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EVOLUTION UNDER FIRE: HOW SOVIET OPERATIONAL ART BECAME A SCIENCE

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Exercise Solo Flight

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EXERCISE *SOLO FLIGHT* – EXERCICE *SOLO FLIGHT*

**EVOLUTION UNDER FIRE: HOW SOVIET OPERATIONAL ART
BECAME A SCIENCE**

Maj S.G. Popowych

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The struggle of the *Wehrmacht* and the Red Army during the Second World War is a subject that typically divides western scholars into one of two camps. The first, and most prominent, attributes Soviet victory to the juggernaut effect of mass formations of Red Army soldiers and armour overwhelming a tactically superior enemy with little regard for their own casualties. This camp of scholarship formed the basis of longstanding public perception by virtue of being the first material available for consumption during the cold war years when many Soviet sources of information were beyond the reach of western scholars. Since the collapse of the Soviet Union, access to previously unavailable sources has given rise to a different view of the story that has come to show the Red Army in a more favourable light.

A balanced analysis of some critical battles reveals a degree of sophistication on the part of the Red Army that has served to dispel some of the notion that operational commanders were mere automatons who were not permitted to display any initiative. Notwithstanding arguments that this recent scholarship has presented, many stereotypical views of Soviet operations and tactics persist. Using the recent scholarship, this paper will seek to dispel a portion of the existing stereotypes by undertaking a critical examination on the manner in which the Red Army was transformed during the course of combat operations in the Second World War. In particular, the lens of force development will be applied to demonstrate that the Red Army operationalized dormant manoeuvre warfare doctrine in the context of continuous combat operations, taking a deliberate and measured approach to force development to optimize their military might.

This paper will consider the aspects of force generation, force development and force employment to demonstrate the sophistication and careful consideration that guided these activities which were previously viewed as ad hoc and sloppy. The first section will focus on mobilization rates with an emphasis on fielded strength of the force, demonstrating that overwhelming numbers did not practically materialize until later in the war than is popularly perceived. The second section will focus on the development of doctrine, showing how the Red Army adopted and then refined dormant manoeuvre doctrine, ultimately arriving at the well-developed concept of Deep Operations that was grounded in the lessons learned in hard combat.

As doctrine evolved, new force structures were conceived of in order to support it. The evolution of force structure through the course of several major battles will show the careful consideration that went into the deployment of Soviet combat capability. This line of argument will clearly show that Red Army planning factors were far more evolved than the popularly conceived attrition based approaches that have been articulated in the past. Finally, analysis of Red Army command and control will seek to reinforce the notion of a deliberate approach to operations during the course of the war. New force structures, combined with the growing experience level resident within the officer corps enabled delegation of authority to lower levels, contrary to popular perception of rigid adherence to orders with no regard to circumstance on the part of Red Army commanders. Though an examination of the various functions of force development, the Soviet tendency to study and apply lessons learned with mathematical precision not only represented a sophisticated process, it set the foundation for Soviet Deep Operations

doctrine that challenged the North Atlantic Treaty Organization alliance for decades to come.

FORCE GENERATION

The conflict between Germany and the Soviet Union went beyond the battlefield, affecting all aspects of the respective nations. The herculean Soviet effort to move industrial facilities and equipment beyond the reach of the German advance represents one well known example of this widespread impact of the war. Even more impressive was the manner in which the Soviet Union mobilized its population, drawing on its sizeable population to fill the ranks of the Red Army. The following examination of force generation activities will demonstrate that despite a massive ability to field replacement units, the Soviet Union did not possess a decisive advantage in manpower until later in the War than is commonly thought. The common perception has been shaped by early scholarship such as Earl Ziemke's assertion that the Soviet "capacity to sacrifice lives and territory was in fact a historic Russian strategic asset."¹ Such misperception is not altogether surprising given that mobilization rates were underestimated by both sides throughout the course of the war thus skewing the early writings on the subject based primarily on German sources.²

The Soviet mobilization plan was in fact well considered and based on the existing military theory of the day. The plan called for a total mobilization of the population that could then be directed by the centrally controlled communist

¹ Earl Frederick Ziemke, *Stalingrad to Berlin: The German Defeat in the East* (Washington: Office of the Chief of Military History, U.S. Army; for sale by the Supt. of Docs., U.S. Govt. Print. Off., 1968), 23.

² David M. Glantz, *Kharkov 1942: Anatomy of a Military Disaster* (Rockville Centre, NY: Sarpedon, 1998), 18.

government.³ The ability to rapidly field replacement units enabled the Red Army to survive the crushing blows that marked the opening of hostilities in 1941 but it was not until the counteroffensive at Kursk in 1943 that the manpower advantage had decisive effect on the prosecution of an offensive operation.⁴ The Red Army, despite the activation of some 800,000 reservists, was not fully mobilized at the start of the war.⁵ Germany launched Operation BARBAROSSA with a marked superiority in fielded forces, particularly when qualitative factors are considered. Arrayed against the Wehrmacht strength of 3, 050 000 was a fielded Soviet force of 2 900 000.⁶ In the early stages of the invasion, the Red Army lost over 600,000 men and much critical equipment.⁷ The Soviet mobilization plan quickly provided a vast quantity of operational reserves, providing 194 newly formed divisions and 94 brigades during 1941 alone.⁸ Red Army fielded strength subsequently grew from 5,373,000 in 1941 to over 10.9 million in 1942.⁹ This mobilization again permitted the Red Army to absorb 1943 losses of over 1,977,000 troops, most of which were incurred within the first half of the year.¹⁰ The

³ Bryan I. Fugate and L. S. Dvoretzki, *Thunder on the Dnepr: Zhukov, Stalin, and the Defeat of Hitler's Blitzkrieg* (Novato, CA: Presidio Press, 1997), 18.

⁴ Trevor Nevitt Dupuy and Paul Martell, *Great Battles on the Eastern Front: The Soviet-German War, 1941-1945* (Indianapolis: Bobbs-Merrill, 1982), 91.

⁵ David M. Glantz, *The Battle for Leningrad, 1941-1944* (Lawrence: University Press of Kansas, 2002), 22.

⁶ This numerical superiority was amplified with both the quantity (3350 versus 1800) of tanks and quality (Pz III versus T26 with only a few newer tanks) advantage further skewing favour to the side of the Wehrmacht. Dupuy and Martell, *Great Battles on the Eastern Front: The Soviet-German War, 1941-1945*, 22.

⁷ Sources vary in this regard and the source cited lists a German claim of capturing 665,000 prisoners. Soviet sources refute this figure but do provide a contested figure of 527,000 though the author does suggest this figure could be on the conservative end by at least 100,000. Geoffrey Jukes, *The Defense of Moscow*, Vol. 13 (New York: Ballantine Books, 1970), 23.

⁸ Fugate and Dvoretzki, *Thunder on the Dnepr: Zhukov, Stalin, and the Defeat of Hitler's Blitzkrieg*, 132.

⁹ *Ibid.*, 114.

¹⁰ Walter S. Dunn, *Kursk: Hitler's Gamble, 1943* (Westport Conn.: Praeger, 1997), 21.

staggering scale of such numbers has largely contributed to the perception that the Red Army simply overwhelmed by mass.

To dispel the perception that the Wehrmacht simply ran out of ammunition in the face of the Red Army hordes it is necessary to look at how units formed through the mobilization process were committed and examine the fielded combat strength at various stages of the war. While it is possible to survive sustained combat by replacing losses, it takes much more to actually overwhelm an adversary. The large number of reserves in existence or newly created in 1941 were deployed to battle piecemeal, often plugging holes to replace losses rather than being employed to achieve decisive effect.¹¹ The 1941 losses were largely attributable to the Red Army being overmatched and ill prepared for the combat it was facing. Consequently, reinforcements were committed and employed out of desperation. Many initial losses came in the form of forces who surrendered once they became encircled.¹² Later losses up until the end of 1942 were at least partially attributable to weak leadership at the Operational level as observed at Kharkov. Losses at Stalingrad again placed substantial demand on the mobilization system but signs exist that at least in some sectors, a more deliberate approach was taken with respect to the fielding of replacements early on. Prior to the failed 1942 operation at Kharkov, replacement formations underwent tactical training under direction of front command prior to going into battle.¹³ In addition to improved training, the fact that continual modification in force structure was ongoing, even among newly formed units, lends support to the notion of a well-considered mobilization plan.¹⁴ Mobilized units reflected

¹¹ Glantz, *Kharkov 1942: Anatomy of a Military Disaster*, 70.

¹² Jukes, *The Defense of Moscow*, 14.

¹³ Glantz, *Kharkov 1942: Anatomy of a Military Disaster*, 48.

¹⁴ Dunn, *Kursk: Hitler's Gamble, 1943*, 29.

new Red Army approaches, specifically with respect to the composition of Tank and mechanized units.¹⁵

Despite fielding a force that was quickly numerically superior to the Wehrmacht, it is only prior to the counteroffensive at Kursk, namely Operations KUTUZOV and RUMYANTSEV where the Soviets carefully and methodically massed an overwhelming force for the operational level assault. In July 1943 the Red Army concentrated 1.25 million men against the Wehrmacht strength of 600,000.¹⁶ This victory paved the way for subsequent operations where the Red Army would dictate the terms of engagement, and represents a more favourable view of the Red Army than those evoked by often used phrases such as the “Soviet Steamroller”.¹⁷ There remains no doubt that the manpower struggle was ultimately won by the Soviet Union, owing to a strategy that correctly assessed the nature of the war that would be fought and was more than haphazard committal of conscripts to battle. This strategy initially enabled the Red Army to survive despite suffering horrendous losses. Later, as the Red Army evolved, the mobilization plan provided commanders the ability to mass combat power in key sectors, enabling the strategic command to achieve decisive effect.

DOCTRINAL DEVELOPMENT

The notion that the Red Army simply overwhelmed the Wehrmacht with decisive numbers is closely linked with the perception that Soviet tactics were stubborn,

¹⁵ David M. Glantz and Jonathan M. House, *When Titans Clashed: How the Red Army Stopped Hitler* (Lawrence, Kan.: University Press of Kansas, 1995), 155.

¹⁶ Adding to the disparity was a ratio of 22,000 Red Army assault guns and mortars to the German 7,000 along with 3,000 Red Army tanks as compared to 1,200 German tanks. Dupuy and Martell, *Great Battles on the Eastern Front: The Soviet-German War, 1941-1945*, 91.

¹⁷ Earl Frederick Ziemke and Time-Life Books, *The Soviet Juggernaut* (Alexandria, Va.: Time-Life Books, 1980), 208.

simplistic, unrefined and executed by mere automatons.¹⁸ When describing defensive strategy leading up to the battle of Moscow, Zeimke comments that “The strategy was still the same: meet the enemy head-on, wear him down, stop him, then counterattack.”¹⁹ With respect to Red Army tactics over the course of the war, this notion is utterly false yet has proven hard to dispel, largely owing to the casualty rates experienced by the Soviet Union and overstatement of Wehrmacht combat capability.²⁰ This section of the paper will discuss the evolution of Soviet doctrine through the course of the war, demonstrating that the Red Army was in fact a highly effective learning organization as it reintroduced and then refined maneuver warfare doctrine.

After the Russian civil war, a rich body of scholarship was produced in the Soviet Union that considered manoeuver warfare, deep battle concepts and operational encirclement manoeuvres. Writings by Sharposhnikov, Svechin, Trifilandov and Tukhachevskii (to name only a few) made significant contributions to the school of military thought concerning the nature of future conflict and what kind of forces would be needed to fight such a conflict. However, owing to the climate that existed during the infamous purges, the writings of many were discredited and those who supported certain schools of thought were persecuted.²¹ The purges deprived the Red Army of a sound doctrinal foundation, causing a woeful unpreparedness for the type of combat that was thrust upon it in 1941.

¹⁸ Mary R. Habeck, *Storm of Steel: The Development of Armor Doctrine in Germany and the Soviet Union, 1919-1939* (Ithaca, N.Y.: Cornell University Press, 2003), 88.

¹⁹ Ziemke, *Stalingrad to Berlin: The German Defeat in the East*, 30.

²⁰ R. J. Overy, *Why the Allies Won*, 2nd ed. (London: Pimlico, 2006), 120.

²¹ Habeck, *Storm of Steel: The Development of Armor Doctrine in Germany and the Soviet Union, 1919-1939*, xvii.

Deep Battle type doctrine advocated by Tukhachevskii was a mature concept within the Red Army in the 1930's to the point that it was trialled during field manoeuvres. In many respects, Red Army doctrinal development paralleled the path that German doctrine took during the pre-war years.²² Numerous pressures including poor unit showings on field maneuvers, technical limitations of existing tanks and experience during the Spanish civil war caused the doctrine to be scrapped in 1938.²³ Red Army doctrine at the outset of hostilities saw armour formations subordinated to the infantry and emphasized defensive operations to include active defence activities as opposed to Deep Operations.²⁴ Despite advocates like Zhukov who argued for a more offensive role, to include the mass use of tanks²⁵, the largest armoured formation in existence at the start of the war was a mechanized Corps, though this was largely a hollow force.²⁶ Tanks were dispersed piecemeal and simply viewed as infantry support weapons with little thought given to coordinated and concentrated use of Armour in the close or deep fight. The Red Army was simply not structured for mobile tank warfare, owing to the lack of a strong doctrinal foundation.

Going beyond doctrine and the state of mobilization in the Red Army at the start of the war, the extent to which Soviet leadership paid little regard for casualties also serves to undermine the perceived capability of the Red Army. Early in the war, draconian orders threatening execution for soldiers or commanders who retreated were

²² *Ibid.*, 22.

²³ *Ibid.*, 266.

²⁴ Fugate and Dvoretzki, *Thunder on the Dnepr: Zhukov, Stalin, and the Defeat of Hitler's Blitzkrieg*, 24.

²⁵ Georgii Konstantinovich Zhukov, *The Memoirs of Marshal Zhukov* [Vospominaniia i razmyshleniia.], 1 American ed. (New York: Delacorte Press, 1971), 236.

²⁶ Glantz and House, *When Titans Clashed: How the Red Army Stopped Hitler*, 34.

commonplace.²⁷ These orders paid little regard for the tactical situation and there are many instances of futile counterattacks being ordered with little chance of success.²⁸ The disaster at Kharkov in 1942 is an often cited example of an ill-conceived offensive that ignored operational reality and cost the Red Army over 250 000 soldiers.²⁹ When directing Operation MARS, one of the Red Army's most capable leaders, Marshall Zhukov, is often criticized for suffering heavy losses through his insistence in pursuing continued offensive operations with little chance of success.³⁰ These are but a few examples among many of circumstances cited by critics of the Red Army, often as a mechanism to elevate the status of the Wehrmacht or extoll the virtues of *Blitzkrieg*.

The reality of doctrinal matters and the Red Army approach to fighting is that it evolved rapidly and steadily through the course of fighting, a significant feat given the scale of the challenge involved. Not only did the Red Army analyze operational experience successfully, it implemented entirely new force structures that aligned to evolving doctrine. It is somewhat of an understatement to assert that the task of applying a lessons learned process within an organization the size of the Red Army in time of war was a gargantuan one. Notwithstanding the challenge, the Red Army established a process that saw data gathered from operational and tactical combat forces, analyzed it and made recommendations. These recommendations were often implemented in the force generation apparatus and the fighting force simultaneously. If the process is at all in doubt, the result surely cannot be. By late 1943, the Red Army was able to dictate the

²⁷ Glantz, *The Battle for Leningrad, 1941-1944*, 81.

²⁸ Fugate and Dvoretzki, *Thunder on the Dnepr: Zhukov, Stalin, and the Defeat of Hitler's Blitzkrieg*, 141.

²⁹ Glantz, *Kharkov 1942: Anatomy of a Military Disaster*, 239.

³⁰ This argument often neglects the degree to which Zhukov found it necessary to press his operations to tie up German reserves from interfering with the breakout at Stalingrad. Glantz and House, *When Titans Clashed: How the Red Army Stopped Hitler*, 139.

time and place of engagement for the vast majority of the remainder of the war. It had developed and implemented a way of fighting completely different from that which was formally practiced only 2 years prior, setting the foundations for Deep Operations doctrine that would later become formally codified within Red Army publications.

As the threat posed by the success of Operation BARBAROSSA became painfully evident to the Soviet high command, so did the need to change the way in which the Red Army needed to counter the threat. It is in fact as early as the battle of Moscow where the earliest signs exist that commanders make an attempt to revive the dormant notion of deep battle type doctrine. Glantz and House assert that it is here that the grouping of forces under General Belov, commander of 2nd Cavalry Corps, represented an effort to produce a cavalry mechanized group for deep penetrations.³¹ The task of the commanders in adapting to the threat was made easier by the formal establishment of a system designed to aid in using experience to guide future action.

In November 1942 the General Staff ordered the creation of a system for collecting, analyzing and generalizing war experience to enable the Red Army to adjust to the changing nature of the war. . . . After the outbreak of war in 1941, the General staff encouraged operating fronts to institute their own programs for analysing war experiences.³²

The output of this process ranged from guidance to commanders as to how operations might be planned and coordinated to tactical guidance for sighting defensive positions.³³ Many of these lessons were distributed in the form of easy to digest pamphlets, maximizing the utility of the product. The analysis of war experience continued throughout the war and took on increasingly detailed forms.

³¹ *Ibid.*, 86.

³² Harold S. Orenstein, *Soviet Documents on the use of War Experience*, Vol. 1 (London ; Portland, Or.: Frank Cass, 1991), xvii.

³³ *Ibid.*

The Russians used a formula for the assignment of antitank guns based on the number of tanks expected, the number of rounds required to stop one enemy tank, the number of rounds a gun could fire per minute, the maximum distance at which each type of tank could be destroyed, and the distance a tank could move in one minute. This calculation indicated the number of guns required.³⁴

This mathematical analysis was applied across all manner of Army activities whose increased operations provided further validation and refinement as the war continued on. Fewer than two years after the implementation of a process designed to analyse war experience, the Red Army successfully executed the June 1944 Byelorussian offensive, coordinating vast numbers of well thought out formations to achieve decisive effect.³⁵ This operation was governed by principles of the deep battle and had begun to look similar to that which would be prescribed by the Deep Operations doctrine of the future. Operation BAGRATION drove the Wehrmacht back to the Operation BARBAROSSA starting point, a dramatic reversal against an adversary who was still operationally dangerous and tactically brilliant. It must be remembered that it was the same Wehrmacht who, less than 3 years earlier, had driven the Red Army the same distance to the very gates of Moscow in less than five months. This dramatic reversal was not born of chance, rather a deliberate and laborious effort on the part of the Red Army to transform itself. The first step in this process was analysis, a step the Red Army performed with particular proficiency. The result was a firm foundation for future doctrine that the Red Army grounded in statistical fact, giving commander's confidence in their way of fighting by the end of the war.

³⁴ Dunn, *Kursk: Hitler's Gamble, 1943*, 22.

³⁵ Glantz and House, *When Titans Clashed: How the Red Army Stopped Hitler*, 205.

Research has revealed virtually no comparable effort on the part of the Wehrmacht to undertake similar efforts to rethink their method of fighting, even once the tide of operations gradually turned in favour of the Red Army. Some examples exist of tactical adaptations to Wehrmacht defensive layouts in response to Soviet superiority³⁶ but there is no accompanying narrative of a larger realigning of army operations. This can be explained by the fact that Wehrmacht doctrine was relevant to the type of war being conducted and that in general they had the technology to prosecute their doctrine. The aim of this portion of the essay has not been to debate the root causes of German defeat; rather it has been to show that the Red Army applied a rigorous process to address a deficiency in its doctrine. As would seem evident, Red Army success hinged upon far more than simply adopting a transformational mindset. The true test was to operationalize the concept practically, necessitating a broader change in the structure of the Red Army.

FORCE STRUCTURE DEVELOPMENT

Having established that Red Army commanders recognized a need to change their force and implemented a mechanism to codify the lessons of combat it is now possible to examine the manner in which change was implemented. More specifically, the following portion of the paper will examine the manner in which operational concepts associated with Deep Operations theory were implemented through modifications in force structure along with command and control architecture. Given the scope and scale of transformation required, change could not occur immediately and several incremental

³⁶ J. P. Harris and F. H. Toase, *Armoured Warfare* (New York: St. Martin's Press, 1990), 106.

steps were taken to align the force structure to doctrine. These measures were not taken haphazardly; rather the Red Army's interim force structures represented the most that could reasonably be achieved at any given moment in time. Given the constraints applied by technological development, ongoing major combat operations and leadership competency at the emerging operational level, Red Army transformation took a balanced form limited more by physical constraints rather than lack of vision or intellectual framework.

At this stage of discussion, it is useful to highlight the key principles of Deep Operations theory with a view to noting what changes to Red Army force structure those dictated. Only then is it possible to critically examine the transformation efforts and determine the degree to which they may be considered deliberate and well thought out. Deep Operations theory was based on an overarching principle of inducing shock (*udar*) into the enemy system and defined three elements of operational maneuver designed to achieve this. These elements were fragmenting strike, simultaneity and momentum and it was these elements that would necessitate new force structures that represented practical mechanisms to achieve the desired shock effect.³⁷ The four familiar combat groupings prescribed by Deep Operations doctrine were derived from the elements of operational manoeuvre, namely the shock element, holding group, artillery group and reserve.³⁸ Red Army efforts to implement these groupings have been described by some as taking a trial and error or experimental approach.³⁹ Closer consideration suggests that the only major limitation in fielding the prescribed groupings arose from material or physical limitations

³⁷ Shimon Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory* (London ; Portland, OR: Frank Cass, 1997), 220.

³⁸ *Ibid.*, 188.

³⁹ Glantz and House, *When Titans Clashed: How the Red Army Stopped Hitler*, 103.

rather than intellectual ones.⁴⁰ To be sure, the lessons of combat played a key role in refining the specific application of principle, but refinement should be viewed as such and not be confused with a haphazard approach.

It is as early as December 1941 where the concept of a shock group is first implemented in vicinity of Moscow, albeit in rudimentary form. At Moscow, the formation of a shock group simply referred to the approach of concentrating full strength units at certain points as opposed to the task tailored grouping of a dedicated unit to achieve the effect.⁴¹ Such employment enabled Red Army units to break through the tactical zone of enemy defences by overwhelming them though the Red Army force structure did not enable commanders to develop momentum required to achieve operational manoeuvres such as encirclement. Early experiences indicated that mobility among infantry formations during breakthrough operations was a limitation as was the lack of massed armour to achieve decisive effect. Both of these elements would have to be resolved in order to properly employ shock groupings in the deep battle. While lend-lease equipment would give a slight mobility advantage to Infantry units⁴², the organization of tank formations still needed development.

The failure at Kharkov can sometimes serve to portray the Red Army as an inept organization, with much of its combat power having been committed to battle piecemeal, in a manner that failed to generate operational momentum. Here, the failure is not one born of force structure; it is primarily attributable to a lack of experience with operational art on the part of Red Army commanders. From a structure standpoint, between December 1941 and April 1942, the Tank Corps had been established and fielded in time

⁴⁰ Harris and Toase, *Armoured Warfare*, 94.

⁴¹ Glantz and House, *When Titans Clashed: How the Red Army Stopped Hitler*, 100.

⁴² Dunn, *Kursk: Hitler's Gamble, 1943*, 187.

for the Kharkov operation. This formation theoretically enabled mass employment of armour and was made even more robust by the inclusion of more than a Brigade of motorized infantry.⁴³ Structural aspects of the newly established formation were still somewhat weak. The 1942 Tank Corps possessed no integral logistical support while some of the infantry still lacked mobility support.⁴⁴ Even at Stalingrad, the progress of breakthrough forces was inhibited by maintenance issues, though it did not completely compromise the Red Army from achieving encirclement.⁴⁵ When analysing the performance of Armour groupings at Kharkov it is more telling to examine the missions they were assigned than to look at structural weakness. The majority of Armour Brigades (10 out of 19) available for the assault were subordinate to infantry formations and were employed in a supporting role tasked primarily with achieving the breakthrough.⁴⁶ The misemployment of tank formations resulted in a fundamental inability to exploit breakthrough and left few independent manoeuvre formations of armour available to operate in the rear of the tactical defensive zone. Clearly there was more to implementing the deep battle doctrine than establishing combat groupings and Red Army commanders had further lessons to learn in terms of how to employ and coordinate shock formations on the battlefield.

By 1943, the Red Army had made additional refinements to force structure, creating the Tank Army⁴⁷ and modifying the structure of tank destroyer units to maximize on new technological characteristics of anti-tank weapons. Substantially higher levels of field artillery were now present on the field, a development stemming from the

⁴³ Glantz, *Kharkov 1942: Anatomy of a Military Disaster*, 71.

⁴⁴ *Ibid.*, 73

⁴⁵ Glantz and House, *When Titans Clashed: How the Red Army Stopped Hitler*, 132.

⁴⁶ Glantz, *Kharkov 1942: Anatomy of a Military Disaster*, 234.

⁴⁷ Dunn, *Kursk: Hitler's Gamble, 1943*, 74.

lessons learned in 1942.⁴⁸ Given the scale and intensity of combat, the defensive phase of the Kursk engagement provided many valuable lessons for the battlefield calculations concerning tank versus anti-tank formations. The counteroffensive phase of Kursk presents evidence of increased competency with respect to the handling of Tank formations on the part of Red Army commanders. Breakthroughs were successfully exploited and the Wehrmacht forces faced real threat of operational encirclement.⁴⁹ By the end of 1943 the Red Army possessed the advantage in manpower, had aligned the structure of Armour formations to doctrinal principles and possessed growing numbers of competent leaders at progressively lower levels of command. By the spring of 1944, these elements would combine to achieve decisive effect during Operation BAGRATION where the Red Army truly became masters of the operational level of war.

COMMAND AND CONTROL DEVELOPMENT

Much has been said, or rather speculated as to the quality of Red Army leadership, even during the latter stages of the war. For instance, Earl Ziemke asserted that:

The great and persistent Soviet weakness was lack of initiative at all levels, which resulted in dogmatism, slavish dependence on orders from the top, and preference for the fixed and approved formula even when it was contradicted by reason or experience.⁵⁰

While it is clear that significant experiential gaps must have existed throughout the war, it is the perception that Red Army commanders were simple drones that this section will

⁴⁸ Orenstein, *Soviet Documents on the use of War Experience*, 49.

⁴⁹ Dupuy and Martell, *Great Battles on the Eastern Front: The Soviet-German War, 1941-1945*, 93.

⁵⁰ Ziemke, *Stalingrad to Berlin: The German Defeat in the East*, 24.

seek to dispel. As a complement to the previous analysis of force structure evolution, the development of new command and control mechanisms was a necessary step in the effective employment of combat formations to fulfill the roles required by deep battle doctrine. The factors surrounding the evolution of Red Army command and control resulted in the formal codification of the Soviet conception of the operational level of war as a specific unit with specific geographical constraints.⁵¹ This result was not arrived at by accident nor was it a result of poor quality leadership; rather the final doctrine related to command and control represented the embodiment of what Red Army commanders had determined to be a winning formula by the end of the Great Patriotic War.

As senior Red Army commanders came to understand changes necessitated by the adoption of a deep battle doctrine, it became evident that new methods of directing the battle would need to be developed as well. As has been stated, at the outset of hostilities Red Army tank formations were subordinated to infantry units. The basic building block of the Red Army was the Rifle Division and the commonly held view for the employment of tanks was as an infantry support weapon. Deep battle doctrine logically required forces that could achieve a breakthrough, preserve the penetration and exploit the gap to engage the opponent's operational reserves. These tasks required structural, technical as well as personnel changes within the ranks of the Red Army to include more advanced training. Tukhachevskii succinctly summarized the challenge inherent to command and control:

Commanding the deep battle and engagements or operations in depth is a very difficult matter – and not just because of the complex communications required. That problem could be solved by radio, aircraft and motor vehicles. What makes operational command complex in practical terms is the synchronization of such heterogeneous actions as landing by airborne troops, tank breakthroughs, air bombing actions, the

⁵¹ Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory*, 220.

artillery battle, infantry actions and so on. It will take far reaching training to perfect the apparatus of command and control and prepare for its new tasks.⁵²

In the face of rapid mobilization of Soviet forces, combat losses and a tank service that had suffered to a greater extent than did the other services under the purges⁵³, the central command (STAVKA) had few initial options with respect to the direction of field forces. The handling of Red Army units, particularly at the outset of war is the prime contributing factor to the view of junior commanders as mindless leaders. Marshall Timoshenko noted in the pre-war years that “there is no mindset to implicitly, quickly and precisely obey orders”⁵⁴ reflecting a view of what was expected of the Soviet junior leader. In 1941, recognizing the lack of experience among newly generated units, the STAVKA eliminated the Corps level of command as it was believed that inexperienced officers could better control divisions, leaving the higher level of control to a central authority.⁵⁵ This approach was directly at odds with what deep operations required but was the only real option during the first period of the war.

Experience would eventually come to benefit Red Army Commanders and strategic command would align to reflect this fact, evidenced by the eventual formation of Tank corps and armies previously highlighted in this paper. The best officers were recruited for tank units, reversing some of the damage done by the purges.⁵⁶ Experience levels of within both the command and staff domains improved during operations at Kharkov and Kursk, setting the stage for dominant actions in 1944. Marshall Zhukov

⁵² *Ibid.*, 234.

⁵³ Habeck, *Storm of Steel: The Development of Armor Doctrine in Germany and the Soviet Union, 1919-1939*, 248.

⁵⁴ Fugate and Dvoretzki, *Thunder on the Dnepr: Zhukov, Stalin, and the Defeat of Hitler's Blitzkrieg*, 79.

⁵⁵ Glantz and House, *When Titans Clashed: How the Red Army Stopped Hitler*, 65.

⁵⁶ Harris and Toase, *Armoured Warfare*, 95.

noted that during the battle of Kursk that the “strategic and operational-tactical commands matured enormously.”⁵⁷ When comparing the relative level of capability resident in the Red Army leadership from the defense of Moscow to the Kursk counteroffensive he states:

. . . seventeen weakened field armies without special tank units took part in the defence of Moscow. . . . but in the Kursk operations twenty two full strength field armies, five tank armies and six air armies and long range bomber units participated⁵⁸

If the mere scale associated with the effective coordination and prosecution of combat operations with such a force does not necessitate competent lower levels of command, the development of the concept of *inisiativa* as part of deep battle should help to describe the Red Army aspiration for junior leaders. The term *inisiativa* refers to an intellectual expectation that a tactical commander would analyse a chaotic situation, select a correct course of action from a limited menu of options and prosecute the selected option in a manner that accomplished his immediate mission. The immediate mission needed to be completed in a way that supported the subsequent mission consistent with the operational aim.⁵⁹ This leadership paradigm does not reflect blind obedience or rule out the application of initiative at lower levels and is not entirely dissimilar from the principle of mission command commonly practiced by Western militaries.

The seemingly rigid scope of operational level employment of combat forces embedded in Deep Operations doctrine is not a phenomenon rooted in a fundamental belief in the inability of the Red Army soldier to independently succeed. More relevant to the command and control structure is the degree to which numerous operational level

⁵⁷ Georgij Konstantinovich Zhukov and Harrison E. Salisbury, *Marshal Zhukov's Greatest Battles*, 1 Cooper Square Press ed. (New York: Cooper Square Press, 2002; 1969), 256.

⁵⁸ *Ibid.*, 256.

⁵⁹ Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory*, 222.

combat actions provided realistic experience regarding force ratios, time and space limits and what could be reasonably expected of combat units. The drone argument negates all of the above factors in favour of an over simplification of the tactics employed. Additionally, any analysis of experience levels among leadership that fails to account for combat losses must be considered as incomplete as it cannot be expected that newly mobilized formations would possess the same degree of competence as regular units. While one could reduce the scale of the Soviet war machine to nothing more than an extreme manifestation of industrial warfare⁶⁰, requiring simplistic controls to be implemented by unimaginative means, the reality is more complex. Red Army commanders had a much better understanding of the battlefield and its complexities than early scholarship generally attributes to them.⁶¹ Additionally, the staff planning required to synchronize the movement of large scale combat groupings across bridgeheads and through breakthrough sectors could have only be achieved through dedicated and competent effort. Arguments advocating the view of faceless Red Army leaders fighting blindly neglect to account for how marginally competent officers could have coordinated complicated operational maneuvers involving millions of soldiers. One must be left to conclude that Divisional leaders grew increasingly competent and the highly structured nature of Red Army orders stemmed from a highly developed vision of the battlespace. This vision was validated by combat data which enabled Red Army planners to reasonably predict outcomes and issue direction accordingly. Such structure necessitates rather than negates the need for skilled leadership within a massive military machine by virtue of scale and complexity alone.

⁶⁰ Ziemke, *Stalingrad to Berlin: The German Defeat in the East*, 500.

⁶¹ Glantz and House, *When Titans Clashed: How the Red Army Stopped Hitler*, 176.

CONCLUSION

As the current body of scholarship continues to show, the Red Army was a much more savvy combat force than is commonly portrayed. The analysis presented in this paper has sought to demonstrate that the functions of force generation, force development and command and control were highly coordinated and deliberately advanced throughout the course of the war, enabling the Soviet Union to prevail. Overwhelming quantities of manpower, though quickly available to the Red Army, did not provide the opportunity to overwhelm by mass until at least 1943. Even as the ability to field a decisive advantage in manpower materialized, numerical superiority was not decisive until doctrinal and structural factors enabled this advantage to be concentrated decisively. The Red Army succeeded against its tactically superior opponent by quickly recognizing the type of combat it was facing and transforming itself to meet new demands. Had the Red Army continued to fight as it had in the beginning of the war, its manpower advantage would have been rendered moot. The pace of force structure change was staggering with an outmoded force that was ill prepared for combat in 1941 becoming arguably the most combat capable army in the world by late 1943. This paper has shown that Red Army transformation was deliberate and the product of a complicated interplay between desired ambition, combat lessons learned and available command and control mechanisms. Successful blending of force structure with the level of leadership that was assessed as sufficiently competent to direct its employment within the new doctrine was a critical innovation that shaped the final state of doctrine by the end of the war.

The result of this effort was a combat tested tactical and operational doctrine that had been refined with mathematical precision. Though it is easy to confuse precision with

undue constraint, there can be no doubt as to the successful origins from which the doctrine was born. Few examples in history exist that provide the same ability to demonstrate how a discarded theoretical construct was not only implemented but subsequently refined under conditions of actual combat. The resulting adoption of Deep Operations doctrine by the Soviet Union significantly shaped the global military landscape for years to come. The development of nuclear forces would represent the only greater influence on the composition of global militaries during the cold war. With respect to the conduct of land operations, it is principally Red Army battlefield conceptualization influenced writings concerning imagined future war during the cold war.

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