From Tukhachevskii to Gerasimov: The Evolution of the Russian Way of Warfare into the Information Age

A Monograph

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14. ABSTRACT

Since the Soviet era, the Russian has not had the physical capability to execute Tukhachevskii's theories of Deep Battle and Deep Operations, nor has the geopolitical climate fostered conditions to do so in pursuit of Russian national interestes. Instead, Russia engaged in wars with limited aims and means in Georgia in 2009, and Ukraine beginning in 2014. Soviet doctrine of Deep Operaitons of annihilation strives to physically destroy the adversary. Today, the Russian theory of Deep Operatoins seeks to achieve success with a more significant informational component in a strategy of limited action in New Type Warfare. Leveraging the information environment allows Russia to compensate for its lack of military capacity for sustained large-scale combat against Western powers by integrated military and non-military means in a whole-of-nation approach. Russia seeks seams in the relationships of the international system and exploits opportunities to employ limited military means successfully by achieving operational surprise, maintaining the initiative with its operational tempo, and by massing physical and cognitive effects throughout the depth of the tactical, operational, and strategic areas.

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Abstract

From Tukhachevskii to Gerasimov: The Evolution of the Russian Way of Warfare into the Information Age, by MAJ Nicholas J. Kane, US Army, 57 pages.

Since the Soviet era, the Russian military has not had the physical capability to execute Tukhachevskii's theories of Deep Battle and Deep Operations, nor has the geopolitical climate fostered conditions to do so in pursuit of Russian national interests. Instead, Russia engaged in wars with limited aims and means in Georgia in 2008, and Ukraine beginning in 2014. The Soviet doctrine of Deep Operations of annihilation strives to physically destroy the adversary. Today, the Russian theory of Deep Operations seeks to achieve success with a more significant informational component in a strategy of limited action in New Type Warfare. Leveraging the information environment allows Russia to compensate for its lack of military capacity for sustained large-scale combat against Western powers by integrated military and non-military means in a whole-of-nation approach. Russia seeks seams in the relationships of the international system and exploits opportunities to employ limited military means successfully by achieving operational surprise, maintaining the initiative with its operational tempo, and by massing physical and cognitive effects throughout the depth of the tactical, operational, and strategic areas.

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Acronyms

BTG	Battalion Tactical Group
LSCO	Large-Scale Combat Operations
NATO	North Atlantic Treaty Organization
OSK	Operatsionnaya strategaya komanda [Operational Strategic Command]

Illustrations

Introduction

> Current Soviet theorists and practitioners have returned with a vengeance to the long Soviet tradition of emphasizing the role and importance of operational maneuver. When they contemplate the planning and conduct of operational maneuver today they do so with the basic faith in the utility of those earlier experiences when balanced against the realities of modern technology.
>
> — David M. Glantz, *Toward Deep Battle*

Since the end of the Soviet era, the Russian military has not had the physical capability to execute Marshal Mikhail Tukhachevskii's theories of Deep Battle and Deep Operations for annihilation in their original conceptions, nor has the geopolitical climate fostered conditions to do so in pursuit of Russian national interests. Instead, Russia evolved its theory of warfare in the spirit of Aleksandr A. Svechin and engaged in wars with limited aims and means as in Georgia and Ukraine. The modern Russian theory of warfare—New Type Warfare—touted by the chief of the Russian General Staff General Valery Gerasimov, now resembles Aleksandr Svechin's theories on Deep Operations for attrition, focused on a defensive strategic approach. This way of warfare leverages effects in the information environment during Deep Operations to mitigate lack of physical means and account for geopolitical constraints. While the United States and its allies prosecuted the Global War on Terrorism, Russia underwent significant transformation throughout its military after the 2008 incursion into Georgia.

Rather than massive, multimillion-man armies, Russia's military consolidated into smaller, professionalized conventional maneuver formations with more robust capabilities. These capabilities include its long-range fires, air defense, and cyber-electronic means. In Russia's theory of New Type Warfare, "gray zone" activities conducted by non-military and irregular military means complement the conventional military entities. Since these reforms, Russia has demonstrated its "near-peer" capabilities to contest Western military powers in every operational domain in its major exercises, the annexation of the Crimean Peninsula in 2014, and the ongoing conflict in Eastern Ukraine.

This contestation in the land, air, sea, space and cyberspace domains presents challenges to Western military operational planners in understanding how the Russian military will approach large-scale combat operations (LSCO) against a significant military power. The purpose—or "why"—for Deep Operations remain the same in the Information Age, but the means and ways do not. By examining Deep Operations theory, commanders and staffs can understand the "how" of Russian operational art, although the current context must be applied. Thus, the "what" remains, leading to the question: What are the requirements of Russian Deep Operations in the contemporary era? Given Russia's desire to avoid a significant Western kinetic military response, the most critical requirements for Russian Deep Operations are seizing the initiative through operational surprise, maintaining a high operational tempo to retain the initiative, and the massing of effects simultaneously in the tactical area and the operational rear. These particular requirements are important because—if successfully executed—they facilitate accomplishment of Russian political and military objectives before the world can prevent such action. Russia will need to achieve its operational objectives before strategic decision makers can understand the environment and respond, therefore imposing a higher political or military cost to undo Russia's actions.

The Soviet doctrine of Deep Operations for annihilation supported a direct, offensive strategic approach and strove to destroy the adversary. Today, the Russian theory of warfare more closely reflects Svechin's ideas and seeks to indirectly achieve attritional success with a more significant informational component, rather than simply physical destruction of the enemy, given the limited means and aims available. Leveraging the information environment allows Russia to compensate for its lack of capacity for sustained large-scale combat against Western powers. Russia operates this way presently so as not to cross a threshold of violence that will spur the North Atlantic Treaty Organization (NATO) into significant military action in response.

The hypothesis is that when on the offensive during LSCO, Russian forces will leverage deception and Information Age technologies to facilitate the speed of initial operations and

increase ambiguity for adversary decision-makers. These efforts in the information environment will focus on the disruption of the enemy's command and control with kinetic and non-kinetic means to set conditions for ground forces to destroy enemy units physically, or neutralize them, and penetrate operational rear areas. To accomplish this, Russia requires local air superiority to provide intelligence to cue fires assets, including non-kinetics fires like cyber electromagnetic capabilities, to mass effects in the operational rear. The other significant requirement is the logistics capability to sustain tempo and provide operational reach for ground forces. In non-permissive environments, these sustainment capabilities are more vulnerable, and therefore Russian forces will need to shape the local information environments to mitigate risk before executing ground maneuver.

Similarly, when on the defensive during LSCO, Russian forces will echelon themselves in depth. Advancements in technology now allow the defender to affect the attacker's rear areas with long-range artillery and rockets, as well as cyber-electromagnetic capabilities to disrupt the attacker's ability to command and control his forces. In this case, Deep Operations through maneuver is not the prime object, but rather deep effects, to stymie the attacker.

To test the hypothesis, this monograph presents a comparative analysis of the original Soviet theory of Deep Operations and applies the concepts to the current operational environment, from the Russian military perspective using qualitative analysis of primary and secondary source documents. Next, via a case study of the recent Russo-Ukrainian conflict, the author discusses the Russian military's current capabilities and demonstrates how Russia employed these capabilities in the context of operational art and Deep Operations theory.

The Theories of Deep Battle and Deep Operations

After World War I, many militaries took stock in what happened and derived a myriad of lessons from their experiences. Three main theories that emerged in the 1920s and 1930s framed

the Russian way of warfare leading into World War II. First was operational art, developed by Svechin and Isserson to link strategy and tactics.[1] Second, was Deep Battle, developed by Tukhachevskii and Isserson focused on the penetration of the tactical area.[2] Third, was Deep Operations, initiated by V. K. Triandafillov and continued by Tukhachevskii and Isserson which focused on the simultaneous and successive actions to affect the enemy's operational rear area.[3] These theories of Deep Battle and Deep Operations gave rise within the context of operational art. The theories came about as a result of losses in the Russo-Japanese war, the stalemate of World War I and subsequent civil war after the Russian revolution.[4]

History credits Svechin as the first man to use the term "operational art" in 1922 which he defined in *Strategy* as "a critical conceptual linkage between tactics and strategy."[5] He recognized logistics as a critical function to enable the operational art. Svechin linked tactical actions and logistics in theory as:

> [T]he material of operational art and the success of the development of an operation depends on both the successful solution of the individual tactical problems by the forces and the provision of all the material they need to conduct an operation without interruption until the ultimate goal is achieved.[6]

Reinforcing Svechin's ideas, B. N. Morozov defined operational art as:

> [A] component part of military art, concerned with the elaboration of the theory and practice of preparing and conducting front and army operations of the different services of the armed forces. Operational art is the connecting link between strategy and tactics. Proceeding from the demands of strategy, operational art determines the methods of preparing and conducting operations for the achievement of strategic goals and serves as

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[1] Jacob W. Kipp, "General-Major A. A. Svechin and Modern Warfare: Military History and Military Theory," in *Strategy*, edited by Kent Lee (Minneapolis: East View Publications, 1999), 23.

[2] Richard Simpkin, *Deep Battle: The Brainchild of Marshal Tukhachevskii* (New York: Brassey's Defense Publishers, 1987), 38-40.

[3] Richard W. Harrison, *Architect of Soviet Victory in World War II: The Life and Theories of G.S. Isserson* (Jefferson, NC: McFarland and Company, 2010), 91-93.

[4] Ibid., 26-31.

[5] Jacob. W. Kipp, "The Tsarist and Soviet Operational Art, 1853-1991," in *The Evolution of the Operational Art: From Napoleon to the Present*, ed. John Olsen and Martin van Creveld (Oxford, UK: Oxford University Press, 2011), 65.

[6] Aleksandr A. Svechin, *Strategy* (Minneapolis, MN: East View Publications, 1999), 69.

> the point of departure for tactics, which organized the preparation and conduct of the combined arms battle in accordance with the operation's goals and tasks.[7]

Significant in this definition is the connection of theory and practice at *front* and army levels, germane to LSCO, and the use of combined arms to achieve the goals of the operation. These aspects lay the foundation for evolution to modern military thinking at the operational level.

Early in the reform of military thought were debates on strategic approach. There was a battle of ideas on strategy between two schools of thought. Tukhachevskii championed for an offensively-minded strategy of annihilation while Svechin favored a strategy of attrition. Tukhachevskii's camp won the debate, and his theories continued to develop within an offensive mindset, resulting in Deep Battle and Deep Operations.[8]

The Soviet strategy of annihilation after World War I meant that Isserson's theory of operational art had to nest with that strategy since the operational level links strategy and tactics. There was not an appetite for an attritional strategy using limited means during that era, and the purpose of operations was to achieve decisive aims with offensive actions, enabled by technological advancements.[9] The increase in the range and lethality of armaments changed the spatial concept of the battlefield and drove the need for new thinking about the operational art. The new means of combat warfare relevant to operations in depth included the airplane and the tank.

According to Soviet expert David Glantz, operational art and by extension, Deep Operations, emerged from Soviet thinkers wanting to bring mobility and maneuver back to the battlefield given the circumstances in which the Russian civil war occurred over vast geography

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[7] Richard W. Harrison, *The Russian Way of War: Operational Art 1904-1940* (Lawrence, KS: University Press of Kansas, 2001), 2.

[8] Harrison, *Architect of Soviet Victory*, 41-42.

[9] Ibid., 105.

with limited military means.[10] Trench warfare and the stalemated front lines of the World War I left militaries with dilemmas of maneuver. Soviet thinkers wanted to avoid these stalemates and sought to operate throughout the depth of the operational area as part of a strategy of annihilation. The Soviet army had to penetrate the tactical depth of the broad front with enough combat power to locally encircle the front units for destruction while passing a breakthrough echelon through into the operational rear. Thus, the theories of Deep Battle and Deep Operations emerged. Tukhachevskii listed the "depth of operational objectives—operational reserves, army headquarters, major signals centers, airfields, army or higher long-range artillery, and major logistic dumps."[11] This list of objectives set the operational foci, and the resulting theories provided the concept of ways to achieve them, and with what means. Therefore, the purpose of Deep Battle was to decisively destroy the enemy forces and break a stalemate of a broad front which set conditions to exploit the enemy tactical and operational rear areas.

Isserson codified four necessary conditions to successful Deep Battle: weapons that "combined firepower and maneuverability"; "the ability to simultaneously suppress throughout the depth of the tactical battlespace"; the rupture and penetration of the enemy's defense in the tactical area; and defenders in the tactical area must find themselves isolated from operational and strategic reserves.[12] Deep Battle developed as a tactical concept; Deep Operations became an overarching theory of maneuver of which Deep Battle is a part. Thus, Deep Operations satisfies the notion of operational art—linking the tactical Deep Battle to the achievement of strategic ends via successive Deep Operations.

While Isserson and Svechin developed the operational art, Triandafillov is said to be the father of the theory of Deep Operations, given his promulgated ideas from *The Character of*

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[10] David M. Glantz, "The Nature of the Soviet Operational Art," *Parameters* 15, no. 1 (Spring 1985): 4.

[11] Simpkin, *Deep Battle*, 50.

[12] Harrison, *Architect of Soviet Victory*, 86-87.

Operations of Modern Armies. In this work, lauded by Zhukov, Triandafillov accounted for incorporating advanced concepts using technologies the Soviets did not yet have but would come into play in the future. Isserson would be the first to take Triandafillov's ideas and incorporate the modernized military capabilities like armored maneuver and improved aviation into how the Red Army could practically apply the theory of Deep Operations.[13]

Tactical penetration of the enemy's front is for naught without continuing to exploit the penetration into the operational depth of the battlefield.[14] While both the Central and Allied powers achieved impressive tactical breakthroughs of deadlocked front lines in World War I, they could not translate those successes into operational effects. Thus, the need for consecutive operations in depth as highlighted by Isserson who liked to say, "It made no sense to knock down the door, if there was no one to go in."[15]

Deep Operations were the subsequent exploitation of the tactical area Deep Battle penetration of the enemy's front. Execution of Deep Operations meant passing second and third echelons of units through the storm units that penetrated the enemy's tactical defenses. The purpose of the exploitation forces was to disrupt and destroy the enemy's ability to conduct continued combat operations through attainment of the operational objectives previous listed by Tukhachevskii. The ultimate aim of Deep Operations was to annihilate the enemy forces in pursuit of strategic ends for the *front*.[16]

Deep Operations is all about echelonment of forces and simultaneity of effects, of which the first echelon only pursued the Deep Battle. The first echelon—or "attack echelon"—breaches the enemy's front lines, and then subsequent echelons—the "breakthrough development

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[13] Harrison, *Architect of Soviet Victory*, 91-93.

[14] Ibid., 86.

[15] G. S. Isserson, *The Evolution of the Operational Art*, trans. Bruce Menning (Fort Leavenworth, KS: Combat Studies Institute Press, 2013), 37.

[16] David M. Glantz, *Soviet Use of War Experience: Tank and Mechanized Corps Exploit the Penetration* (Fort Leavenworth, KS: Soviet Army Studies Office, 1988), 5.

echelon"—punch through the penetration to exploit enemy rear areas by disrupting logistics and command nodes, preventing enemy reserves from reinforcing embattled front-line units, and encircling enemy forces for decisive defeat. Tukhachevskii, via the 1936 *Ustav*, defined deep operations as:

> Simultaneous assault on enemy defenses by aviation and artillery to the depths of the defense, penetration of the tactical zone of the defense by attacking units with widespread use of tank forces and violent development of tactical success into operational success with the aim of the complete encirclement and destruction of the enemy.[17]

Deep Operations may be uncontested at the onset of a conflict where strategic ambiguity existed, and the military achieved operational surprise. The organizational structure and echelonment of forces would not necessarily change, but rather the pace of the advance based on the lack of enemy resistance. Isserson proposed a concept of echelonment in *The Evolution of Operational Art*, depicted in figure 1. However, once the opposing sides meet and establish front lines, Deep Battle becomes part of the operational calculus. Both Triandafillov and Isserson, after he continued with the former's work following his death, understood that additional fronts would consist of fortified zones 60 to 100 kilometers behind the enemy's front lines.[18]

[17] David M. Glantz, *Soviet Military Operational Art in Pursuit of Deep Battle* (Portland, OR: Frank Cass, 1991), 25.

[18] Harrison, *Architect of Soviet Victory*, 106.

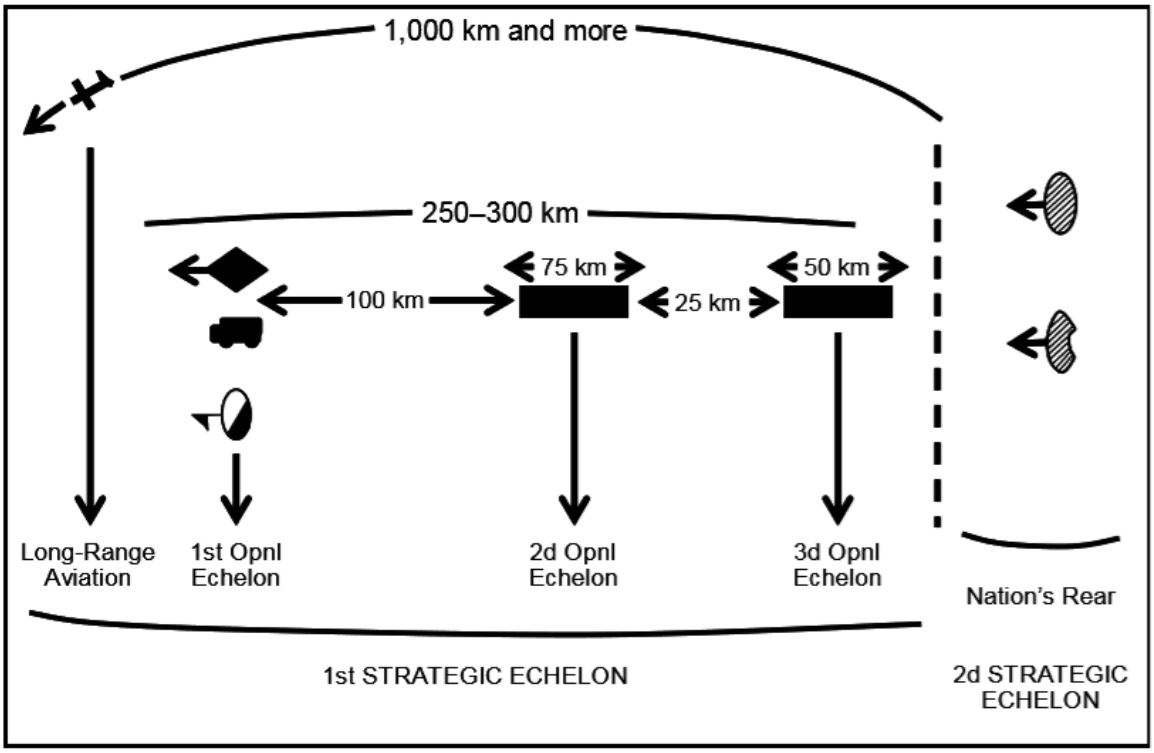

Figure 1. Entry in Depth into a Modern Operation. G. S. Isserson, *The Evolution of Operational Art*, trans. Bruce Menning (Fort Leavenworth, KS: Combat Studies Institute Press, 2013), 64.

To overcome the fortified zone in depth, Isserson—and Triandafillov—proposed a new structure of echelonment—both strategic and operational. The first echelon of the strategic-level was the military activity conducted behind the enemy's front lines, from the aviation strikes to the tactical and operational breakthroughs and subsequent exploitation.[19] Multiple operational echelons comprised this first strategic echelon. The deepest reaching was the reconnaissance and attack aviation assets that struck at the enemy's operational and strategic reserve forces, or at least disrupted their employment to support the tactical forces under attack at by the Soviet attack echelon. The first operational echelon—and first ground force—was the vanguard of the breakthrough development echelon consisting of mechanized and motorized formations and cavalry.

[19] Harrison, *Architect of Soviet Victory*, 110-112.

The second operational echelon was the main breakthrough development force, a shock army. Speed, range, and firepower were the characteristics of the shock army. However, key entities of the breakthrough echelon force structure were the Forward Detachments of each *Front*. Forward Detachments located enemy units, secured important objectives like river crossing sites and railroad junctions, and set conditions for follow-on operational maneuver forces—greatly facilitating maintenance of operational tempo.[20] These detachments were reinforced battalion or brigade-sized elements consisting of armored or motorized rifle units. These detachments operated forward of the main body by 20 to 100 kilometers, depending on their size, and ultimately shaped the environment for the arrival of the main force.[21]

This first strategic echelon, given the technology at the time, could deliver effects up over 1000 kilometers into the enemy's operational depth. The second strategic echelon was the operational and strategic reserve element in the Soviet rear area. Also located in this echelon was the transportation nodes and strategic supply depots.[22]

According to Isserson, the four phases of the breakthrough operation are: aviation preparation of the battlefield in depth, the attack echelon's commencement of the attack on the front-line defense to the commitment of the breakthrough development echelon, the emergence of the that echelon from the enemy's tactical defense area, and "the rout of the enemy's defense throughout the entirety of the operational depth."[23] Thus, for the breakthrough operation—a Deep Operation—to be successful, the *front* commander needed to achieve simultaneity of the disruptive effects provided by long-range aviation and the massing of effects from combined

[20] David M. Glantz, "Spearhead of the Attack: The Role of the Forward Detachment in Tactical Maneuver," *Journal of Soviet Military Studies* 1, no. 3 (1988): 3.

[21] Timothy G. Heck, "From the Vistula to the Oder: Soviet Deep Maneuver in 1945," in *Deep Maneuver: Historical Case Studies of Maneuver in Large-Scale Combat Operations*, ed. Jack D. Kem (Fort Leavenworth, KS: Army University Press, 2018), 111.

[22] Harrison, *Architect of Soviet Victory*, 111

[23] Ibid., 144-147.

arms maneuver with supporting attack aviation at tactically decisive points. Figure 2 depicts Isserson's conception of how to achieve successful Deep Operations.

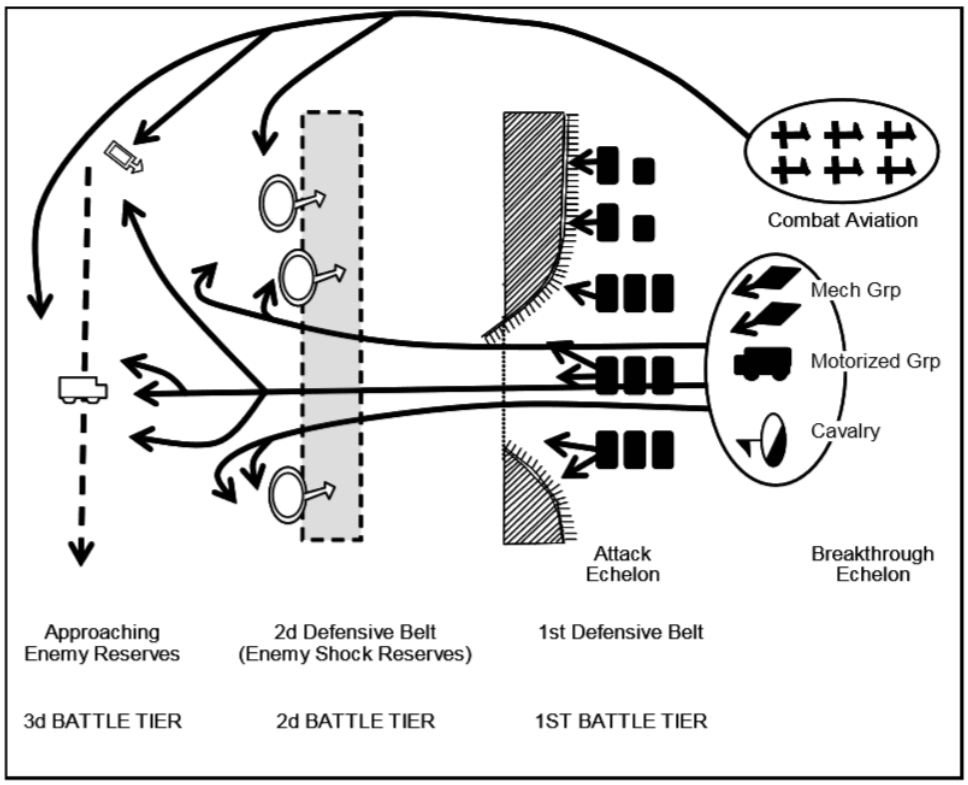

Figure 2. The Deep Operation for Penetrating and Crushing a Front. G. S. Isserson, *The Evolution of Operational Art*, trans. Bruce Menning (Fort Leavenworth, KS: Combat Studies Institute Press, 2013), 67.

Figures 1 and 2 demonstrate the significance within the theory of Deep Operations of leveraging all the resources and capabilities available in a synchronized manner to achieve success towards desired strategic ends from tactical actions via the operational art. The requirements for *front*-level Deep Operations were: long-range aviation, the attack echelon—in the form of a shock army, the breakthrough echelon—composed of motorized cavalry, tanks, motorized infantry, and the operational reserves. The final requirement for Deep Operations, not shown in Isserson's figures, was an effective logistics network that could sustain such deep thrusts.

The critical characteristic of the subsequent maneuver echelons is mobility. The mobility groups that made the breakthrough echelon and operational reserves needed to be large enough to be a threat to rear areas, but not too large to hinder rapid mobility and maneuver or overburden logistics systems. Thus, the *front* commander could maintain the desired operational tempo to continue to disrupt the adversary's decision cycle.

Amongst the triad of Tukhachevskii, Isserson, and Triandafillov, the developing theories of action percolated in the 1920s and 1930s until Deep Battle found codification to a degree in the Red Army Provisional Field Regulation, or *Ustav*, of 1936.[24] However, a specific definition of Deep Battle is difficult to discern as the Field Regulation of 1936 did not explain it in detailed, codified terms. Mary Halbeck expands upon this lack of precise definition by highlighting examples within the Soviet Army wherein the Generals made errors during warfighting due to lack of shared understanding of what Deep Battle truly meant as a doctrine. She notes an example when a commander blindly opted for a frontal assault—as part of Deep Battle—rather than a flank attack which was more appropriate for the situation at hand.[25] Some smaller conflicts before World War II, like the Soviet-Finnish war, exposed gaps in the tactical provisions of the 1936 manual, but a newly drafted manual with revisions from Isserson and others remained unpublished before the Great Patriotic War.[26]

Unfortunately for these theorists and other senior military leaders, Stalin purged much of the talent from the Red Army in one way or another, mostly between 1936 and 1941. The purge contributed to the unpreparedness displayed when the *blitzkrieg* thundered east in 1941 during Operation Barbarossa. Various sources indicate that secret police executed or imprisoned 20,000 to 40,000 personnel from the Red Army, including five marshals, fifteen army commanders,

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[24] David M. Glantz and Jonathan M. House, *When Titans Clashed: How the Red Army Stopped Hitler* (Lawrence, KS: University Press of Kansas, 2015), 6.

[25] Mary R. Habeck, *Storm of Steel* (Ithaca, NY: Cornell University Press, 2003), 232.

[26] Kipp, "The Tsarist and Soviet Operational Art, 1853-1991," 74-76; Harrison, *Architect of Soviet Victory*, 89.

sixty-two corps commanders, 201 division commanders, and 474 brigade commanders.[27] As a result, the competent application of the operational theories of action was temporarily lost or ill-regarded—until 1941.[28] Commanders and staffs lost proficiency of Deep Operations because the refined theories did not become published doctrine.

Additionally, the concepts were associated with purged officers and in disrepute.[29] Even though doctrine expressed Deep Battle and Deep Operations to a degree, the men who could turn concepts into practice were dead or in the gulag when the German *Wehrmacht* invaded Russia. Therefore, the commanders of large formations could not translate the theory of Deep Operations into battlefield success in the early stages of the Great Patriotic War. The Soviet High Command, the *Stavka*, needed to adapt quickly lest the German Army succeed where Napoleon failed in 1812.

Theory in Action during The Great Patriotic War

Operation Barbarossa highlighted Soviet military shortcomings as the German *blitzkrieg* again proved initially successful, but created a sense of urgency for military thinkers to adapt. However, since two of the three significant military theorists died in the purge and an airplane crash, and Isserson remained imprisoned, none of the main proponents of the theories were in the Red Army. Instead, Josef Stalin charged Field Marshal G. I. Zhukov, fresh from his first combat blooding in Khalkhin-Gol against Japanese forces, with the defense of Moscow and subsequent command of a *front*. Many of Triandafillov and Isserson's ideas on operational art and Deep Operations influenced Zhukov, especially regarding composition and employment of operational echelons, and maneuver.[30] However, given the fate of the original proponents of these theories,

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[27] Harrison, *Architect of Soviet Victory*, 186.

[28] David M. Glantz. "Soviet Operational Art Since 1936: The Triumph of Maneuver War," in *Historical Perspectives of the Operational Art*, ed. Michael D Krause and R. Cody Phillips (Washington, DC: Center of Military History, 2010), 247-248.

[29] Harrison, *Architect of Soviet Victory*, 89.

[30] Ibid., 91, 234-237.

many senior military leaders did not "embrace the ideas of their fallen predecessors," in name, but rather in content.[31]

After the cognitive crisis of German *blitzkrieg* shook the *Stavka* in the first period of the war, the Soviet Army began to reconstitute and relearn operational maneuver.[32] Whether the *Stavka* adapted in accordance with the theories of Deep Battle and Deep Operations or through learning from failure is not clear. Glantz's description of its adaptive actions and employment of forces indicate that some staff and commanders adhered to the theories, but it was only after the Battle for Moscow that the *Stavka* and Soviet commanders metaphorically dusted off the ideas developed by the Soviet theorists and begin to apply them.

With the increased experience of field commanders after the Battle of Kursk and the flow of Lend-Lease equipment in full tilt, the Red Army began to master Deep Operations in the third period of the war that contributed to overall victory against Nazi Germany. Successful operations like Operation Uranus, the Battle of Kursk, and Operation Bagration between 1942 and 1944 continued to improve the Soviet *Stavka's* ability to plan for, and commanders' ability to execute, Deep Operations.

At the zenith of Deep Operations planning in the war was the Vistula-Oder campaign. The Vistula-Oder campaign of 1945 exemplified masterfully executed Deep Operations and the concept of consecutive operations. The overall *front* campaign consisted of four fronts—two main fronts in the center and one on each flank. Critical elements of the campaign were mass and tempo to achieve enemy- and terrain-based objectives deep in the enemy's operational rear area. Soviet planners desired two stages immediately consecutive stages without pause to maintain tempo against a less mobile German army group.[33] The first stage occurred from 12 January to 24 January and the second was 25 January to 3 February.

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[31] Glantz, *Soviet Military Operational Art*, 25.

[32] Glantz, "Soviet Operational Art Since 1936," 248.

[33] Heck, "From the Vistula to the Oder," 101.

The frontage at the onset of the offensive campaign was approximately 625 kilometers long. Planners sought to break through the German front to an operational depth of 600 to 700 kilometers to the Oder River.[34] The two main *fronts*—the First Belorussian *Front* under Zhukov and the First Ukrainian *Front* under Konev—consisted of 2.2 million men, 4,500 tanks; 2,500 assault guns; more than 13,000 artillery pieces; 2,200 multiple rocket launchers; and more than 5,000 aircraft.[35] These massive forces reflect the context of warfare during this period, and highlight force structure sizes necessary to achieve decisive effects in such enormous operational areas.

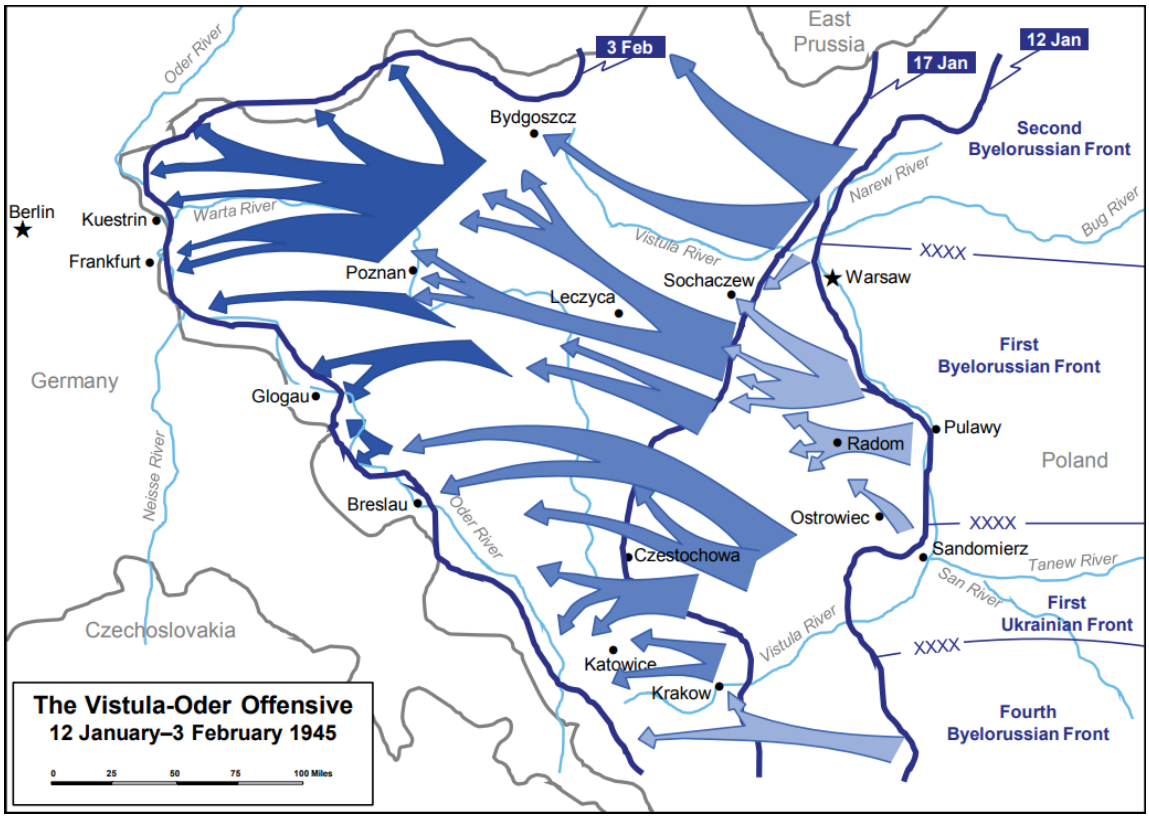

Figure 3. The Vistula-Oder Offensive. Timothy G. Heck, "From the Vistula to the Oder: Soviet Deep Maneuver in 1945," in *Deep Maneuver: Historical Case Studies of Maneuver in Large-Scale Combat Operations*, ed. Jack D. Kem (Fort Leavenworth, KS: Army University Press, 2018), 105. Used with permission.

[34] Heck, "From the Vistula to the Oder," 101.

[35] Christopher Duffy, *Red Storm on the Reich: The Soviet March on Germany, 1945* (New York: Routledge, 1991), 24-25.

Through the campaign, Zhukov pursued the Warsaw-Poznan line of operation and Konev pursued the Sandomierz-Silesian line of operation.[36] Employment of Konev's *front* on this line of operation served to deceive the German army as to the main thrust of the operation, which was Zhukov's *front*. The plan called for simultaneous offensive operations to the north in East Prussia by Second Belorussian *Front*, and in the south by Fourth Ukrainian *Front*. These adjacent *fronts* would, by their drives westward, protect the flanks of Zhukov and Konev's *fronts*. Additionally, the increased ambiguity for German senior leaders caused by the simultaneous operations would help the Red Army stay within the adversary's operational decision cycle.[37] Success in this campaign would place the Red Army within striking distance of Berlin.

The *Stavka* tasked First Belorussian *Front* with defeating German forces in the Warsaw-Radom area, liberate Warsaw, and then continue the offensive toward Poznan.[38] Simultaneously, the First Ukrainian *Front* would attack toward Breslau. With airstrikes destroying targets in the operational rear as the breakthrough began along the Vistula, the *fronts'* combined arms armies advanced the within seventy kilometers of Berlin in three weeks and destroyed thirty-five German divisions.[39] Vindicated, Isserson, Triandafillov, and Tukhachevskii's ideas of operational art and Deep Operations found validation in practical application in military theaters of operation during the Great Patriotic War.

In this example, the main objectives of Deep Operations centered on the destruction of enemy forces and the seizure of terrain. Evident characteristics of success for Deep Operations during the Vistula-Oder offensive are the achievement of mass and tempo. First, mass refers to not only the concentration of forces but also the ability to mass the effects of combat power at

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[36] Heck, "From the Vistula to the Oder," 101.

[37] Ibid., 102-104.

[38] Soviet General Staff, *Prelude to Berlin: The Red Army's Offensive Operations in Poland and Eastern Germany, 1945,* trans. Richard Harrison (Buckinghamshire, UK: Helion and Company, 2016), 48.

[39] Heck, "From the Vistula to the Oder," 106.

critical locations in depth through the use of combined arms warfare. During this period in Soviet military history, the Red Army leveraged armor, mobile infantry, artillery, and aviation capabilities in harmony to achieve penetration and subsequent exploitation of the enemy's rear areas.

Second, the Red Army was successful because it maintained an operational tempo that allowed it to retain the initiative through the two stages of the campaign. Tempo refers to speed and position relative to the adversary, and who holds the initiative.[40] To achieve success during this operation, the *Stavka* planned successive operations with a short operational pause to transition from stage one to stage two without ceding the initiative to the Germans.[41] *Stavka* planners calculated for, and resourced, critical functions that affect operational tempo, including mobility, logistical support, and surprise.

For mobility, engineer support was crucial to facilitate wet-gap and river crossings to maintain the operational tempo. There were two or three major rivers to cross on each line of operation for the *fronts*. Not only could the Red Army mass combat effects at decisive points, but its operational tempo and disruption of the German Army in the operational rear with air strikes and forward detachments hindered the Germans from massing effectively against the Soviet offensive and seizing the initiative.[42]

Logistically, the Soviets maintained a good operational tempo by massing ammunition stockpiles at logistics nodes before launching the offensive and rebasing fighter and air support assets forward during the campaign.[43] This forward staging of supplies allowed the Red Army to keep the operational pause very short—shorter than the Germans could capitalize on, and

[40] US Department of the Army, *Army Doctrine Reference Publication (ADRP) 1-02, Operational Terms and Graphics* (Washington, DC: Government Printing Office, 2016), 1-94.

[41] Heck, "From the Vistula to the Oder," 101.

[42] Ibid., 105.

[43] Ibid., 114.

maintain the desired operational tempo. Strategically, the economy must be able to support the industrial outputs required to field such large mechanized and armored forces to enact Deep Operations doctrine. The Soviet Union was not able to meet the requirement organically, and therefore met the need by the good graces of the Western Allies via the Lend-Lease Act of 1941 which provided raw materials, trucks, uniforms, and food.[44]

Another factor that helped the Soviets achieve a successful tempo was deception. The main information related capability the Soviets could employ during the Great Patriotic War was deception at the tactical and operational level to give commanders an operational advantage. The Soviets leveraged *maskirovka* well to mask the movement of forces and sequenced offensives to increase ambiguity about their intent.[45] The purpose of military deception is to influence the enemy commanders to make incorrect decisions, or no decision, regarding the employment of their forces, to gain an advantage.[46] Therefore, deception was the first element of information warfare incorporated into the Russian way of war.

While the context of the Great Patriotic War provided the Soviet Union with an existential crisis, the geopolitical climate changed drastically in the seventy-five years that followed. The Cold War and nuclear armaments, the fall of the Soviet Union, and the rise of Vladimir Putin all drove paradigm shifts in how the Soviet Union, and later Russia, pursued national interests. The offensive strategy of annihilation and demand for unconditional surrender of Germany were appropriate at the time, but in an age of nuclear weapons, and the emergence of space and cyberspace as operational domains, Russia changed its mindset and strategic approach.

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[44] Glantz and House, *When Titans Clashed*, 197-198.

[45] Richard N. Armstrong, *Soviet Operational Deception: The Red Cloak* (Fort Leavenworth, KS: Combat Studies Institute, 1988), 3.

[46] Armstrong, *Soviet Operational Deception*, 36; US Department of Defense, Joint Staff, *Joint Publication (JP) 3-13.4, Military Deception* (Washington, DC: Government Printing Office, 2012), vii.

The Modern Russian Military and Theories

In modern Russian theory of warfare, the required operational effects and ends are the same, but the ways and means are significantly different, due to technological advancement and the current constraints of the geopolitical climate. Additionally, Russia's strategic approach changed drastically since the Soviet era. Throughout the 20th century, Russia and the Soviet Union adhered to a direct, offensive strategy, whereas Russia presently uses an aggressive, predominantly indirect, and less overt strategy, with Georgia, Crimea, and the Donbas as exceptions.

With the feasibility of nuclear exchange during the Cold War, the Soviets put aside the theory of Deep Operations and favored strategic rocket forces over large maneuver formations. However, the Soviets eventually sought more flexibility and adopted anti-nuclear maneuver doctrine which directed operational maneuver in groups of smaller formations.[47] Additionally, the Russian special forces—the *Spetsnaz*—came into being in the early 1980s which added reconnaissance and diversionary capabilities to front-level organizations.[48] As technological advancements marched on in the mid-to-latter parts of the Cold War, the Soviets dedicated effort to information flows and information superiority in the form of Radioelectronic Combat doctrine.[49] Information superiority refers to an actor's disruption of the adversary's ability to command and control systems and subordinate forces while protecting his own.[50] Radioelectronic Combat essentially included: radio signal jamming, detection and collection, sonic deception, and

[47] Glantz, "Soviet Operational Art Since 1936," 268-271.

[48] Ibid., 273.

[49] Christopher Lowe, "The 'Battle' and the 'Battle of Ideas': Misunderstanding of Information Operations" (Monograph, School of Advanced Military Studies, Fort Leavenworth, KS, 2010), 17.

[50] US Department of the Army, *Field Manual 100-6, Information Operations* (Washington, DC: Government Printing Office, 1996), 2-2.

protection of friendly systems.[51] Thus, began pursuit of non-kinetic effects in the information environment, which includes the electromagnetic spectrum, to achieve an advantage during Deep Operations, and reducing the need for expensive and massive military formations as means to conduct warfare. This shift also began the transition to a more indirect strategic approach.

Since the Soviet Union's collapse, Russia has risen from the ashes as a revisionist power. However, its military capabilities had atrophied in quality, and Russia no longer had the volume of military means available as it once did. Thus, driving the need to alter its strategic approach based on available means and the strategic context.

After the disappointing performance in Georgia, Russian military leaders revised its theory of action to fit in the modern era and conducted reform to meet the realities of the geopolitical and military systems, marking a transition to a more indirect, and predominantly covert, offensive strategy, although Gerasimov terms it a "strategy of limited action."[52]

The Soviet doctrine of Deep Operations emerged from the operational art and Tukhachevskii's concept of Deep Battle and focused on the destruction of the adversary.[53] Today, however, the Russian theory of warfare reflects Svechin's ideas more and seeks to achieve attritional success with a more significant informational component, rather than simply physical destruction of the enemy, given the limited military means available and limited aims. Leveraging the information-related capabilities and non-military means allows Russia to compensate for its lack of capacity for sustained large-scale combat against Western powers. Against the geopolitical backdrop, Russia operates this way presently in the near abroad so as not to cross a

[51] Floyd D. Kennedy, Jr., "The Evolution of Soviet Thought on 'Warfare in the Fourth Dimension'," *Naval War College Review* 37, no. 2 (March/April 1984): 41, accessed 13 March 2019, https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=4644&context=nwc-review.

[52] Roger McDermott, "Gerasimov Unveils Russia's Strategy of Limited Action," RealClear Defense, accessed 15 March 2019, https://www.realcleardefense.com/articles/2019/03/11/gerasimov_unveils_russias_strategy_of_limited_actions_114251.html.

[53] Isserson, *Evolution of Operational Art*, 14.

threshold of violence that will spur NATO into significant military action in response that could cause an escalation that Russia cannot afford economically.

The Information Age is arguably the most recent military revolution that recast societies and militaries. Technological advances exemplify the changing character of war as ranges and lethality of weaponry increase, leading to changes in the geography of the battlefield and the expansion of the operational level of warfare—Russian operational art. Additionally, lines of communication are significantly different in the Information Age with the advent of cyberspace, artificial intelligence, space-based assets, and transportation capabilities. These changes create opportunities for Russia to exploit the limitations of democracy in the information environment and cause significant disruption in tactical, operational, and strategic areas of its adversaries at relatively low costs.[54] Therefore, Russian theory surges capability, military and non-military, against adversaries' vulnerabilities in the information environment as a measure of economy of force.

Russia's military leaders continue to rely on the heritage of great theorists like Svechin. In 2013, Gerasimov used Svechin's thoughts to note that each conflict has a logic all its own, and this has been the case in each recent conflict in which Russia has entered.[55] Given the military advantage of the United States and its allies, it is simply pragmatic that Gerasimov would advocate for a "strategy of limited actions" based on the "active defense strategy" as Russia revisited its theory of warfare.[56]

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[54] Nicholas J. Kane, "Will Russian Exploitation of Open Press Destroy US Democracy?" *Interagency Journal* 9, no. 3 (August 2018), 69-74.

[55] Timothy Thomas, *Russia Military Strategy: Impacting 21st Century Reform and Geopolitics* (Fort Leavenworth, KS: Foreign Military Studies Office, 2015), 37-40.

[56] McDermott, "Gerasimov Unveils Russia's Strategy of Limited Action"; Middle East Media Research Institute, "Special Report No. 7943," 14 March 2019, accessed 15 March 2019, https://www.memri.org/reports/russian-first-deputy-defense-minister-gerasimov-our-response-based-active-defense-strategy.

Svechin favored the strategic defense and saw it as being the "only true method for defeating an enemy."[57] Additionally, Richard Harrison posits that Svechin's theory of Deep Operations and strategy are essentially the indirect approach. B. H. Liddell Hart proffered wherein massive frontal attacks are not the solution, but rather preying upon vulnerabilities or attacking on unexpected lines.[58] Furthermore, Mark Galeotti characterized the revised Russian military doctrine of 2014 as that of "aggressive defence."[59] However, included in Svechin's idea of strategic defense was the "totality of operations, including counterstrikes and counterattacks . . . which had been prepared beforehand."[60] Thus, allowing for limited offensive operations with limited aims to achieve strategic objectives.

New Russian Theories of Phenomenon and Action: *Gibridnaya Voyna* and New Type Warfare

Isserson and other Soviet military thinkers after World War I relied on Carl von Clausewitz's theory of the phenomenon of war, positing that war's nature is unchanging, but the character of it does. For decades, Russian military thought followed five steps: analyze tendencies and the changing nature of war, forecast the character of future war, develop a military strategy based on correlation of force, forms and methods, and develop the operational design and concept.[61] After the Cold War, Russian academics and military leaders revisited the phenomena of war, and some argue that the nature of it has changed, despite Clausewitz's assertion that it is unchanging. Ofer Fridman highlights that "[t]raditional Russian military thought has always been

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[57] Vladimir N. Lobov, "The Significance of Svechin's Military-Theoretical Legacy Today," in *Strategy* ed. Kent Lee (Minneapolis, MN: East View Publications, 1999), 20.

[58] Harrison, *The Russian Way of War*, 129.

[59] Mark Galeotti, "The Belligerent Bear: Russia Updates its Military Doctrine," Jane's Defense Weekly (2015): 2. Galeotti first coined the term "Gerasimov Doctrine," for which he later apologized. See Mark Galeotti, "I'm Sorry for Creating the 'Gerasimov Doctrine,'" *Foreign Policy*, 5 March 2018. Accessed 8 April 2019, https://foreignpolicy.com/2018/03/05/im-sorry-for-creating-the-gerasimov-doctrine/.

[60] Lobov, "The Significance of Svechin's Military-Theoretical Legacy Today," 20.

[61] Timothy Thomas, *Kremlin Kontrol: Russia's Political-Military Reality* (Fort Leavenworth, KS: Foreign Military Studies Office, 2017), 92-93.

inclined to conceptualise the phenomenon of war as a socio-cultural struggle rather than a clash of materialistic interests."[62] What emerged from the academic discourse is the theory of *gibridnaya voyna*, which translates as "hybrid warfare."[63] *Gibridnaya voyna* is all-encompassing in a "whole of nation" approach to conflict, leveraging socio-economic, political, cultural and informational elements in addition to military means. G*ibridnaya voyna* seeks to avoid the use of physical military means unless necessary.

Moreover, Western appellations of "hybrid warfare" and the Russian conception of it do not align. Ofer Fridman addresses this discrepancy by contrasting the main variations of hybrid warfare in academic discourse. First, he highlights Hoffman's theory that emerged after 2000 that principally focuses on the regular, or conventional means, and irregular military means used in war. Amos Fox and Andrew Rossow proffer that Hoffman's definition was not useful as it was too broad and, essentially, everything constituted hybrid warfare.[64] Fridman also explains that the Russian theory of *gibridnaya voyna* is "to achieve political goals with minimal military influence on the enemy . . . by undermining its military and economic potential by information and psychological pressure, the active support of the internal opposition, partisan and subversive methods."[65]

In his analysis of hybrid warfare, Amos Fox proffers:

> In hybrid warfare, tactical actions are more than just the combination of offensive, defense, and stability operations. In several key respects, these actions include cyber and electronic operations targeting an opponent's movement of troops, targeting an opponent's ability to communicate across the front, and targeting an opponent's information. In fact, many of the operational cyber and electronic operations prey on the same targets as operational fires, albeit with different means. Concurrently, hybrid

[62] Ofer Fridman, *Russia's Hybrid Warfare: Resurgence and Politicisation* (New York: Oxford University Press, 2018), 93.

[63] Ibid., 91.

[64] Amos Fox and Andrew Rossow, *Making Sense of Russian Hybrid Warfare: A Brief Assessment of the Russo-Ukrainian War* (Arlington, VA: Institute of Land Warfare, 2017), 2.

[65] Fridman, *Russian Hybrid Warfare*, 155.

> operational level operations are not solely found in the cyber and information domains, but also found on the ground and in the area.[66]

While his analysis is thorough, Fox incorrectly implies that operations in the information environment are actions separate from the offense, defense, or stability tasks during operations. Some Western thinkers leverage the term hybrid warfare to describe the Russian way of war, but in US military doctrine, there is only a definition for a "hybrid threat." Rather, they should use the terminology dictated by the thinkers who execute it. In this case, General Valerie Gerasimov termed it "New Type Warfare." This New Type Warfare aligns more with Svechin's ideas about strategies of attrition wherein he proffered that, "[W]aging operations with limited aims, which would ultimately bring about victory through the gradual accumulation of military and other advantages."[67] Furthermore, the purpose of New Type Warfare is congruent with *gibridnaya voyna.*

Figure 4 represents Gerasimov's chart depicting the Russian military's understanding of modern warfare, New Type Warfare. Many Western states refer to this idea as "Russian New Generation Warfare" or "Hybrid Warfare." Gray zone activities, strategic ambiguity, and non-kinetic measures characterize the early stages in the spectrum on conflict according to New Type Warfare. Deception and non-attribution of the activities of proxies and surrogates allow Russia, thus far, to wage New Type Warfare without causing escalation to declared armed conflict. *Maskirovka* and disinformation campaigns facilitate this strategy and set conditions for strategic, operational, and tactical surprise. However, should a situation devolve into armed conflict, the bolded black box in the figure highlight major combat and the requisite strategic non-military support to combat operations, i.e., the economy's ability to sustain or absorb the shock of sustained combat operations in a military theater.

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[66] Amos Fox. "Hybrid Warfare: The 21st Century Russian Way of Warfare" (Monograph, School of Advanced Military Studies, Fort Leavenworth, KS, 2017), 6.

[67] Harrison, *The Russian Way of War*, 138.

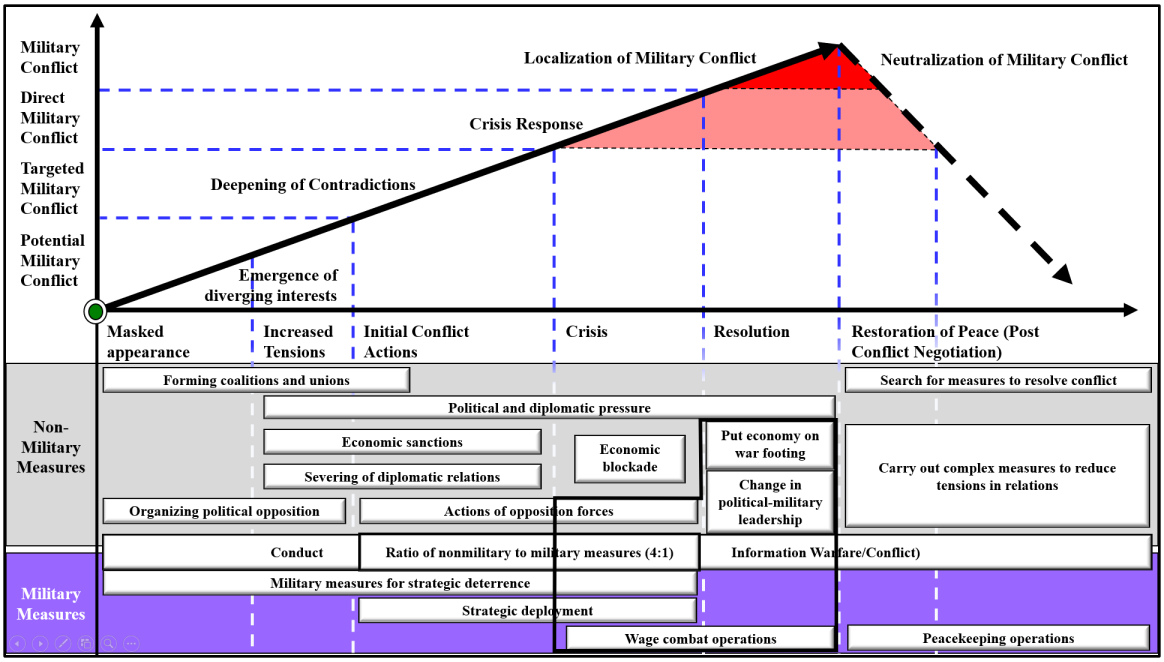

Figure 4. Gerasimov New Type Warfare Chart. Created by the author from multiple translations of the Russian source document.

As Russia does not wish to escalate to armed conflict with Western powers, the shaping phase is significant to setting the strategic conditions operational success in a war of limited aims. Within the military means available for Russia's military to employ, there is a "[re]new[ed] emphasis on surprise, deception, and strategic ambiguity."[68] At the operational and tactical level, Russia leverages a newer form of *maskirovka*, especially in the information environment. By this, the author refers to "volunteers and contractors" employed by Russia to keep certain activities "non-military" in character and therefore do not cross thresholds that would invoke a Western armed response. Also included in modern *maskirovka* is the exploitation of social media and the open press of Western democracies.[69]

Attribution and deniability are also critical in the shaping phase of Russian operations before major combat. For example, Russia staged forces on its borders under the guise of

[68] F. Stephen Larrabee, Peter A. Wilson, and John Gordon IV, *The Ukrainian Crisis and European Security: Implications for the United States and the U.S. Army* (Santa Monica, CA: RAND Corporation, 2015), 42.

[69] Kane, "Will Russian Exploitation of Open Press Destroy US Democracy?," 70.

conducting training exercises to mask the military build-up for the incursion into the Donbas.[70] This example demonstrates *maskirovka* to achieve operational and strategic surprise. The purpose of this deception and surprise seeking is ultimately about decision-making and the initiative. By increasing ambiguity in the operational and information environments, strategic and operational decision-makers are slow, or unable, to take meaningful action in time to significantly hinder Russian operations. As a result, Russia can accomplish tactical and operational objectives, while maintaining continual strategic advantage relative to the West. Figure 5 depicts the progression of New Type Warfare activities.

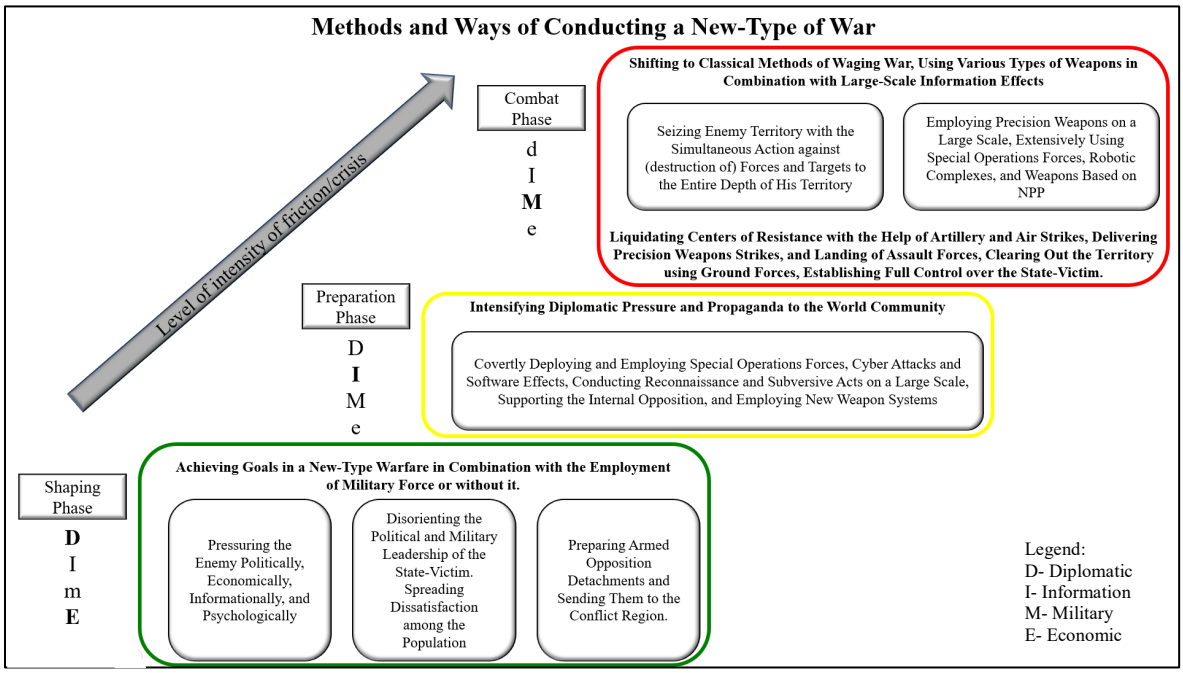

Figure 5. The Escalatory Approach of New Type Warfare; Exhibited in the Russo-Ukrainian Conflict. Created by the author and modified from the original figure by Timothy Thomas, *Russia Military Strategy: Impacting 21st Century Reform and Geopolitics* (Fort Leavenworth, KS: Foreign Military Studies Office, 2015), 106.

[70] Michael R. Gordon and Eric Schmitt, "Buildup Makes Russia Battle-Ready for Ukraine," *New York Times*, 5 August 2014, accessed 11 April 2019, https://www.nytimes.com/2014/08/05/world/europe/buildup-makes-russia-battle-ready-for-ukraine.html.

Modern Deep Battle

In modern times, Russia maintains an overall strategic defensive posture. While original Deep Battle and Deep Operations theory were offense-oriented, technological advancements allow that these theories of operational depth can contribute to defensive thinking as well. Les Grau and Chuck Bartles describe defensive Deep Battle as:

> [T]he concern of the senior commander using deep targeting, raids, sabotage, air assaults, missile strikes and air interdiction to weaken the attacking enemy. In the brigade defense, the first echelon occupies the main forward position and is responsible for stopping the enemy's attack in front of or within this position. It will normally have two battalions forward and two battalions in the second echelon. Should it defend with three battalions forward, it may also constitute a combined arms reserve. Where possible, the brigade will establish a security zone which may extend in excess of 20 kilometers in front of the main defense. If it cannot establish a security zone, it will establish a forward position that will mimic the forward line of defense.[71]

In the first line of this description lay similar operational targets and objectives as the Soviet theory. The conditions to achieve successful Deep Battle set forth by Isserson remain valid in the modern Russian theory of warfare, but theory now accounts for achieving effects in the information environment that enable tactical maneuver. Therefore, regardless of defense or offense, past or present, the ends are essentially the same, but the means available with technological advancements have grown the size of the operational area significantly and thus, changing the means to achieve said operational and tactical ends.

Also significant to Deep Battle and Deep Operations in the last decade is the emergence of the Battalion Tactical Group (BTG), built around a motorized rifle or tank battalion with enablers tailored to specific missions in specific areas.[72] These enablers include electronic warfare, air defense artillery, and other task-specific capabilities. Much like the Forward Detachments of the Great Patriotic War, the BTG has the organic capability to operate deep in the

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[71] Lester Grau and Chuck Bartles, *The Russian Way of War: Force Structure, Tactics, and Modernization of the Russian Ground Forces* (Fort Leavenworth, KS: Foreign Military Studies Office, 2015), 49.

[72] Ibid., 37.

enemy's rear and achieve tactical and operational effects. Its air defense capability is self-propelled, as is the artillery, meaning that it will not hinder the tempo of the BTG. Also included in the air defense capability of the BTG are Man-Portable Air-Defense Systems—shoulder-fired missiles—which are difficult to identify and eliminate on the battlefield and pose a high risk to rotary-wing and fixed-wing aviation assets. This combat entity is self-sufficient within all six warfighting functions for a period of time, but the limiting factor of operational reach and maintenance of tempo becomes sustainment.

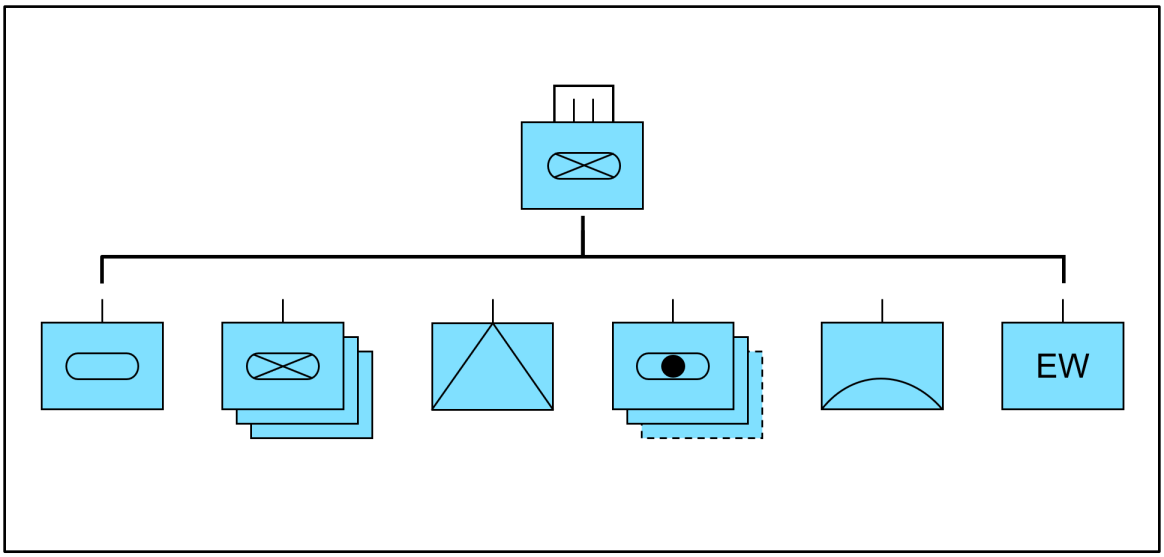

Figure 6. Example of a potential Russian Battalion Tactical Group (BTG). Created by the author with modifications of an original BTG diagram from Amos Fox and Andrew Rossow, *Making Sense of Russian Hybrid Warfare: A Brief Assessment of the Russo-Ukrainian War* (Arlington, VA: Institute of Land Warfare, 2017), 6.

The critical complement to maneuver forces in the Russian Army are the capabilities that affect the information environment. Where gaps exist on the battlefield to deliver physical effects on the adversary, the Russian military leverages cyber-electromagnetic activities to mitigate those gaps. For example, if the air defense capabilities are sparse, the Russian military employs

electronic warfare systems that can "confuse incoming missiles, overload ordnance guidance modules, or cause premature detonation of electronic fuses" to fill the gaps.[73]

The BTG in its self-sufficiency may well be able to accomplish the Deep Battle aims in the tactical area, given its versatility and lethality, in wars of limited aims. The BTG, complemented with operational-level non-kinetic capabilities, can also achieve operational effects and serve as a forward detachment-type maneuver group in support of an army-sized formation during Deep Operations in LSCO. If Russia can achieve operational surprise, the BTG, with its mobility and capabilities, could be quite effective in deep areas against a non-peer adversary. Furthermore, the BTG could serve as a tactical or operational vanguard, or as the main maneuver entity, as demonstrated in Ukraine.

Modern Deep Operations

As noted, the essential requirements to conduct offensive Deep Operations in the 21st century remain the same as during the Soviet era. The Russian military forces pursuing Deep Operations must achieve surprise to seize the initiative, simultaneously mass effects throughout the depth of the operational area, and maintain operational tempo. However, given the limited character of recent conflicts, the BTG acted as the main conventional maneuver force, rather than the exploitive vanguard of an army-sized element like the Forward Detachments did in the Great Patriotic War. In modern equivalency of purpose, the *Glavnoe Razvedyavatel'noe Upravlenie*, or GRU, Spetsnaz, and proxy forces prepare the deep environment for the conventional maneuver forces and facilitate exploitation in the information environment following conventional success.[74]

In lieu of the World War II-style Forward Detachments, the Russian military can now leverage operations in the information environment, partisan forces, and special forces, all of

[73] Center for Army Lessons Learned, CALL Handbook No. 17-09, *Russian New Generation Warfare* (Fort Leavenworth, KS: Center for Army Lessons Learned, 2017), 11.

[74] The GRU is the Main Intelligence Division, formerly Soviet Military Intelligence.

which present a much smaller signature, and present challenges in attempting attribution of actions. That said, conventional maneuver forces will still employ forward detachments, likely BTGs, to support Deep Operations maneuver. Russian military exercises are a venue in which to observe Russian will conduct modern maneuver.

The Zapad 2017 exercise indicated that Russian large maneuver formations for LSCO would have characteristics reminiscent of Great Patriotic War-era in that they will be "heavy artillery-enabled, land-based forward push with the joint help of reconnaissance units and special operations, air superiority elements, air defence, and naval elements."[75] Mathieu Boulègue concluded that:

> Zapad showed that any army seeking to burst Russia's A2/AD bubble would bear a high enough cost as to be effectively beaten . . . Russia demonstrated that its borders with Eastern Europe are not only conventionally tough to breach but also benefit from solid anti-access capability to deny entry to enemy forces—not just geographically but also on many strategic fronts, from space down to the sea.[76]

Boulègue's conclusion also supports the idea that the Russian military currently operates using an attritional indirect strategic approach, à la Svechin.

[75] Mathieu Boulègue, "Five Things to Know About the Zapad-2017 Military Exercise," Chatham House, 25 September 2017, accessed 31 December 2018, https://www.chathamhouse.org/expert/comment/five-things-know-about-zapad-2017-military-exercise.

[76] Ibid.

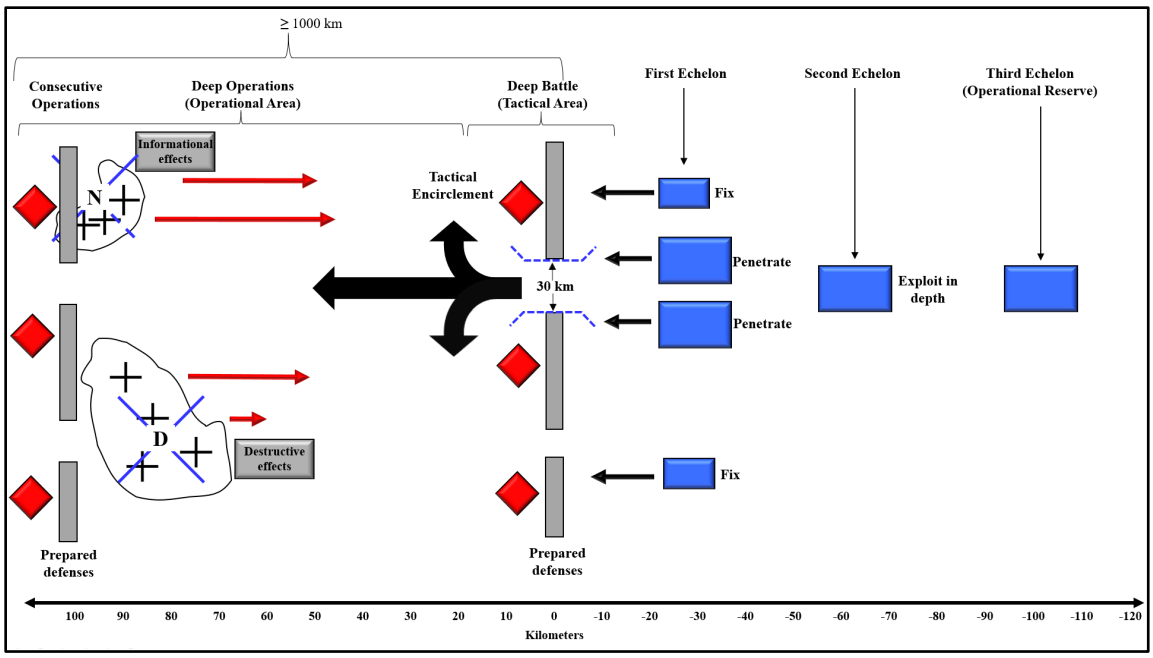

Figure 7. Deep Battle and Deep Operations in the Offense. Created by author.

Ultimately, while Gerasimov stated that Russia's military doctrine overall is "defensive in nature," there are aggressive characteristics in their non-military means, informational means, and if it suits Russian interests at the time, limited aggressive military action.[77] Figure 7 depicts the battlefield geometry of the original Deep Operations Theory but also depicts informational effects for modern application. The outset of the ongoing Russo-Ukrainian conflict is an example of a well-timed and executed limited Deep Operation. However, operations in the information environment were critical to achieving surprise and tempo, especially in Crimea.

The Russo-Ukrainian Conflict (2014 to 2019)

The sheer volume of troops, vehicles, and armaments for massive fronts and large-scale land combat are impractical for the Russian military both economically and geopolitically. Mitigations for this are shaping activities in the Gray Zone with special operations forces, other entities and local proxy forces. These Gray Zone activities facilitate the generation of ambiguity

[77] Valery Gerasimov in a speech to the Academy of Military Sciences on 2 March 2019. Middle East Media Research Institute, "Special Report No. 7943," 14 March 2019, accessed 15 March 2019, https://www.memri.org/reports/russian-first-deputy-defense-minister-gerasimov-our-response-based-active-defense-strategy.

for adversary decision makers, which leads to achieving operational surprise. Surprise, in turn, creates more time for Russian forces to seize the initiative and maintain tempo in the early phases of armed conflict, which is especially critical in wars of limited aims.

The Russo-Ukrainian conflict was one of limited aims so as not to provoke a large-scale reaction from the West. While the Russo-Ukrainian conflict exemplified New-Type Warfare characterized by Gray Zone activities like covert leverage of proxies to achieve operational surprise, there were elements of Deep Battle and Deep Operations regarding the military objectives sought: control of government buildings, neutralization of security forces before the main force arrived, critical commercial infrastructure, and media sites. As a result of special operations and operations in the information environment, the "little green men" quickly seized the Crimean Peninsula before Ukrainian decision-makers understood the environment.[78]

While the initial maneuver forces were Russian-backed Ukrainian "separatists" and not conventional, uniformed mass formations, the incursion into Eastern Ukraine had aspects of conventional maneuver. The separatist forces, supported by Russian forces, massed effects through combined arms maneuver against terrain and Ukrainian military forces. From the first Battle of Donetsk Airport to the Battle of Debal'tseve, the "Russian-backed separatists" demonstrated how to execute limited offensive operations in depth to force Ukrainian forces to retrograde West out of the eastern part of Ukraine called the Donbas, populated by an ethnic Russian majority, which includes the oblasts of Donetsk and Luhansk. At the very least, the initial exemplified Deep Battle. Depending on the timeframe, the subsequent offensive operations could demonstrate character reminiscent of the Deep Operations when examining effects in depth of the information environment.

[78] Jakub J. Grygiel and A. Wess Mitchell, *The Unquiet Frontier: Rising Rivals, Vulnerable Allies, and the Crisis of American Power* (Princeton, NJ: Princeton University Press, 2016), 49.

At the operational level, Russia employed surrogates and proxies to facilitate information warfare activity. Local proxies provided more credibility to the narrative, such as the Russian theme of "Novorossiya" as a moniker for Eastern Ukraine. Also, Russia used paramilitary contractors in Ukraine to add a level of deniability to their activities.[79] While many of these contractors could be prior-service military or military-trained, their status as independent contractors allowed more options within the geopolitical realm. For example, the deaths of Russian contractors in 2018 in Syria who facilitated attacks on US uniformed forces allowed Russia and the United States to refrain from overt military escalation due to the non-official capacity of the contractors.

At the tactical level, Russia employed technological capabilities in Ukraine for electronic warfare that can disrupt unit operations and enable friendly maneuver. These capabilities can disrupt a spectrum of communication and navigational systems. Additionally, Russian forces leveraged the electromagnetic spectrum for intelligence. Using cyber-electromagnetic capabilities, the Russian forces detected a general location of Ukrainian soldiers through the electromagnetic signature of their communications equipment and their personal devices.[80] Then, Russian forces positively identified Ukrainian forces using unmanned aerial vehicles. Subsequently, Russian artillery would follow the drone.

Another capability that Russia demonstrated at the tactical level was precision message delivery of psychological messages when it set tactical conditions in Crimea and Eastern Ukraine. Russian forces sent text messages directly to the cellular devices of soldiers indicating threats to their families, and sowing confusion about the tactical situation, affecting them psychologically and possibly contributing to the poor showing of the Ukraine security force's defense of

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[79] Aleksandr Gostev and Richard Coalson, "Russia's Paramilitary Mercenaries Emerge from The Shadows," RadioFreeEurope RadioLiberty, accessed 11 April 2019, https://www.rferl.org/a/russia-paramilitary-mercenaries-emerge-from-the-shadows-syria-ukraine/28180321.html.

[80] Aaron F. Brantly, Nerea M. Cal, and Devlin P. Winkelstein, *Defending the Borderland: Ukrainian Military Experiences with IO, Cyber, and EW* (West Point: Army Cyber Institute, 2017), 32.

Crimea.[81] Russia again demonstrated this capability by taunting Ukrainian forces after an indirect fires barrage by sending text messages asking how they liked the artillery.[82] In future armed conflict, Russia will leverage these capabilities as standard practice during Deep Battle and Deep Operations.

The initial Russian conventional operations limited the physicality of the operations to the Crimean Peninsula and approximately sixty miles into Eastern Ukraine from the Russian border. Thus, the invasion into the Donbas was analogous to Soviet Deep Operations in its character. However, Russia employed limited military means which constrained it from achieving the physical depth of the theory because of the strategic context of the geopolitical climate.

Conclusions and Implications

> We would be powerless to achieve the aims of the present if we failed to go beyond the limits of historical experience, if we failed to reassess it from the perspective of the new conditions of our era, and if we did not mercilessly discard all that was time-worn and stale.
>
> — G.S. Isserson, *The Evolution of the Operational Art*

Tukhachevskii predicated his theories on the idea that "operations are conducted to annihilate the enemy's vital armed forces; this is necessary for achieving the war's aims."[83] This idea is no longer valid in the modern era, evidenced by Russian conflicts in Georgia, Ukraine, and Syria. The military instrument of national power is not the sole entity that achieves the strategic and political objectives during wars of limited aims. By leveraging a whole-of-nation approach in

[81] Dale Brown, "Russian-Backed Separatists Are Using Terrifying Text Messages to Shock Adversaries—And It's Changing the Face of Warfare," *Business Insider*, 14 August 2018, accessed 11 April 2019, https://www.businessinsider.com/russians-use-creepy-text-messages-scare-ukrainians-changing-warfare-2018-8.

[82] Center for Army Lessons Learned, CALL Handbook No. 17-09, 23.

[83] N. Pavlenko, "Some Questions Concerning the Development of Strategic Theory in the 1920s," The Reinvigoration of Operational Art, 1965-70, in *The Evolution of Soviet Operational Art, 1927-1911: The Documentary Basis Volume II Operational Art, 1965-1991,* trans. Harold S. Orenstein (Portland, OR: Frank Cass, 1995), 81.

New Type Warfare, the military, in concert with non-military means, achieve effects in the operational environment and accomplish the strategic objectives.

In modern Deep Operations, the required effects and ends are the same, but the ways and means are significantly different, due to technological advancement and the current geopolitical climate. Additionally, Russia's strategic approach changed drastically since the Soviet era. Throughout the 20th century, Russia and the Soviet Union adhered to offensive strategy, whereas Russia claims it presently uses an active defense strategy. Therefore, given Russia's desire not to provoke a Western kinetic military response, it will seek to exploit seams in alliances and agreements, as it did with Ukraine which was not a member of the European Union or NATO.

In the future, despite Russia's proclaimed defensive strategic approach and preference to avoid major military combat with the West, there exist opportunities when the Russian military may go on the operational offensive for a short duration to achieve political objectives. If Russia becomes an aggressor in the Nordic states of Finland or Sweden, for instance, it is likely that the Russian military will have approximately thirty days to operate before the West can levy an effective military response—if at all since these states are not NATO members. At that point, it will likely be too late to affect change militarily without risking significant escalation that Western societies may not support. Therefore, operational surprise, massing effects, and operational tempo will be critical in such a case to secure as much territory quickly and then sue for a political settlement or transition to defense in depth to repel a counteroffensive.

Russia will also continue to operate in the Gray Zone until such operational opportunities arise in which the military can achieve rapid progress toward strategic objectives. When opportunities for employment of military forces arise, the most critical operational requirements for Russian Deep Operations are achieving operational surprise, maintaining high operational tempo, and the massing of effects simultaneously in the tactical area and the operational rear. Thus, military action in Ukraine exemplifies the needed strategic ambiguity and speed to achieve operational objectives before the international community could discern the situation and prevent

aggressive action. Furthermore, within Putin's risk calculus, Russia will pursue military action where it assesses it will succeed without escalation to armed conflict with the West, but Russia will also plan for options that will allow it to "off-ramp" aggressive action if it deems the West will intervene militarily as a preemptive measure.

The construct of time, space, and purpose within operations is significantly different in the character of warfare during the Soviet era compared to the Russian military in the Information Age. The range of indirect fires, unmanned aerial systems, space-based support capabilities, and reach of internet and media drastically changed the art of the possible within the operational art. Russia integrates organic operational capabilities, national and non-military means effectively into the operational construct during wars of limited aims, also evidenced in the Russo-Ukrainian conflict.

To buy time for conventional forces, Russia will leverage deception and Information Age technologies. The military will focus these means on the disruption of the enemy's command and control to set conditions for ground forces to destroy enemy units physically in the tactical area and penetrate operational rear areas. Russian forces require local air superiority to provide deep strikes and intelligence to cue fires assets, including non-kinetics fires like cyber-electromagnetic capabilities, to mass physical and cognitive effects in the operational rear. The other significant requirement is the logistics capability to sustain tempo and provide operational reach for ground forces. In non-permissive environments, these sustainment capabilities are more vulnerable, and therefore Russian forces will need to shape the local information environments and infiltrate clandestine entities to mitigate risk before executing the ground maneuver.

While not previously considered at the beginning of this study, the theory of Deep Operations can be said to include defense in depth in the modern theory. With Russia's strategy being ultimately defensive, the military will seek to achieve effects in depth—kinetic or non-kinetic—to disrupt an adversary advance and degrade the effectiveness of enemy combat power.

Finally, there is an imbalance between Russia and the United States regarding the art of the possible with information operations, and willingness to leverage sharp power—defined as using soft power tools like information for deceptive or manipulative purposes.[84] Many US servicemembers have a fundamental misunderstanding about the information environment and information operations. As the author previously concluded about Russian operations in the information environment:

> Consistent with the Russian way of war, the strategic approach to the information component of their [New Type Warfare] is aggressiveness and brute force that is opportunistic and dynamic, and unconstrained by the truth. Another characteristic that gives Russia's information strategy strength is the decentralized execution of the centralized themes without bureaucratic approval processes which provided resilience when open source intelligence exposed their activities in Eastern Ukraine.[85]

Implications

The implications of Russia's current theory of warfare are threefold: Getting to theater, fighting the fight, cognitive resiliency.

First, during major combat operations, the time from the initial penetration of front lines to disruption of the adversary's operational depth is significantly shorter and can begin before kinetic actions against the front line occur. Intelligence entities and special operations forces conduct this disruptive shaping activity before conventional maneuver forces attempt to breach the front lines. In a war of limited aims, these low visibility entities perform the role akin to those of the forward detachments in the Great Patriotic War. Deep Operations theory previously called for pre-assault fires with aviation and artillery to shape the battlefield and provide tactical and operational advantages to the Russian penetration force and subsequent exploitation forces. In its

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[84] Joseph S. Nye, "How Sharp Power Threatens Soft Power: The Right and Wrong Ways to Respond to Authoritarian Influence," *Foreign Affairs*, 24 January 2018, accessed 19 February 2018, https://www.foreignaffairs.com/articles/china/2018-01-24/how-sharp-power-threatens-soft-power?cid=int-fls&pgtype=hpg&utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%2001.25.2018&utm_term=Editorial%20-%20Military%20-%20Early%20Bird%20Brief.

[85] Nicholas J. Kane, "Analyzing Threats in the Information Environment from Russia in the Ukraine" (paper presented at the Missouri Valley History Conference, Omaha, NE, 3 March 2018), 3.

new way of warfare, Russia synchronizes these artillery fires with other information related capabilities in an integrated manner to set conditions for successful penetration. Simultaneously, in a way that would make Tukhachevskii proud, these fires break down the enemy's ability to sustain and provide command and control to its forces throughout its operational—and sometimes strategic—depth.

Second, Russian military leaders, much like Western leaders, would face challenges initially in effectively operating large combat formations in LSCO as it is an art rarely practiced in reality. However, large exercises like Zapad 2017 and Vostok 2018 provide Russian commanders with more opportunities to practice maneuvering operational formations. Currently, the United States cannot train maneuvering divisions or corps outside a virtual environment. Thus senior military commanders may be at a disadvantage initially in LSCO.

Third, within the framework of New Type Warfare in the Information Age, the strategic level of warfare will be far more active in the conduct of information warfare than during the Soviet era, nuclear weapons being the exception. Telecommunications is one of the driving factors in this idea, given that global information dissemination can be almost instantaneous. As the Russian military strives for operational surprise and high operations tempo to speedily achieve objectives, the challenge for Western military powers will be to mobilize and project combat power forward promptly. In the Information Age, there is now a global reach through cyberspace to have operational effects during hybrid warfare or LSCO by leveraging weaponized information.

For instance, theater logistics are vulnerable to disruption via malware delivered during cyberspace operations which challenges the assumption that Western powers will be able to project combat power into a theater uncontested. Additionally, using a technique called "doxxing," adversaries can expose truthful, sensitive or damaging information for malign

purposes.[86] An example of this concept is exposure of perceivably inappropriate behavior of commanders and influential strategic leaders which would result in the removal of those individuals pending an investigation. Such a removal would disrupt a military organization, especially one engaged in combat operations, or degrade the public trust in the military and discredit US legitimacy.

The US Army and the joint force requires an education and training overhaul on operations in the information environment. There is not a separate information operations campaign plan as is commonly believed, but rather there is a concept of support to *the* campaign plan, just as there are concepts of support for fires, sustainment, intelligence collection, and schemes of maneuver. These warfighting functions are all integrated into an overall campaign plan, as information should be as well. It is folly to view operations in the information environment as a stove-piped effort. In the event of LSCO, integration of information activities such as cognitive resiliency developed on the homefront, online identity management, signature reduction, and tactical and operational deception will save lives.

Maxim Trudolyubov posits that the Russian population would be willing to go to war if their leader decided to do so.[87] Such is the charisma of Vladimir Putin. However, many doubt the likelihood of major combat with Russia in the near future. Regardless, military thinkers must explore the problem in a time of peace to prepare for possible future realities, which nests with the Chief of Staff of the Army's vision towards readiness for LSCO against a peer adversary. Geography matters in the strategic context and the potential execution of Deep Battle and Deep

[86] Sebastian Bay and Nora Biteniece, "The Current Digital Arena and its Risks to Serving Military Personnel," NATO STRATCOM, January 2019, 11, accessed 17 March 2019, https://www.stratcomcoe.org /current-digital-arena-and-its-risks-serving-military-personnel.

[87] Maxim Trudolyubov. "Russia's Grand Choice: To Be Feared as a Superpower or Prosperous as a Nation?" in *Roots of Russia's War in Ukraine*, ed. Elizabeth A. Wood, William E. Pomeranz, E. Wayne Merry, and Maxim Trudolyubov (Washington, DC: Woodrow Wilson Center Press, 2016), 87.

Operations will depend significantly on where it may take place like the Baltic Sea region vice the Caucasus region vice a Far East front with China or Western allies.

Ultimately, while Putin deftly kept Russia's malign activities from breaching the threshold to spur a NATO armed military response, recent incidents with the Ukrainian Navy and continued electronic warfare and cyberspace acts of aggression in the Baltic Sea region may cause flashpoints. To be without well thought out plans for contingencies and crises would be folly. Regardless of the immediate likelihood or location of direct armed conflict, it would be irresponsible and not in keeping with Secretary Mattis' strategy of deterrence to not plan for combat with near-peer adversaries. Furthermore, these plans must account for cognitive threats in the information environment, rather than rely solely on technology and kinetic activity. Operational artists would do well to study the past to understand the underlying theories and synthesize with the current contexts of their adversaries to more accurately understand current environments and frame problems.

Appendix 1: Evolution in the Cold War and Beyond: Bridging the Ballistic to the Cybernetic

After Zhukov's reforms and restructuring of the military post-World War II, the Soviet army still focused on the offensive, but understood the implications of atomic weapons on the battlefield and therefore, the need for high mobility and protection. Additionally, the United States' nuclear advantage cause the Red Army to pursue organizations that were mobile but had protection so they could operate in a dispersed manner, but be survivable on the nuclear battlefield. Cue the doctrine of anti-nuclear maneuver. Once the Soviet Union achieved nuclear parity with the United States, nuclear forces became strategic means, and conventional forces focused on tactical action. The operational level of warfare temporarily found itself relegated to obsolescence in Soviet doctrine.[88]

The main information related capability the Soviets could employ during World War II and beyond was deception at the tactical and operational level to give commanders an advantage. The Soviets leveraged *maskirovka* well to mask the movement of forces and increase ambiguity about their intent. Thus, enemy commanders made incorrect decisions, or no decision, regarding the employment of their forces. The use of deception facilitated tactical and operational surprise for the Soviets to great effect in the later campaigns of World War II. Therefore, deception was the first element of information warfare incorporated into the Russian way of war.

With improvements in radio and telecommunications in the Cold War, the necessity to disrupt an adversary's ability to command and control forces increased to gain information superiority and an operational advantage during operational maneuver. This necessity led to Radioelectronic Combat doctrine in the late 1960s and early 1970s.[89] While the principles of deep

[88] David M. Glantz, "Soviet Operational Art Since 1936: The Triumph of Maneuver War," in *Historical Perspectives of the Operational Art*, ed. Michael D. Krause and R. Cody Phillips (Washington, DC: Center of Military History, 2010), 268-273.

[89] Christopher Lowe, "The 'Battle' and the 'Battle of Ideas': Misunderstanding of Information Operations" (Monograph, School of Advanced Military Studies, Fort Leavenworth, KS, 2010), 16.

maneuver remained relatively unchanged, the effects to be achieved in the information environment played a role in giving commanders and operational advantage. Figure 8 contextualizes the evolution of the Russian theory of warfare and highlights the transition in influence from Tukhachevskii to Svechin and the increase in efforts in information warfare.

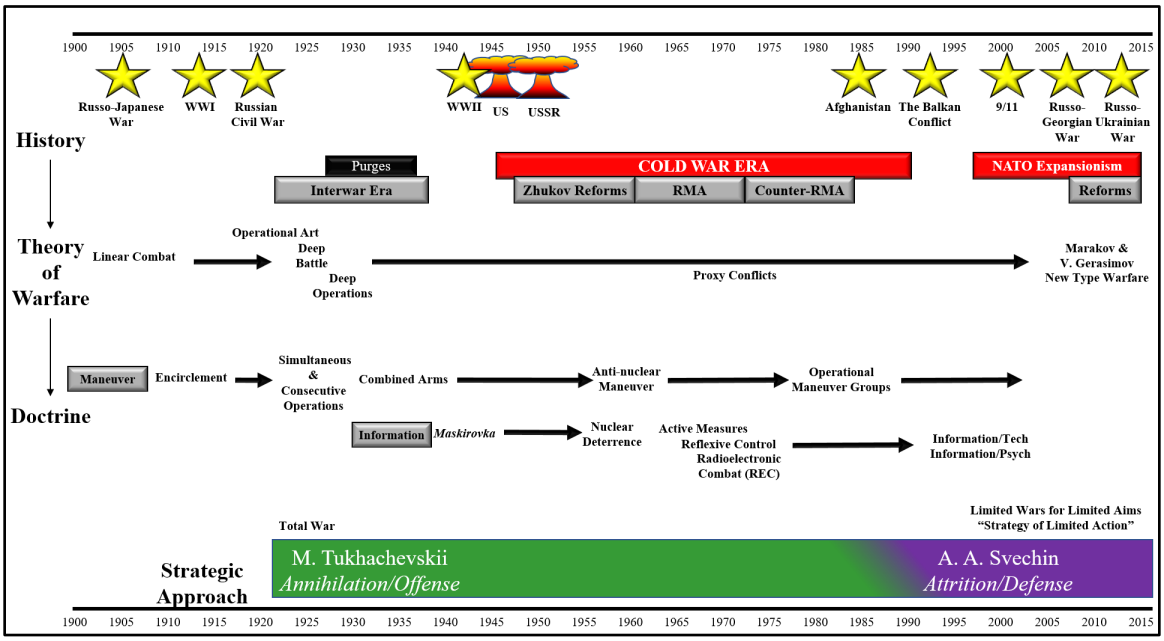

Figure 8. Evolution of the Russian Theory of Warfare and Strategic Approach. Created by the author. For more information about Zhukov Reforms, Revolution in Military Affairs (RMA), and Counter-RMA, see David M. Glantz, "Soviet Operational Art Since 1936: The Triumph of Maneuver War," in *Historical Perspectives of the Operational Art*, ed. Michael D. Krause and R. Cody Phillips (Washington, DC: Center of Military History, 2010), 268-273.

Further evidence of Russia's strategic transition lies in the period after the 2008 invasion of Georgia. The Russian military underwent significant strategic modernization, or *modernizatsiya* in structure and its investment priorities in technology.[90] This *modernizatsiya* is proving beneficial as the Russian military refines new technologies, and validate employment concepts in Syria and Europe.

First, the command structure of the Russian military is now similar to that of the United States' geographic and functional combatant commands. The US Department of Defense Unified

[90] Dale Herspring, *Putin's Russia: Past Imperfect, Future Uncertain*, 6th ed., edited by Stephen K. Wegren (New York: Rowman and Littlefield, 2015), 323-342.

Campaign Plan distributes responsibilities for regions across the globe to the geographic combatant commands. However, for the Russian *Operatsionnaya Strategicheskaya Komanda* (OSK) or operational strategic commands that now comprise the Russian military, the areas of responsibility for the OSKs are internal to Russia, rather than externally focused. This internal focus reinforces the idea that Russian military strategy is defense-oriented.

Previously, the Russian military divided responsibility amongst ten Military Districts that Russia consolidated into five OSKs. The Western and Southern Joint Strategic Commands are significant as they encompass the near abroad of Eastern Europe and the Caucasus Region of Eurasia. These two areas were host to the two most recent conventional conflicts in which Russia engaged with ground forces—Georgia in 2008 and Ukraine beginning in 2014. These OSKs are akin to the *fronts* as organized in the Great Patriotic War but are now joint service entities. The composition of the Western OSK—oriented on Russia's European frontier—includes three armies of ground forces, two air defense and aerospace armies, the Baltic Fleet and 11th Army Corps.[91] This Western OSK appears most active regarding publicly reported malign activities in the near abroad—particularly towards the Baltic states and Ukraine.

Second, Russia prioritized technological advancements that now allow it to contest every operational domain. According to the US Army's pamphlet on Multi-Domain Operations, "over the last decade, Russia has increased its investments in anti-access and area denial capabilities and systems intended to deny the Joint Force entry into a contested area and set the conditions for a fait accompli attack."[92] The effects of the progress of these systems are apparent in Syria as coalition aircraft must be vigilant of air defense capabilities that hold them at risk. Other priorities included cyber electromagnetic capabilities, unmanned aerial vehicles, long-range artillery, and air defense assets. While these assets and capabilities may be limited in quantity, they still

[91] Grau and Bartles, *The Russian Way of War*, 29.

[92] Training and Doctrine Command (TRADOC), *TRADOC Pamphlet 525-3-1, The U.S. Army in Multi-Domain Operations 2028* (Fort Monroe, VA: Government Printing Office, 2018), 7.

provide Western powers with significant tactical, operational, and strategic challenges in future contexts.

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