the USSR. He then identifies six types of operation in which they are likely to be involved; strategic diversionary groups, airborne raids in strength, raids to destroy an objective in the enemy rear, long range reconnaissance operations, raiding action by combined armed troops of the ground forces and heliborne assaults. Of particular importance for our discussion is the first.

Donnelly uses the example of the Manchurian Operation as an historical precedent and illustration of operations in the enemy rear, though he correctly emphasises that Soviet experience of such operations is extensive, both in the Great Patriotic War and the Civil War. Regarding the use of strategic diversionary groups:

> *At the outset of the Manchurian Operation (16th - 27th August 1945) the theatre commanders deployed against strategic targets some 20 airborne assaults of between 34-40 men each drawn, it would appear, from a special unit of about 600 men. The groups were dropped close to central Manchurian cities ... with the task of causing as much disruption as possible by sabotage and raids against strategic points, military and industrial targets. At the same time, fast MTBs were used to drop small teams of men, in boats and as frogmen, in all the North Korean ports with the task of disrupting the ports operations, once again by sabotage and diversion. The teams used were small, and their employment was not on a large scale. There is no evidence that they were able to create a significant level of destruction deep in the enemy rear. What they did serve to do was to create panic ... which greatly*

19 Isby, D.C., Soviet airmobile and air assault brigades, Jane's Defence Weekly, 14th September 1983, p 565

increased the shock effect of the Soviets' massive surprise attack. We consider that this is a valid historical model for the initial employment of diversionary troops in any future war . . . the shock to national morale of an attack made on, say the Ministries of Defence in Bonn, the Hague or London, or of the assassination in their own homes of senior politicians, industrialists, financiers, etc, in the very first hours of the war would be disproportionately great in comparison to the small cost of attempting such an operation.

Victor Suvorov's article complements Donnelly's analysis well. He uses the term 'Spetsnaz,' to describe the special forces of Soviet Military Intelligence the GRU and says that 'Spetsnaz' troops are an independent clement of the Second Staff Directorate (Intelligence) at each command level from Army level upwards. Spetsnaz tasks are the hunting down and assassination of enemy political and military leaders, and attacking enemy nuclear delivery means, command systems, important military bases and his power system. Spetsnaz units exist at Army level (company strength) and Front (brigade); Naval Brigades exist as well. Brigades comprise an HQ Company of professional soldiers tasked to carry out assassination operations and three or four parachute battalions, or in the naval brigades, a group of midget submarines, two or three battalions of combat swimmers and one parachute battalion. There are three elements to the Spetsnaz, elite combat troops, professional athletes and foreigners recruited as 'agents' by the GRU, to either provide intelligence to the Spetsnaz combat troops or professional athletes or themselves conduct sabotage operations. In war, the professional units would probably enter the target country before hostilities commenced, perhaps as tourists or as Soviet Embassy staff. On the outbreak of war, the main Spetsnaz forces will be dropped simultaneously on all fighting fronts, Army independent companies being landed some one hundred to five hundred kilometres in the enemy's rear and front brigades five hundred to one thousand kilometres. The professional 'athletics' regiments will operate within range of capital cities, regardless of how far these are from the front lines.

Taken in the context of current Soviet Military Strategy, these two papers seem to have identified an hitherto ignored threat to the UK home base from Soviet ground forces, and the conclusions drawn from them have clearly influenced the development of the current concept of home defence. Unfortunately, it may be that this analysis has been accepted too uncritically and it is worth examining some of its assumptions.

The first obvious assumption of Donnelly's papers is that strategic diversionary groups are an indispensable aid to offensive operations in the Western TVD and TV. No one can logically quarrel with that. The second assumption is that such groups would attack targets in the UK. This is to assume that the Soviets see the UK as an integral

A Soviet AN-225 aircraft banks into a turn during a flight demonstration held as part of Airshow Canada '89. Photo U.S. Department of Defense, Wikimedia, Released

part of the ultimate strategic objectives of the Western TVD and TV. Certainly the 1985 edition of *Soviet Military Power* would seem to support this conclusion.[20] It is however, possible to suggest an alternative.

If we accept Suvorov's definition of a TVD as *'... the water areas of the ocean including islands adjoining seas and coastal land belts (Oceanic TVDs)'*, remembering that this definition is quoted from an authoritative Soviet source, then it may be that the UK is in fact within the boundaries of the Atlantic and/or even the North Western TVDs. As one of the aims of strategic offensive operations in these Oceanic TVDs must be the assault on NATO's Sea Lines of Communication (SLOCs) and that (as is obvious) the UK is the 'arrival' end of those SLOGs, it would seem logical from a Soviet viewpoint to place the UK within the boundaries of the Atlantic rather than the Western TVD, since offensive operations against the SLOCs can then be best coordinated by a single Naval Commander. In this event Spetsnaz operations in the UK would not be in direct support of ground forces operating in Continental Western Europe, but would be part of a complementary but separate strategic offensive operation coordinated at a much higher level. If this is correct, it has implications as to how Spetsnaz forces would be used, and of more importance for our purpose, how the UK Services should perceive the threat at present.

20 US Government, Soviet Military Power, 4th ed., 1985, p 13

Exercise Brave Defender postulated up to five hundred Spetsnaz, troops operating in the UK against key points ranging from military bases to industrial and economic installations. Unfortunately, in the wider public mind, such an ubiquitous threat could be seen as having echoes of the 1940 'Paratroopers in Nuns' habits' syndrome and the new organisation of home defence as being a 1980s version of the efforts so splendidly portrayed in 'Dad's Army' of the undoubtedly enthusiastic but rather amateurish Home Guard. To counteract such an image, it is vital to have our perceptions of the threat exactly right, and to do this we must try to see things from the Soviet perspective. Certainly Soviet target priorities are clear; nuclear delivery means are at the head of the list, followed in order of importance by C3I systems, the incapacitation of certain EW equipment, the capture of key airfields and ports to prevent reinforcement or deployment and their destruction or neutralisation if not needed by the USSR, and the disruption of key industrial targets.[21] Clearly an abundance of such targets exists in the UK, (as in any industrial state) and it has been easy to assume that they are too tempting for the Soviets to ignore; witness the threat perception on 'Brave Defender'.

Spetsnaz troops on exercise on the Beret March. Photo Vitaly V. Kuzmin, Creative Commons Attribution-Share Alike 3.0 Unported licence, Wikimedia

We have already suggested that it may be a naval responsibility to coordinate attacks on the United Kingdom as part of the Atlantic TVD's strategic offensive operations. However, it is important to appreciate that the main aims of strategic

21 Donelly, C.N., Operations in the Enemy Rear: Soviet Doctrine and Tactics, International Defence Review, January 1980

offensive operations in either the Atlantic or North Western TVDs in the opening phase of any conflict would be the protection of the Soviet SSBN force and the attack on United States Carrier Battle Groups (CGBs) and SSBNs. In this event, the priority given to attacks on SLOCs would be relatively much lower. This would have a corresponding effect in reducing the Soviet's perceived need to deploy Spetsnaz forces against the United Kingdom. If this is so, it will have implications for the use of strategic diversionary groups; if such groups were used at all, the emphasis would tend to be towards operations against our ports, harbours and coastal installations supporting the SLOCs. If Suvorov is right in his analysis of the organisation of Spetsnaz forces, the bulk of them are parachute trained and they rely on parachute insertion for initial deployment; it is however difficult to conceive of numerous parachute landings in the UK just prior to, or just after, an outbreak of active hostilities, even if they were individually only of small groups of men. Given the size and ubiquity of the Soviet Navy and Merchant Marine, it is more realistic to suggest their arrival by sea as a more credible and practical likelihood and this in turn must reinforce the suggestion that the Naval Special Brigades are more suitable for employment against the UK. British nuclear means and their delivery systems and our input to NATO's command and control system and the assassination of our political leaders might be priorities, though it is difficult to see the point of attacking Faslane if all the Polaris boats were already at sea, as hopefully they would be in time of a crisis preceding hostilities. Regarding the assassination of political leaders, it is worth pointing out that the Soviets never tried such a ploy during the Great Patriotic War. Furthermore, the suggestion that the assassination of industrialists or financiers would affect national morale may be an exaggeration; for such assassinations to affect the national morale, they would have to be of persons well-known and respected in the country at large. While such men are undoubtedly important leaders and of professional standing within their own circles, they are unlikely to be nationally both well-known and respected and so their deaths would be sad but irrelevant to the national morale. Suvorov's whole examination, while of course fascinating, must be taken with some caution, since one must ask how extensive his knowledge of the most secret aspects of the GRU's work would be, even if, as IDR says, he claims to have 'had some experience with them during his career', and his work is, of course, uncorroborated.

'Brave Defender' assumed that Spetsnaz operations would begin at, or subsequent to, the outbreak of hostilities in Europe and that these operations would be in direct support of land operations. It also assumed that many of the targets of those operations would be the means and methods of reinforcement of BAOR. This second assumption is something of a contradiction since, for planning purposes at least, BAOR is always reinforced prior to any move forward on the Continent. Looked at from the Soviet viewpoint, they would not wish to attack a fully reinforced and deployed NATO defence and they would attack

A column of Royal Marines 'attack' Fort Purbrook the 19th-century fortification, near Portsmouth, in a home defence exercise. The premise was to see how well Portsmouth naval establishments would respond to infiltration by saboteurs. © IWM (A 32212)

only if we were unprepared or partially deployed. They would, however, see the US reinforcement of Europe as the main threat and it may be possible in passing to argue that they would not worry too much about disrupting the reinforcement of 1(British) Corps, which is, though important, only one of four national corps in NORTHAG. Soviet options would therefore be to begin Spetsnaz operations prior to a move forward on the Continent, with the intention of disrupting reinforcement by the UK, Canada and the USA, or allow those reinforcements to arrive intact. Since UK reinforcement should take place relatively quickly, and US/Canadian reinforcement relatively more gradually, this underlies the possible lack of interest in the UK reinforcements since they would have probably already arrived in BAOR before Spetsnaz operations got underway. Of course, if they were to achieve a capability to launch a surprise attack within forty eight hours, they could wait to begin Spetsnaz operations until after the main offensive. This does not seem to have been the practice during the Great Patriotic War or in Manchuria, where special force operations began at the latest simultaneously with the commencement of major land operations. Furthermore, while current Soviet operational art and tactics seek ways to achieve this capability, they are some way off succeeding, and may never do so. The implications of this are that if the assumption that the Soviets would launch widespread Spetsnaz operations against our reinforcement capability is mistaken, then the threat may have been exaggerated, since if the UK reinforcement of BAOR goes according to plan, at least at the UK end, there will be little worthwhile to attack. On the other hand, massive US reinforcement through the UK will occur and they would be an undoubted target for Spetsnaz teams.

This paper does not seek to analyse airborne raids, raids in the enemy rear or any of the other types of operation identified by Donnelly. In the first instance at least, such forces available for distant operations would be committed to operations in the Western TVD and it is difficult to see how even the Soviets could launch heavy airborne or sea landing operations against the UK without sustaining massive casualties. Though they do have a tradition of raiding extending at least as far back as the Russo-Turkish War (General Gurko's forward detachment) and the Russo-Japanese War (General Mishchencko's raid)[22], such operations were carried out as an adjunct to, or indeed by, elements of the main ground forces, and they are out of place in discussing operations against the UK. The air and sea landing forces available would need to be retrained, rested and re-equipped before any operations against the UK were possible and this would take much more time than the Soviets consider they would have. They would hope to have inflicted a decisive defeat on NATO before such operations were necessary.

Do these doubts about Donnelly's and Suvorov's analyses, and our attempt to see things from the Soviet standpoint mean that 'Brave Defender' was completely misguided and a thoughtless reaction to a fictitious threat? This paper argues most definitely not;

22 Bellamy, C.D., Antecedents of the Modern Soviet Operation Manoeuvre Group (OMG), RUSI Journal, September 1984, pp 50-57

the strategic offensive operation, as we have demonstrated, now plays a central role in Soviet Military Strategy and Donnelly and Suvorov have identified both tactical thinking and capabilities that indicate the Soviets have the ability to put their strategy into effect. However, what is required is some refinement of the perception of the threat. We suggest that Spetsnaz operations against the UK are likely to be conducted by naval forces of the Atlantic and/or Arctic TVDs and that therefore much activity can be expected against our ports, harbours and coastlines. This, however, will be conducted against a background of other and higher priorities with the TVDs. Thus such operations may not receive as full an allocation of resources as is presently imagined. While certain UK national facilities, such as our nuclear delivery systems and command and control mechanisms, can be regarded as likely targets, we also suggest that the bulk of land targets will in fact be United States installations, whether they are existing bases or new reinforcements and that it will be their responsibility to defend themselves, though that defence will, of course, be coordinated with our own national home defence organisation.

The views expressed in this article are those of the Author and are derived from the published material listed in the Footnotes. They do not purport to reflect official policy. Editor

A starboard bow view of a Soviet Pomornik class air cushion landing craft, onshore next to two PT-76 light amphibious tanks with a BTR-60PB armoured personnel carrier in between them. Photo JO1 Kip Burke, U.S. Navy, Wikimedia, Released.

T-34 monument at Prokhorovka, site of the Battle of Prokhorovka, a major armoured confrontation during the Battle of Kursk in the Second World war. Photo Alexander Grata, Creative Commons Attribution 2.0 Generic licence, Wikimedia.

The Soviet Use of Military History for Operational Analysis

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Military history performs two separate and almost contradictory functions within the Soviet system, neither of which has any real parallel in the West. The consequence is a degree of confusion over the reliability of Soviet military historical sources and a failure in some places to appreciate their value to the analyst and strategist.

On the one hand, military history plays a most important didactic and propagandistic role. Western military historians seeking in Soviet works an overt reflection of the various opposing views and philosophical debates on wars, battles, and commanders that characterize Western military history will seek in vain. Soviet military history moves from a position of ideological righteousness. It is strongly moralizing in tone, its chief exponents being much given to harangues and propagandistic declarations. Its first function is to convince the Soviet people of the rightness of the Marxist-Leninist cause, of the need to defend the Soviet homeland and socialism against the ravages of the capitalist beast, and of the invincibility of the Soviet armed forces as the main guarantors - under Party control - of Pax Sovietica. Soviet military historical works are often so tendentious, blatantly one-sided and narrow-minded, so chauvinistic, and so hyper-sensitive to criticism or opposing views, that Western historians reject them out of hand, irritated beyond endurance by Soviet hypocrisy and cant. Much of Soviet military history deserves no better treatment.

On the other hand, there is a much more positive aspect to Soviet military history. In Western military circles the very term 'military history' conjures up an image of the study of wars of long ago. Moreover, there is a tendency to think of the study of such wars as studies done for their own sake; for example, to establish as nearly as possible the actual course of events or to establish beyond all reasonable doubt the brilliance of a certain commander or the extent to which another should bear the blame for some disaster. By contrast, in the Soviet definition military history begins yesterday and works backwards. The Falklands War, the invasion of Grenada, the US raid on Libya, events in Afghanistan are just as much the subject of military historical interest as are the battles of 1945, 1916, or 1812. Moreover, history is studied (and taught) to extract a lesson of some sort, either political or patriotic - to support the communist cause and its shaping of society, or military, to help the Soviet Armed Forces improve their performance in battle.

It is the former propagandistic, function of Soviet military history that gets most exposure in the West for the simple reason that it gets most visibility in the USSR. It is the latter function, that of operational analysis, which is our interest here, that is the role which is seen by only a small section of Soviet society, those responsible for the development of Soviet military strategy, operations and tactics. This is one area in particular where the Soviets make much more use of military history than do we, and, in this writer's opinion, to very good effect.

In the 1980s, the Soviet Armed Forces entered a period of great change, influenced by rapid advances in technology and complicated by developments in the international political situation. This has forced the Soviet military to review organizational structure,[1] tactical and operational concepts, training and equipment programmes. With the help of an evaluation of their military/historical experience the Soviets hope to find answers to some of today's pressing problems in the political, organizational, strategic, operational

1 See, for example, VIZh, No. 4, 1982, Leading Article, p. 3.

and tactical spheres. The importance of 'bringing the experience of past wars and of local wars into the training process'[2] is growing as the introduction of complex new equipment and the need for higher combat readiness makes training more complicated.[3]

Contrasting Approaches

In the field of operational analysis and planning, historical experience forms an important part of the data base on which the Soviet concepts are established 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 the British Army. Their approach to 'sustainability' and their use of military history in establishing the parameters of this concept provides an excellent example of Soviet procedures.

For some years NATO commanders have been concerned with improving the 'sustainability' of their forces. Many consider this to be almost synonymous with improving 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 SACEUR for use within Allied Command Europe and has been circulated by the Military Agency for Standardization 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.*
>
> *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.*

This definition does make clear that sustainability, as it is perceived in NATO, is really an educated guess. The accuracy of the guess will depend on the level of education, experience, and intuition of the individual commander.

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2 Semenov, Lieutenant General V.A., Chief of Staff, Odessa Military District, 'From the Experience of Military Historical Work in the Red Banner Odessa Military District', VIZh, No 2; 1986, p. 49.

3 This 'systematic exploitation of experience' is unbalanced by the difficulties Soviet military historians face when trying to discuss Soviet failures and defeats. Soviet operations of the 1941-5 War that terminated in disaster are described in military historical studies, to be sure, but analysis and discussion of the causes and results of failure are very rare - the bottom line is left out and it takes dedicated Western analysts to draw out the lessons if they are to be understood in context. The work of Colonel David Glantz, US Army, Soviet Army Studies Office, Fort Leavenworth, is a model in this regard, and highly recommended. There is the possibility that a greater openness in Soviet society may lead to franker discussion of failure. See the comment of Colonel V.M. Romanov at a conference in the Leningrad Military District reported in VIZh, No 7, 1986, p. 96.

As a reflection of the values of their societies, many NATO armed forces (the British Army is a prime example) 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 defence on small elite armies rather than mass conscript forces. The above definition of sustainability, which stresses the reliance on the commander, serves to illustrate this philosophy very well. The Soviets also recognize the importance of the 'human factor' in war, but their interpretation of this is to strive as much as possible 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.

A Soviet heavy gun crew firing at enemy positions during the Great Patriotic War. Photo RIA Novosti archive, image #46802/Temin/CC-BY-SA 3.0, Creative Commons Attribution-Share Alike 3.0 Unported Licence, Wikimedia

This basic principle is, perhaps, the first factor that determines the difference between Soviet and Western operational planning. It results in a Soviet reliance on a 'scientific' approach to battle planning, which attempts to reduce the battlefield to a set of numerical calculations to minimize the uncertain ties of conflict. This, it is considered, will enable strategists and tacticians, logisticians, weapons designers, and even staff officers in the field to base their plans and decisions on as mathematically firm a foundation as possible.

The statistical calculations on which Soviet battle planning today relies are derived from a combination of historical experience and the scientific measurement of modern weapons effects. The aim is to produce a detailed and quantitative assessment of battlefield requirements (the number of guns or tanks per kilometre and the necessary ratios of superiority for success, the required amount of fuel and ammunition for an offensive, etc.). Furthermore, the compulsory inclusion of statistics taken from actual battles ensures that it reflects the true impact of the stress of battle upon the human beings who must participate in it, and upon whose performance its course depends. It is

this latter factor that is frequently missing from Western operational analysis, which so often relies on technical data gained on the range or in the laboratory. Many of the claims made for proposed weapons systems based on 'emerging technology' could well do with an admixture of just such a 'degradation factor' based on the impact of stress, or of unforeseen technical malfunction, or their effectiveness in battle.

A third important factor also comes into play at this point: Soviet military doctrine. This is a structured framework of views on war that is common to everyone with some role to play in the Soviet Union's military machine. It ensures a consistent, comprehensive, and highly standardized approach to operational analysis throughout the Warsaw Pact. Whereas NATO is a war fighting organism, the Warsaw Pact is not. There is no 'Warsaw Pact' doctrine, no real international Warsaw Pact staff, no multi-national operational headquarters. There is only a Soviet command and control system into which the non-Soviet Warsaw Pact countries are integrated, each given a limited and specific role. The Warsaw Pact staffs transmit Soviet instructions. Furthermore, Soviet military doctrine is applied in the other Warsaw pact countries - they all subscribe to the same military philosophy and have very similar operational procedures - in marked contrast to the variety of national procedures to be found within a NATO army group.

This concept of doctrine is fundamental to the Soviet philosophy. It is a way of thinking, an attitude of mind, closely linked to the Marxist 'scientific' approach to life and to society as a whole, in which as little as possible is left to chance. When the British or Americans talk of 'officer education' they use a word derived from the Latin *e duco, 'I lead out'*. Our whole social conditioning is to see education as 'broadening the mind '. The Russian words most often used to describe a Soviet officer's 'education' are *vospiianiye -'upbringing'* - *obrazovaniye - 'moulding'* (from obraz, a 'shape' or 'mold'), aptly drawing the distinction between the two philosophies. By reducing the role of individual initiative in the running of the battle, the battlefield becomes more predictable and controllable. In the Soviet view, the more predictable and calculable the battlefield can be made, the more drills can be developed to cope with battlefield emergencies 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.

Some Western experts certainly maintain that a high reliance on drills makes a military unit less effective at coping with the unexpected: the Soviets would not agree. For them, drills are an essential prerequisite for the speedy reaction to any battlefield emergency. It is the logical and inventive thought necessary to create a plan that is the first victim of a surprise, reversal, or unexpected opportunity. The Soviets do not claim that every eventuality can be planned for or drilled for but 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 impending battle is good, if surprise and speed are achieved and the initiative seized and maintained, 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.[4]

To be effective, unit and formation tactical drills and standard operating procedures for army and front staff planning are dependent not only on personnel training, but on keeping the unit or staff team in question functioning. The more the force structure or constitution of the team for which the drill was worked out changes, the less easily can the drill be applied. However, if losses too can be accurately estimated and reduced to a numerical equation, and included in calculations for the operation, then plans can be made to take account of casualties when assessing combat capability at successive stages of the operation. Furthermore, drills can be designed to cope with (and thereby lessen) the impact of casualties on the combat capabilities of the unit or formation.

Soldiers of the 20th army fighting on the Dnieper bank to the west of Dorogobuzh. The Western Front. Photo RIA Novosti archive, image #76 / L. Bat / CC-BY-SA 3.0, Creative Commons Attribution-Share Alike 3.0 Unported licence, Wikimedia

4 A good example of the impact of an unexpected (and therefore uncalculated) factor on Soviet operations can be seen in the impact of terrain on Soviet operational planning. The effect of hilly terrain on an offensive was outside Soviet experience in 1943-4 and very seriously affected operational performance in the Carpathian Operations. However, by the time of the Manchurian Operation of 1945 this new experience had been assimilated into Soviet calculations and was reflected in the planning for that operation

Sustainability and Viability

Mathematical calculation involving historical and modern operational analysis being basic to the Soviet concept of command and control, an understanding of it is the key to establishing how the Soviet Army assesses the sustainability of its formations and units in battle. It is on the basis of these calculations that 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, ie, 'the viability', of the Soviet armed forces in war. This provides a good example of how the Russians incorporate historical analysis into current operational doctrine.

The Russian term (and Soviet military concept) that most closely equates to ATO's 'sustainability' is '*Zhivuchest – viability*'. This term first appeared in its current general military meaning in the *Soviet Military Encyclopaedia of 1977*, along with several subordinate definitions.[5] In the 1983 edition of the *Soviet Military Encyclopaedic Dictionary* it is given extensive coverage, receiving proportionally very much more space that in the earlier *Military Encyclopaedia*[6] 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 of the Military Encyclopaedic 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 fulfil their appropriate military task).*

Subsidiary definitions expand and elucidate the term, by demonstrating its application in specific circumstances. The most important of these definitions reads:

> *'Zhivuchest' voysk (mil). The liability 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 Soviets have a comprehensive definition of the concept in which subjectivity has no place. If the concept does not require subjective judgement, then it must be objective;

5 *Sovetskaya Voyennaya Entsiklopediya, Vol. 3., 1977.*
6 *Voyennyy Entsiklopedicheskiy Slovar, Moscow: Voyenizdat, 1983, p. 256*

A right front view of A Soviet SA-8a Gecko amphibious low-altitude surface-to-air missile system vehicle with surveillance radar erected. This particular vehicle is not carrying any missiles. Photo U.S. Department of Defence, Wikimedia, Released

if it is objective it must be based on objective (mathematical) analysis and on objective data, on fact, not on guesswork or intuition.

The extent to which, to establish data, the Soviets 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 General A I Radziyevskiy in an article in *VIZh*, No. 6, 1977. He wrote: *'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.'* The high degree of agreement between his views and the encyclopaedia definition demonstrates the impact of the doctrinal approach. We have found no 'alternative views' on what constitutes sustainability in the Soviet military press. According to General Radziyevskiy, viability presupposes the existence of a rational organizational structure of units and formations. Improvements in the organizational structure of the various arms and services, he continued, made for new and better ways of conducting an offensive battle (operation), helping to reduce losses among Soviet troops and thus to improve their 'viability'. To demonstrate the point, he turned to military history. The following is a selection from the examples he chose to cite:

- ***Material factors:*** *Between July 1941 and July 1942 a Soviet 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. Whereas in July 1941 the division could fire from standard small arms a total of 140,430 rounds per minute by July 1942 this had risen to 198,470. The weight of the artillery salvo increased over the same period from 348kg to 460kg and the weight of the mortar salvo more than trebled from 200kg to 626kg.*

Between July 1942 and December 1944, the weight of the artillery and mortar salvo of a division increased from 1,086 to 1,589kg and by the end of the war it reached 2,040kg. At the same time mobility and manoeuvrability of the division increased.

- ***Organizational factors:*** *During the war, considerable changes took place in the organization of tank and mechanized formations. The experience of the first offensive operations of 1941and 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, ie, capable of greater sustainability. The question of force structuring occupied a great deal of General Radziyevskiy's attention in defining the parameters of 'viability'. He went on to stress the importance of the creation of the tank armies in 1943.*
- ***Military Art:*** *The development of the art of organizing and conducting battles and operations was a further key to sustainability. Planning, command and control, echeloning, and logistics developed to facilitate the implementation of one of the most important principles of Soviet military art: the concentration of pressure on a decisive spot at the right moment. A special place was given by General Radziycvskiy to air support. This was attained by devoting up to 40% of aircraft sorties to air superiority missions, and concentrating air power on main axes.*

As a wartime Army Chief-of-Staff, General Radziyevskiy 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 hammer home (the above details are only a short selection of his main points) 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 above all a positive approach based on military experience: the more effectively the enemy is hit, the less casualties he will inflict and therefore the longer can friendly operations be sustained. Furthermore, sustainability is quantifiable and it is historical analysis which has provided an important part of the statistical detail which is so necessary for accurate calculation and planning.

Soviet Methodology

The exploitation of this historical experience breaks down into four phases: (a) collection of data; (b) analysis of this 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 ('l'sGASA) are the repositories 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 and district, local, or national museums. These logs contain records of operational decisions, planning details and battles which provide much of the basic detail of the experience under study.

This detail, however, is 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. This also required the allocation of significant resources. Only because careful records were kept of every facet of the battlefield can General Radziyevskiy state with some confidence his facts about, for example, the growth in the weight of a divisional salvo. His approach to the problem - basing his analysis on quantifiable data - is very much in line with standard research procedures in the Soviet Union.

Historical data, even of very recent campaigns, is not enough. In addition to data on the performance of men, equipment, tactical plans, units, and formations in battle, theoretical and practical studies of new or proposed weapons and tactics are constantly being conducted on a wide scale in the Soviet Army. This modern data is 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 Soviets never forget that the performance of a weapon under range conditions or of a unit on exercise can be degraded by an order of magnitude once there is an enemy to shoot back.

The Russians are also keen not to underestimate the impact of technological change on the battlefield. Their respect for technology, in particular Western technology, is very strong indeed. Even without technological breakthroughs a general improvement in weapons performance can make for significant changes in the factors making up the tactical equations, and account is taken of this in tactical and operational planning. Nevertheless, 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 that they study and from which they draw lessons. That the subject matter of the problem may be qualitatively different is not in this instance seen to be relevant. An understanding of how the Red Army attempted to solve its organizational problems in 1925 or 1942 may help today's Soviet General Staff in their search for solutions to modern organizational problems, even though the details of the problem to be faced are very different.

When the data has been assembled, it must be analyzed and the analysis made available before experience can 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 about 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 successive generations of Soviet officers can benefit from the results of their research.

Norms

It is from its operational analysis of weapons and tactics combined with an analysis of historical experience that the Soviet Army establishes the standardized procedures and statistical averages which form the core of the Soviet command and control system. These procedures and statistical means are then applied via:

- *Battle Regulations which lay down rules to be followed and have the force of law (in contrast to U K Field Manuals, which merely offer advice) and*
- *Frequent issues of manuals and text books, which offer new ideas, pose new problems, and contain useful advice as to how the regulations might best be implemented.*

A large and lively military press provides an effective vehicle for the expression of more topical ideas) and suggestions as to 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.[7] The standards that have the force and authority of regulations (ie, law) are known as 'Norms'. For military purposes, norms are subdivided into three groups: operational and tactical (spatial and temporal) norms, norms of expenditure, and norms of supply.

Spatial norms relate to 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; scale of redeployments and regrouping; and other factors on an operational and tactical scale. Temporal norms are concerned with the time taken to complete a task, march or manoeuver, etc. These norms 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, and in some cases the degree of fatigue to be expected of soldiers after long periods in battle.

Expenditure 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,

7 For an authoritative statement of this see General Ye Ivanovskiy, (Commander in Chief Soviet Ground Forces), Vayrnnly Vestnik, 1.86, p. 3.

sub-units, units, formations, and armies. These norms, too, are laid down by the Soviet Ministry of Defence on the basis of researched and calculated data. Unit and formation expenditure rates are calculated either in numbers or by weight, or in fractions or multiples of standardized accounting quantities called a Boyevoy *KOM PLEKT (BK- 'Unit of Fire')* for ammunition and in *Zapravki, 'Refills'* for fuel.[8]

The amounts of ammunition and fuel required are worked out during the planning stages of an operation. 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 terrain manoeuvrability.

Norms of supply are the amount of materiel resources laid down for supply to servicemen, sub-units, units or formations and designated for use in a specific period of time. Under this category are included spare parts, types of instruments, materiel stores, ammunition, POL, and rations. Whereas expenditure norms are standardized data for what is necessary to accomplish a given task, norms of supply dictate what is actually available for use, sometimes less, sometimes more, than the mean.

Soviet military operational analysis abounds with well-researched and detailed tables[9] providing statistical data on details of last war operations. As such 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

8 A 'BK' is a given number of rounds for a particular weapon. For example, the BK for a modern D-30 122mm gun-howitzer is 80 rounds per gun, for a T-62 tank it is approximately 40 rounds, for a PKM machine-gun it is about 1,000 rounds. It is related to the ammunition carrying capacity of the modern vehicle and to 'historical' analysis of the average daily expenditure rates of the weapon (gun or tank) in 1944-5. A 'Fill' for a given vehicle is the amount of fuel it carries in its main tanks, but its range (determined by its fuel capacity) also takes into account 1944-5 experience.

9 Many such examples are available in English, collated and translated by Lieutenant Colonel C W Blandy, RA, Research Fellow, Soviet Studies Research Centre, as part of a study of Soviet Force Sustainability done for Shape Technical Centre.

A port bow view of a Soviet Balzam class intelligence collection ship underway. Photo U.S. Department of Defence, Wikimedia, Released

conditions. Today's tanks move faster (but not that much faster), today's guns shoot further, 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 on what was possible in real war. The value of the historical data in providing a statistical framework for the scale of future operations for a high-speed offensive is enormous. It was spelled out in an article in the *Soviet Military Historical Journal* in October 1978 (pp. 91-5).

Selection of Data

Soviet researchers select the historical material they 'mine' for basic data very carefully. For example, when investigating rates of advance, tank formations are studied more often than rifle (infantry) formations because they are more similar in armament and mobility to present-day formations. By examining the published data on rates of advance achieved in offensive operations of 1944/5 we can gain some idea of the rate of advance that 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 (GPW) was mainly that of exploiting the successful breakthrough (accomplished by combined-arms armies) - a function known then as a 'mobile group' and today as an 'operational manoeuvre group'. 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, be it relating to digging trenches or firing off shells to destroy an enemy position.

Many examples of statistical data from historical sources and modern manuals are available to demonstrate how the historical data and modern data (based on measurement of exercises and experiments) is complementary, combining to form a total data base necessary for an effective assessment of what is needed to ensure 'viability' in an operation. As a result of this work, the modern Soviet commander can quantify his requirements for the proposed battle or operation. Knowing how many hectares of target area of each kind the deployed enemy division presents, he can work out in advance, with a reasonable degree of reliability, just what he will need in the way of guns and ammunition or, given the availability of guns, shells and transport, he will know how large a sector of the enemy he can afford to attack with the resources available to him.

Just as important when trying to determine 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 for the modern commander who needs to make a scientific assessment of his ability to survive contact with the enemy. An analysis of the data for several operations provided by Ye I Smirnov in his Voyna I Voyennaya Meditsina (Moscow, Medizdat, 1979) shows that casualties in Soviet Armies and Fronts decreased relative to their initial strengths as Soviet superiority over the Germans increased.[10]

10 Lieutenant Colonel H F Stoeckli, Swiss Army, International Research Fellow, SSRC. 'Soviet Operational Planning: superiority ratios vs casualty rates', SSRC paper AA9, March 1985.

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) averaged 20 and 10 per cent 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. 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 today) calculated beforehand with the anticipation of a high degree of accuracy. Casualties in vehicles are as important to viability today as casualties in men. In this regard analysis of the viability of formations nowadays leans most heavily on the experience of the war-time tank corps and tank army as being the examples most relevant to modern levels of mechanisation.

The enormous quantity of statistical tables available demonstrates the breadth and depth of Soviet analysis. This material shows how a combination of historical data and modern research can provide concrete values enabling Soviet officers 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 and tactics and to refine norms for the future battlefield.

Other Applications

This procedure for the collection of data, its evaluation and the application of the lessons learned is also practised 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 AFVs, 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 all but the most modern 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 the vehicle is made. Equipment servicing can be planned at standard periods (e.g. every so many miles driven or hours flown, etc) 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 as a part of the procurement process.[11]

To make the staff officer's calculations and planning easier, the Soviets have developed mathematical formulae and nomograms as well as ready reference charts for almost every action that they must undertake during the operation. The more that

11 See Dr B S Butman, 'Soviet Shipbuilding and Ship Repair', January 1986, Spectrum Associates Incorporated, 2300 South 9th Street, Suite 120, Arlington, Virginia 22204.

Soviet Victory Day Parade in Red Square 1945 marking the end of the Great Patriotic War for the Soviet Union. Photo Ministry of Defence of the Russian Federation, Mil.ru, Creative Commons Attribution 4.0 International licence, Wikimedia

modern computers are introduced, the more they may replace paper and pencil calculations. However, computers are not yet as widespread in the Soviet Army as in some Western armies, and they still remain vulnerable to electronic interference or rough handling. Consequently, they are unlikely to replace the reference book completely in the immediate future. Not only do these procedures ensure a common and standard approach to a problem, and speed up the planning process, but because they ease the thought process when soldiers are under stress (as to battle drills), they make for greater human reliability.

The success of the Soviet armies over the flat plains of Northeast Europe in 1945 and the advent of the nuclear weapon contributed to reducing the appreciation of the importance of ground on operational planning. The return to concepts of conventional war in the early 1970s and the shock of the Syrian losses in 1973, where terrain factors demonstrated the inadequacy of certain Soviet drills and calculations, contributed to a Soviet reappraisal of the impact of terrain on tactics and operations. Historical analysis concentrated on Soviet experience in 1944 during operations in the Carpathians, the terrain of which bears a close resemblance to central West Germany. At the same time, detailed exercise experimentation and technical analyses were conducted to provide modern weapons data. It became clear that for both the tactical and the operational levels of war it is not only a ratio of forceto-force that is important but also one of force-tospace. This is particularly true not only in terrain, which is heavily featured, but also in terrain with many built-up areas. It is complicated by the high effectiveness of modern weapons, particularly antiarmour.

As a result, concern grew for the viability of Soviet armoured forces faced with overcoming a tactical defensive position. Debates[12] were launched in the Soviet military press to discuss the means of handling combined arms units, coordinating armour with

12 See for example, the author's 'Tactical Problems Facing the Soviet Army: Recent Debates in the Soviet Military Press', International Defense Review, 9.78 and 'Soviet Tactics for Overcoming NAT0 Anti-Tank Defense', US 'Infantry' Magazine, 7.79.

artillery, the role of initiative in battle, staff planning, and so on. Stress was put on the overwhelming need for speed and surprise, both at the tactical and at the operational level; though the experience of 1944-5 was still held as being valid at the operational scale, developments in weapons and the mechanization of forces had rendered much of the low-level tactical experience of the GPW less valid. It was no longer possible to rely solely on experience of 1944-5 to establish the viability of a tank or motor rifle battalion attacking a modern anti-tank defense. The painful experience of the Syrian T-62s and BMPs on the Golan Heights and of the Israeli armour in Sinai in October 1973 made this only too clear.

It became essential, as a result, to establish 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 trials, 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 1 below.

Table 1. Survival Chances of Tanks vs Long Range ATGW Tactical Defence [13] [14]

Tanks per km of front	ATGW per km of front			
	5	10	15	20
15	0.50	0.02		
20	0.75	0.10	0.01	
25	0.92	0.30	0.05	
30	0.98	0.50	0.10	
40	1	0.75	0.35	0.1

Let us take the following example to demonstrate the use of the table. If the attacker deploys 20 tanks per 1km against a defense 3km in depth with 5 ATGW per 1km of frontage (ie in a 1km X 3km area), the model shows that the tanks have a survival chance

13 General Kardaschevskiy, Voyennyy Vestnik, No. 7 1979, pp. 64-7.

14 That the value of 0.65 given in the original is probably a mistake or a 'fudge' is suggested by Lieutenant Colonel Stoeckli's mathematical analysis of the data, in his 'Soviet Tactical Planning: Overcoming Anti-Tank Defences', SSRC paper A69 January 1986.

of 75%, or that 5 of them (25%) will be destroyed during the battle. Doubling the density of ATGW against a given enemy, as illustrated above, more than doubles the efficiency of the defense.

Western computer simulations are consistent with this model for tank: ATGW superiority ratios of 3:1 to 4:1, reinforcing our confidence in the Soviet statistics. The high efficiency (up to 1.8 kills per weapon) is partly a result of the initial surprise that the long range ATGW can achieve, and due to the difficulty in destroying long-range ATGW at distances of 2-4km. This enables them to fire several times before effective fire can be returned and thus to increase their overall performance. For anti-tank weapons with a range of less than 2km, on the other hand, only the effect of surprise holds, tanks being able to return suppressive fire effectively.

It would appear from Soviet tactical studies that they expect a loss rate of 40-45% of AFVs in an attacking unit to bring that unit to a halt. Losses greater than this threaten to destroy the units' cohesion and fighting ability completely. The model, therefore, shapes the commander's tactics, leaving little to his choice. The model has another effect; it draws attention to NATO's reliance on the ATGW with its associated shaped-charge warhead, and it makes very clear the payoff of deploying varieties of armour resistant to this, such as laminated armour or active (explosive) armour. It makes it very easy to calculate the impact of this technical development on the battle.

Our course through this Soviet method of calculating the battlefield by means of a combination of military historical analysis and modern operational and technical analysis is almost complete. 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. Historical study and analysis of operations and battles of 1941/45 will also be of assistance to the commander in determining the best stratagems and options to adopt, but this also is more a feature of his general military education, helping him to develop his tactical/operational skill.

Organizational and Training Norms

Let us also remember our starting point. These studies and their resulting calculations are not only for the battlefield. 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.

To ensure the ability of the commander to check the basic values of the equations he is using, to have a ready means of evaluating the ability of his soldiers, units, and formations is the final factor in the 'viability' equation. Standard norms are set for the achievement of

A Soviet T62 Main Battle Tank lays a smokescreen during exercises in November 1984.
Photo U.S. Department of Defence, Wikimedia, Released

every military task, starting with the work of the humblest conscript. Every function that 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 sub-unit is also tested, but the real test of his competence is the level to which he can train his unit or sub-unit. If a given percentage of the unit's soldiers get 'excellent' grades, 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 the commander's 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 where his men are in their training program and how competent they are at their jobs.

Limiting the job a soldier has to do in battle is as important to viability as is having enough shells. 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 that they have learned to do thoroughly. The Soviet training system drills soldiers - 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 to make each soldier

T-55 tanks at Cincu Firing Range in Rumania during MILREX 07 military exercise. Photo Cătălin Ovreiu, Creative Commons Attribtution-Share Alike 3.0 Unported license, Wikimedia

versatile, as is the case with the 'regular' soldier in the US or the British Army. This goes hand in glove, of course, with the concept of a mass conscript army. The principle of teaching only one or two skills, but teaching them thoroughly, means that reservists will not forget the skills learned 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, the AK-47 or T-72, 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.

Conclusions

Our approach to the Soviet concept of sustainability or 'viability' has highlighted three areas where Soviet practice differs from NATO. Firstly, the impact of having a doctrinal approach is very clear in the vivid difference between the two definitions of sustainability/viability. The total integration of the elements of the Soviet 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. The second area is really the most important consequence of the first factor, namely that 'viability' is not, for the Soviet, a matter for 'subjective' judgement as it is for the NATO commander. It is calculated in great detail. The commander does not have to guess as to whether he can 'sustain' his battle; he will know on a scientific basis whether he can or not. The Soviet use of military history to enhance their understanding of procedures, help solve military problems, and establish a statistical data base for future planning is the third distinctive element of Soviet practice, and one which we might profitably emulate.

We must confess to being very impressed by the use that the Soviet Army makes of military history. While the NATO philosophy of 'subjective assessment' has certainly stood, at least the British Army, in good stead in a very large number of colonial campaigns and

limited wars over the years, I do think that there is room for emulating some aspects of this Soviet statistical approach, particularly in relation to armoured warfare at the operational scale. It may indeed be seen as no more than the rationalized exploitation of, perhaps, limited experience of general war, but even limited experience of high intensity warfare is becoming a rare and precious commodity. The Russians have been much better than us at recognizing its value.

We should also be grateful to the Soviet Army because the Soviet approach, quantifying the performance of both Warsaw Pact and NATO forces, allows us to understand not only how they assess their own ability but also how they assess ours.

Troops from 1 RRF and RWxY conduct a combined arms assault on Copehill Down urban operations training area. Photo Corporal Timothy Jones, Crown Copyright

Collapse of Floors, Leninakan, Armenia, damage from the December 1988 Spitak earthquake. Photo C.J. Langer. U.S. Geological Survey, Wikimedia, Released

Glasnost and the Attaché

This article by Major J N W Shakespeare, 2nd King Edward VII's Own Gurkha Rifles (The Sirmoor Rifles) was originally published in BAR 92, August 1989.

It was either ITN or BBC who flew into Yerevan in an Aeroflot IL-76 from London direct, recording the landing from the cockpit, and then afterwards, with all the rest of the world's television firemen, swarmed all over Armenia's earthquake zone and its capital city filming everyone and everything they wanted including Soviet curfew troops cordoning Yerevan's Theatre Square. Off limits to journalists and diplomats for more than two months due to the unrest over Nagorno-Karabakh, Armenia was suddenly open to foreigners again in the aftermath of the earthquake. I found myself among Soviet soldiers off-loading at the airport, being given a ride in a small passenger jet into Leninakan airfield, taking the local electric train, hitching rides in vehicles, passing through military checkpoints - suddenly there was no such thing as a *Zapretnaya Zona* (Forbidden Zone), involuntary entry into which had cost me a confrontation with the authorities on my last journey. The strangeness of this situation in the USSR was total. In the middle of the Soviet government centre in Leninakan were Austrian soldiers; there were French and Israeli military and para-military around the city, TV crews were filming rolling stock in railyards in this country where a snapshot of a girlfriend in front of the railway station could cost you a not-so-friendly exchange with the local police.

We drove to Leninakan in an antiquated Soviet jeep, I along with a Soviet journalist and a most helpful Armenian official, bumbling down the rutted road past aircraft and helicopters and the odd slightly damaged house. We joined the slowly moving traffic on the main road in to Armenia's second largest city. Nine days after the earthquake I had an idea of what it was like and wondered how I would find it. At first, it felt strange, because it almost seemed normal with trains, cars and people moving about and all the buildings apparently still there. Then we saw the odd coffin on the side of the road and soon, half hidden behind some blocks of flats, a pile of rubble with people standing around on it working with a crane. We passed lifeless shops, some more coffins; a whole pile of them knocked up from chipboard and painted in a hurry, and then a solid massive compacted ring of jumbled concrete slabs and girders along one side of the street. Opposite stood surviving six storey buildings. Side roads were half blocked off by collapsed multi-storey flats and vehicles were edging around the roadblock. Now there were drunken, misshapen buildings everywhere and people drained of expression and energy - the place no longer appeared real but looked like some film set.

We drove into a school yard and our driver, a survivor from the flats next door, invited me to get out and stand in this unbelievable scene. There were two women picking their way through a neat row of satchels, searching for belongings, mementos of their children. A few people were wandering atop this pile of broken concrete mixed with twisted metal and carpets, shoes, an overhead projector, school books and a wall map. Little coffins lay around empty except for the small broken bodies of two seven year old girls and a boy who lay there unclaimed. Dressed in their school clothes, covered in dirt and dust, evidence of an ordinary school morning interrupted and a life shattered so suddenly, a quick look at them

dispelled the surreal image and replaced it with an awful understanding that this was on the scale of tens of thousands.

I was very thankful to miss the horror of the place although an arm and a leg stuck out between two concrete slabs like some grotesque sandwich was still a shocking sight. A taxi driver who got to Leninakan just a few hours after the event said that his hair stood on end at the sights and sounds around him. The horror there and in Spitak is best left in the memories of the unfortunates who suffered it. Facile questions to confirm your worst imagination as to what it was like were just inappropriate. But if the horror was no longer so obvious, the suffering and devastation was everywhere on a unique scale. Experienced press men said that they had never seen destruction like it, destruction so total in the way that nine storey blocks of flats were reduced to a jumble of twisted metal a mere twenty feet high.

An air of depression and weariness hung over the place. After nine days the frenzied activity and the weeping and wailing had left the people drained and exhausted. They had listless, sad faces. It was cold and snowing. Groups of people sat around fires beside a huge collapsed building as workers struggled to extract their relatives from a cellar full of bodies - some sixty of them. Small family groups, survivors, were trudging towards the station, clutching a few belongings heading for a new life. The collapsed church, half an arch still standing, stood like a Dresden War Memorial, before it the people and vehicles in Lenin Square amongst the flotsam of discarded clothes, medicines, abandoned belongings, mud and yet more coffins.

Partial Collapse of Masonry Building, Spitak, Armenia.
Photo C.J. Langer, U.S. Geological Survey, Wikimedia, Released

The Armenian national spirit and their character was probably more evident in this time of crisis. All Armenia was involved in the tragedy. It is a small republic anyway but with the close relationships in their extended families many of them had lost relatives. Ordinarily full of feeling and expression they thanked you for your assistance to the Armenian nation and they were unstintingly generous and helpful to all foreigners. In turn they won the praise and respect of correspondents, streetwise television crews, foreign aid experts and any other visitors I came across. Very proud of their nationality and proud of their country, they all advocated a return visit in better times. I said I had every intention of doing so.

President Reagan says goodbye to Soviet General secretary Gorbachev after the last meeting at Hofdi House, Reykjavik, Iceland. White House Photo, Released

I had arrived in Moscow at the end of April, preceding the *razzmatazz* of the Reagan-Gorbachev summit by a few weeks that was, in turn, succeeded by the Party Conference, that June week of extraordinary political excitement in the capital. I was well aware that I was a privileged person to come to the USSR at the time of one of these great moments that have characterised Russian history. However, I did not realise then how the changes being effected would have a significant effect on the possibilities and parameters of my own business here. Conventional wisdom would have it that the military are a conservative breed in any country and that it will be years before new attitudes prevail through the Armed Forces of the Soviet Union. In the meantime, initiatives and bilateral activities multiply and perspectives have changed so that Western attachés have

found themselves engaged in work that has been quite out of the ordinary, a trend that for the moment seems set to continue.

In August I was lucky enough to be invited to represent the Embassy and join a delegation to Volgograd. My twenty four hours there is best covered by my diary entry of 29 August: 'This voice behind me asked what the hell was I doing or how the hell was I doing and I turned around to see an old friend from Mission days in Berlin, now a member of the US Inspection Team. Well, we could never have guessed six years ago that we would meet again in the centre of the Soviet missile test range at Kapustin Yar, deep in the heart of the Soviet Union.' And while Paul and I were catching up the dancing and singing continued for the United Nations delegation as we awaited the moment of firing. In this dog and pony show the main role was given to some sixty visiting UN and other national delegates like myself who had been invited to witness the destruction of three SS-20 missiles simultaneously in one big bang. A big bang does not last very long so around it the Soviets had fitted in a programme that entailed getting on and off our coaches some fourteen times, earnest study of how everything was to happen, a look at the missiles prepared for firing, the bang itself, a look at the crater and a distribution of presents and praise. All of this was designed so that the press, outnumbering the delegation two to one, would have a story and pictures. It was a thin story but it was a symbolic occasion and in the event the bang was spectacular. The day did make a historic event of real nuclear disarmament visible to the world. Clearly a public relations exercise, we were plied with lavish hospitality and the day was planned to perfection that not even a freak foul weather could ruin. The Soviets' initiative clearly paid dividends. The event also provided an opportunity to see Volgograd and to have more than just a fleeting contact with Soviet officers. Relations naturally warmed up as the day went on - many of them were very relaxed. All were well versed in arms control matters and were very keen to know what I thought and why, as they put it, 'The West was being so obstinate.'

Within three weeks I was again the recipient of excellent Soviet hospitality when I met up with forty nine other Stockholm observers in the VIP lounge at Moscow's Sheremetyevo Airport. Following a short welcome speech we were on our way by special Aeroflot flight to Minsk. Forty two days earlier the Soviet Union had notified other signatories of the Stockholm Agreement of their intention to hold an exercise of 21,000 troops in the area of Minsk and had invited these countries to send observers. This array of uniforms and rank from twenty-six different countries was the result.

Our next three days of observation provided an intensive programme. The morning of Day Two saw us on a Training Area near Minsk, on an observation or control platform in the centre of an open heath-like area some seven by four kilometres in which the action would take place. We were updated on the situation and then, our Soviet capes flapping in the cold win, we watched from our grandstand as a Tank and Motor Rifle Regiment of the Southern Division attacked the defensive positions around us. The assault was

An Mi-26 helicopter carries out an air landing assault demonstration during the MAKS Airshow 2013 Ramenskoye Airport, Russia. Photo Vitaly V. Kuzmin, Creative Commons Attribution-Share Alike 4.0 International licence, Wikimedia

deemed a success and the Division moved on northwards. With the tremendous amount of activity taking place around us it was a major task to see and note everything that was going on. The 'dynamics', as I had been promised by Soviet officers accompanying us, had clearly arrived and amidst a profusion of battle simulation explosives we saw what amounted to a tank battalion assault on our right and a motor rifle battalion on our left, followed by some regimental and divisional assets. We were given deliberately impressive demonstrations of battalion assaults, artillery and air defence deployments, engineer activity on the battlefield, forward recovery and even medevac. The same followed on the next day when we watched a meeting engagement between two tank regiments on a different, larger training area where again our observation point was like a grandstand in the middle of the battle. We saw the development of the engagement from Combat Reconnaissance Patrols to deployment of Advance Guard, Flanking Attack and follow on. Here again the text book tactics were followed rigidly that provided for another rather overtly impressive array of armoured vehicles over a small frontage supported by HIND and other aircraft. For the afternoon of Day Three we were in the centre of an air assault landing to see an imposing display of HIP, HOOK and HALO although all-in-all they brought in remarkable little for such lift capacity.

As a demonstration of Soviet tactics and the employment of their equipment the 'dynamics' of these two days were clearly designed to impress. However, it was an opportunity not to be missed: after all, even if they did appear to me rather more demonstration than exercise, three years ago a grandstand view of such an occasion was out of the question for Western observers.

The exercise provided a rare social contact with Soviet officers and soldiers. Jumping into a trench and talking to soldiers with a television camera pointed in your face does not necessarily lead to relaxed conversation nor does a ring of Soviet staff officers listening to the poor man's answers. However, there were opportunities, some chance, some arranged, some strained, some natural: they were all interesting. A buckwheat lunch in the field at the end of the exercise with airborne soldiers was a particularly memorable occasion - prompted, we are told, by Marshal Akhromeyev's lunch in the field with American soldiers at Fort Hood during his visit to the United States. A Soviet interpreter with excellent English and experience in dealing with Westerners or a soldier briefed for the occasion, all provide an opportunity for a better understanding of the Soviet military mind.

Heading back down Leningradsky Prospekt into Moscow at the end of the week I realised I had not seen what I had vaguely expected to see but, for all that, I was far from disappointed by the experience. I felt that talking to officers and men is at least as

Three Russian main battle tanks, T-90S, T-80U and T-90A line up for the finale of the First International Forum 'Engineering Technologies-2010' held in Zhukovsky near Moscow. Photo Photo Vitaly V. Kuzmin, Creative Commons Attribution-Share Alike 4.0 International licence, vitalykuzmin.net.

important as noting equipment and units seen and that this would contribute more to understanding the other's viewpoint and can really lead to confidence building, the raison d'etre of the Stockholm Document.

A month later I was back again in Minsk when Corporal Sidoronek, one time Polish soldier and member of our Eighth Army in North Africa and Italy, was presented with his British War Medals. And in December came the Armenia earthquake, a sudden change of itinerary from the Baltic States to Yerevan and an exchange of portfolio for one of liaison between local authorities and British aid groups. Without the new thinking of the Gorbachev years we would possibly have heard little about the earthquake, we would certainly not have seen the television coverage nor would we have seen British aid groups, diplomats and journalists in Armenia and I would still be waiting for my first visit to Yerevan.

Mr Shevardnadze's statement in September that there were very few real secrets left in the world anymore had not influenced the behaviour of the town Commandant with who I was confronted over rights of access some two months later. However, while attitudes may be slow to change there is no doubt that developments within the Soviet Union and in international relations will continue to alter the parameters and perspectives of attaché life in Moscow and I look forward to greater contact with the Soviet military.

Postscript

Some three months after this article was written we were called in to be told that eleven Soviets were being expelled from London. Since I had already attended the final and abrupt departure of first a Canadian and then an American colleague at Moscow's airport, grim reminders of the thinness of the thread on which an attaché's existence in the USSR depends, I could not say we were unprepared for it. Our hopes that it might not be us were finally shattered when the telephone beckoned me from the kitchen table late in the evening and twenty minutes later the Ambassador confirmed that we were expelled. We had two weeks. My overwhelming feeling was one of profound sadness. After an intense year we had some great friends in the foreign community and we had strong feelings for Moscow and some of its people. For us there was still so much to do, to see, so many opportunities to take. In this dynamic moment of Russian history it was a privilege to be living there in the heart of the political excitement and we knew it. It was a very bitter pill to swallow.

In two weeks we did what we could and said goodbye to friends and colleagues, all of whom gave us great support. Hardest of all were farewells to the Russians we knew. A final twist came at Passport Control when we were almost prevented from leaving the country from which I had been expelled. A typically Russian situation arose when the Sergeant of the Border Guards pointed out to me that the visa on my wife's passport made no mention of our youngest daughter. I had to agree with him. The Captain arrived. Did he know that I was expelled from the country and had to leave? No. The Colonel arrived and I explained the situation to him as well. Finally, just as the Ambassador was about to get involved, the passport was returned. Clara had been given a visa. She had entered the country and now she could leave.

We flew home with the Roxboroughs who had more to lose than anyone, having made a career in Soviet and Russian life and politics. His article in the *Sunday Times* reflected our hopes exactly - that the changing internal politics of the Soviet Union will one day come to mean that the institutions and attitudes of 'old thinking' that led to our tit-for-tat expulsion, will no longer have a significant influence on Soviet/Russian policy because then it might be possible for us to return.

Oct. 28, 1961. Soviet tanks near Checkpoint Charlie sit about 500 feet from the border with West Berlin. From the booklet "A City Torn Apart: Building of the Berlin Wall." Photo US Central Intelligence Agency, Released

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