Chapter 2
Structure and Echelonment
What Kind of Military Action Does Russia Need to Prepare for?
Russia needs to defend itself against internal and external unrest or aggression and prepare to use force in support of its regional and international interests. Internal unrest and aggression may range from soccer riots to armed incursions (Dagestan) to attempted secession from the Federation (the two Chechen Wars) to civil war. External conflict may range from armed conflict (Donbass region of Ukraine) to local war (Soviet-Afghan War) to regional conflict (coalition against ISIS in Syria) to large-scale war (which may involve the territory of the Russian Federation). Additional military actions may involve humanitarian and disaster relief (Chernobyl during Soviet times), peace enforcement (Kosovo or the naval blockade and no-fly zone in Libya) or peace keeping (Golan Heights). To meet all these challenges, the Russians train the bulk of their force primarily to meet the most dangerous challenge/large-scale conventional maneuver war under nuclear-threat conditions, and then train for other contingencies. However, they do not assume that competency in conventional maneuver will transition to all climates and geography. Mountain and arctic combat pose special difficulties, and the Russians commission officers from their five-year mountain combat or arctic combat academies. These lieutenants will spend their careers in Russia's mountain or arctic brigades.

What Constitutes the Russian Military?
Russia's Soviet legacy made stove-piped militarized intelligence and security agencies the norm, as the Soviets were leery of investing all military power in a single organization or ministry, primarily due to fears of a coup. The Russian Federation inherited a system that has militarized intelligence and security services spread throughout its various ministries, services, and agencies. Often military forces that serve in ministries other than the Ministry of Defense (MoD) are labeled in the West as “paramilitary,” which implies these troops are somewhat less than military. This assumption would be incorrect, as the conscripts, contract NCOs, and officers who serve in these formations are, for the most part, indistinguishable from MoD forces.1 These non-MoD forces live in barracks and possess BTRs, BMPs, mortars, artillery, and other weapons appropriate for light or motorized rifle units. In common usage, when Russians speak of serving “in the Army” they may be referring to service in any of these organizations. Historically, the vast majority of the Soviet Union, and later Russia’s, military forces could be found in the MoD, Ministry of Interior (MVD), and Federal Security Service (FSB-formerly the Committee for State Security or KGB) and their subordinate Border Troops.2 In general, troops serving in the MVD and Border Troops are more concerned with internal security, while the MoD is oriented towards external threats.

1 The officer academies of Russian military forces are so similar that officers can attend one ministry’s academy, but be commissioned as an officer into a different ministry.
2 In some post-Soviet states, especially where external state actors are less of a concern, these other organizations have significantly more combat power than the Ministry of Defense units.
The Russian Federation recently enacted a major reform of its military forces by establishing a National Guard. This National Guard is in no way similar to the U.S. National Guard, but consists of active duty troops who were already part of Russia’s other internally focused security services, reportedly including the Ministry of Internal Affairs-Internal Troops (MVD-VV), Special Rapid-Response Detachment (SOBR), the Special-Purpose Mobile Detachment (OMON), the MVD Prompt-Response and Aviation Forces’ Special-Purpose Center, and aviation subunits. Estimates of the total National Guard personnel have varied between 200,000-300,000. For the purposes of clarity, in this book, the term “Armed Forces” will refer specifically to the MoD, while the term “military” will refer to all of Russia’s militarized intelligence and security services, including the MoD.4


The 2008 “New Look” Reforms
The Russian Federation had great difficulties reforming its Armed Forces after the collapse of the Soviet Union. Russia’s civilian leadership’s mantra of military reform was modernize, downsize, end conscription, and increase servicemen salaries. Former President Boris Yeltsin made these promises in the early 1990s, with decidedly mixed results. Russia’s massive conscript-based army was substantially trimmed down from the Soviet high of 5,000,000 uniformed personnel. Aside from the significant changes that took place immediately after the collapse of the Soviet Union, Russia generally took the “band-aid” approach to military reform by applying superficial fixes instead of serious reforms. The net result of this inaction was that Russia retained a bloated command structure designed for the command and control of literally thousands of divisions, regiments, and battalions. The vast majority of these units were “skeleton units” manned by small cadres who help flesh out the unit with conscripts and reservists in the event of a mass mobilization. In Soviet times, such a system made much sense due to the type of war expected and the economic costs of maintaining large military forces, but in the post-Soviet era such a system seemed unnecessary. Moreover, it hindered the formation of a more modern, and combat-ready force.

Russia’s post-Soviet military experiences have occurred on a much smaller scale, which have been ill suited for a mass conscript army. Russia’s political leadership appeared to have turned a corner in 2007, when it decided to implement a massive reform of the Russian Armed Forces, which has been described as the greatest reform of the Russian Armed Forces in over one hundred years. This reform was led by a newly appointed Defense Minister, Anatoliy Serdyukov, and is often referred to as the “New Look” reforms of the Russian Armed Forces.5

Military District System Reform
One of the most high profile “New Look” reforms was that of the Russian military district system. This reform involved not only condensing six military districts into four, but also significantly changed command and control relationships.

In the Soviet system, the military district commander (there were up to 16 military districts in Soviet times) was responsible for garrisoning, training, rear area logistical support, protection of strategically vital areas, and coordination of civil defense. These missions were his primary concern, and fulfilling them involved pre-conscription training, conducting the fall and spring conscription campaigns, operating military state farms, doling out pensions, etc. In wartime, the military district was responsible for conducting mass mobilization, including preparation of units for combat, transportation of units to the front, logistical support, and replenishment. The military district commander was not responsible for operational control of most units in his territory. This responsibility generally lay within the Branches of Arms (Ground Forces, Air Force, Navy, etc.) in peacetime.

The 2010 reform gave the military district commander operational control of most military and MoD forces in their respective regions, with the exception of all nuclear and certain
The above graphic annotates approximate locations of Army and Tank Groups, Divisions, and Brigades, where the vast majority of the Ground Forces’ 220,000 personnel may be found. Russia is in the midst of a major reorganization of assets in the Western and Southern Operational Strategic Commands (OSKs), so this depiction is speculative at best. The command and control relationship between the Army Groups (Combined Arms Armies and Tank Armies) is not depicted.

strategic assets such as the Strategic Rocket Forces (RVSN), Airborne (VDV), and GRU spetsnaz units. At this time, the military districts were renamed “Operational Strategic Commands” (OSK), although the term “military district” is still used when referring to the organization when it is involved with more mundane rear-services activities. (Due to the periodic mentions of military districts in official pronouncements and the very different missions of the OSKs and military districts, it is possible the military district hierarchies were not completely subsumed by the OSKs. Instead, the military districts still exist, but are collocated at the same headquarters as their respective OSKs and are commanded by one four-star flag level officer who is dual-hatted for both commands.)

In 2014, the Russian Federation established the Arctic Operational Strategic Command, based upon the Northern Fleet Headquarters at Severomorsk, due to the size and strategic importance of the Arctic region to Russia. Although the Arctic OSK is considered a Joint Strategic Command, it is apparent that it is not considered as a military district, as are its sister commands (Western, Central, Eastern, Southern), and is essentially “last among equals.” In regards to Russian Ground Forces’ maneuver brigades, the military districts control most maneuver brigades via Army Groups.  

6 Donnelly, pp. 149–151.
The Role of the Army Group

The intermediate echelon of command between the OSKs and maneuver units is the Army Group (a Combined Arms Army or Tank Army). The Army Group system was developed by the Soviets during the Second World War, when the echelons of corps and armies were merged together. Unlike Russian brigades and divisions, there is no uniform set of capabilities or assets that these Army Groups currently possess; some units do not even have motorized rifle or tank units. This is one area that is undergoing some change, as there appears to be an effort to develop a standard set of capabilities for each Army Group. It is likely that in the future each Army Group will have at least several motorized rifle and tank divisions and brigades; headquarters, artillery, air defense, reconnaissance, and MTO (logistics) brigades; and two regiments, an engineering regiment and a NBC defense regiment. During combat operations the Army Group detaches needed assets to support the various maneuver units. Perhaps the most important assets provided by the Army Group in this endeavor are the MTO brigades, which feed, fuel, supply, and maintain the maneuver brigade(s), and the artillery and/or MLRS artillery brigades, which regularly detach assets to support the formation of the Brigade Artillery Group (BrAG), which will be discussed in depth in the following chapter.

Online, November 2014.

7 Russia also has Army Corps which serve a similar function, all Army Corps are currently oriented for coastal defense missions and are assigned to, and collocated with, the naval fleet headquarters. The 22nd Army Corps (Sevastopol/Black Sea Fleet), 11th Army Corps (Kalingrad/Baltic Sea Fleet), and the 14th Army Corps (Severomorsk/Northern Sea Fleet) provide command and control of mostly Coastal Defense Troop units (Naval Infantry and Coastal Defense Artillery), and also some Ground Forces units.


Transition to the Brigade Structure

In terms of brigade-level and below operations, these reforms are significant for several reasons. The first is that they are responsible for consolidating the division/regimental structure into modular maneuver brigades of approximately 3,000-4,500 soldiers, each capable of conducting independent action and providing its own organic support (each brigade is typically also a separate garrison). The transition to the brigade not only reduced a level of management, but was also instrumental in reducing the bloated officer corps. When the Russian Federation converted to the brigade structure, it also designated all units as “permanent readiness units,” eliminating all “cadre units” and the positions of the cadre (mostly officers) that manned them. In all, the Russian Armed Forces reputedly downsized from 1,890 to 172 large units.

In order to understand the impact that this change had on the officer corps, consider that in 2008, the Russian Armed Forces was short some 40,000 officers. By 2010, even after ending the program of conscripting university graduates to serve as officers, the Russian Armed Forces had such an abundance of officers that in some cases lieutenants were placed in NCO positions. The reduction was so extensive that the Russian Federation reduced/consolidated the number of military academies from 65 to 10 to better match officer accession and training needs. In sum, the transition to the brigade structure was the key change needed to downsize a bloated officer corps. The funds freed from this endeavor were put towards the improvement of salaries and the modernization of equipment.⁹

Russia has a somewhat sophisticated classification system for determining unit echelon type. There are several caveats and exceptions, but, in general, elements that are incapable of functioning independently over time, such as battalions, companies and below are considered “subunits” [подразделение]. Units that can function independently over time, such as regiments, are considered “units” [часть], while a formation that consist of a collection of units, such as a division, is considered a “soyedineniye” [соединение]. Serdyukov’s reforms converted most of the force into independent brigade soyedineniye. The regimental/division structure is still common in the Russian Airborne (VDV), and there are still a few of the Ground Forces divisions, but the vast majority of Russian combat power is now found in independent brigades. Although brigades and divisions coexist, brigades are not subordinated to divisions (unlike the U.S. system), each is considered a soyedineniye. Major military formations such as Corps, Army Groups, Fronts and Strategic High Commands (military districts) are considered “ob’yedineniye” [объединение]. In terms of logistics, the difficulties of deploying and supporting a brigade is an order of magnitude easier than that of a division. Russia now has a much easier time projecting combat power by using smaller soyedineniye. This is in large part due to the fact that the Russian Ground Forces (and lesser extent VDV and Naval Infantry) makes extensive use of rail transport, smaller soyedineniye, are easier to deploy and sustain with Russia’s rail infrastructure. This discipline is regularly practiced. It is not uncommon for Russian brigades and their equipment to be transported (by ship or rail) thousands of kilometers for training events.

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The approximate unit manpower is as follows:

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Personnel</th>
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</thead>
<tbody>
<tr>
<td>Motorized Rifle Division</td>
<td>8,500</td>
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<tr>
<td>Motorized Rifle Brigade</td>
<td>3,000-4,500</td>
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<tr>
<td>Separate Motorized Rifle Regiment</td>
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<td>Battalion Tactical Group</td>
<td>700-900</td>
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<tr>
<td>Tank Division</td>
<td>6,500</td>
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<tr>
<td>Tank Brigade</td>
<td>3,000</td>
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<tr>
<td>(Iskander) Rocket Brigade</td>
<td>500</td>
</tr>
<tr>
<td>Artillery Brigade</td>
<td>1,000</td>
</tr>
<tr>
<td>MLRS Brigade</td>
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<tr>
<td>Air Assault Division</td>
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<tr>
<td>Airborne Division</td>
<td>5,500</td>
</tr>
<tr>
<td>Naval Infantry Brigade</td>
<td>2,500</td>
</tr>
<tr>
<td>GRU Spetsnaz Brigade</td>
<td>1,500</td>
</tr>
<tr>
<td>MTO Brigade</td>
<td>2,000</td>
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</tbody>
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Reintroduction of the Division?

Although Russia transitioned to a brigade structure in 2009/2010, a few divisions remained in the Ground Forces, but they were definitely the exception and not the rule. Now the Russian Federation is reintroducing the division into its organizational structure in a few key locations, notably on Russia’s Western border with Ukraine and NATO (reportedly, these divisions will deter any NATO invasion). There have been few details about these divisions and how they will be structured. They will reportedly resemble Soviet-era divisions, with three motorized rifle regiments and one tank regiment (for a motorized rifle division) or three tank regiments and one motorized rifle regiment (for a tank division) plus supporting units. According to one Russian journalist, these divisions will have fewer than the four maneuver regiments that were customary in Soviet times. Russian tacticians envisage the functioning of brigades and divisions in the same Army Groups.

Prior to 2009/2010 the Russian Ground Forces had never used maneuver brigades as permanent formations. When they were used, it was typically in an ad-hoc manner, being formed for a specific purpose or set period of time. Since these units are now functioning together, there is some thinking about how they would interact in large-scale combined arms warfare. The brigades will use their mobility to function as a combined arms reserve to either repel penetrations of the defense or exploit offensive successes. Unlike the U.S. system, division and brigades will be subordinated directly to a Combined Arms Army or Tank Army; the maneuver brigades will never be subordinated to a division.

One reason that Russia turned away from the regimental/divisional structure was the difficulties with deploying these units. Russia determined it needed a brigade structure to more easily project combat power, as it is much easier to move a brigade than a division. Since these new divisions will be formed just on the western border (near the perceived threat), there is likely little concern about these units’ effect on strategic mobility. In sum, current Russian thinking sees value in maintaining both the brigade and divisional structures. The brigades provide needed strategic mobility to rapidly protect the vast borders of the Russian Federation, while the relatively static division provides an abundance of combat power in high risk areas. Although Russia has introduced a few new divisions, the vast majority of the Russian Ground Forces combat power will reside in brigades for the foreseeable future.¹²

The Russian Way of War: Force Structure, Tactics, and Modernization of the Russian Ground Forces

Russian Graphic Symbols Depicting Subunits

<table>
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<th>отделение</th>
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<th>батальон</th>
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<td><img src="image" alt="symbol" /></td>
<td><img src="image" alt="symbol" /></td>
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</tbody>
</table>

Subunit symbols are used in conjunction with vehicle, weapon systems, and other symbols to indicate unit size and type in Russian military graphics.

Building Blocks of the Russian Brigade

Russian maneuver brigades are composed of battalions, companies, platoons, and squads. Unlike U.S. brigades, which typically have only battalions reporting directly to the brigade commander, Russian brigade commanders may also have companies, platoons, and squads reporting to them as well. This number of direct reporting units may seem daunting from a U.S./Western view, but not from a Russian one. Typically, Russian brigade (and to a lesser extent battalion) commanders have several deputy commanders who assist in the command and control of these directly reporting units. In addition, many of the commanders of these subordinate units are also on the commander’s staff. For instance, the senior signal officer not only sits on the staff, but also commands the signal unit. The building blocks of a brigade consist of:

- **Squad [отделение]** - The squad is the smallest troop formation in the Russian Armed Forces. They vary in size, but typically consist of 4-14 personnel. The motorized rifle squad is the basic building block of the motorized rifle battalion, consisting of seven-nine soldiers. Motorized rifle squads are mounted on a combat vehicle, either a BMP, BTR, or MT-LB (the MT-LB is considered a light tracked BTR). Typical personnel include vehicle commander, driver-mechanic, grenadier, assistant grenadier, machine gunner, senior rifleman, and rifleman (in squads mounted on BTRs, a designated marksman).

- **Platoon [взвод]** - Russian platoons typically consist of two-four squads with 20-45 personnel led by a lieutenant or senior lieutenant with the help of an officer assistant (senior NCO). Most platoons are part of companies, but some platoons report directly to battalion, brigade, or higher echelon units. A motorized rifle platoon based upon BMPs has a command element with three squads. A motorized rifle platoon, based upon three BMPs, has a command element and three squads. The command element consists of a commander, senior sergeant, designated marksman, machine gunner, crewman and medic. The platoon has a total of 32 personnel.
- **Company (рота)** - Russian companies vary in size, but the majority have two-four platoons with a total of 30-100 personnel. Most companies are part of battalions, but some companies report directly to battalion, brigade, or higher echelon units. The motorized rifle company has three platoons led by a captain with the help of an officer assistant (senior NCO) and a small headquarters element (seven personnel- company commander, deputy commander, senior sergeant, senior mechanic, medic, grenadier, ground radar operator) for a total of approximately 100 soldiers. In motorized rifle companies based on BTRs, there may be an additional antitank squad.

- **Battalion (батальон)** - Battalions and below are considered “subunits” [подразделение] in the Russian system. Subunits are the basic building blocks of the Russian Armed Forces, creating whole units [войсковая часть] such as regiments and brigades. Battalions that are “separate” [отдельный] are considered “whole” units, and will have larger staffs to support the additional administrative overhead. “Whole” units in the MoD are referred to with five digit numbers, while FSB and MVD units are referred to with four digit numbers. For instance, the 54th Separate Guards Air Assault Battalion is в/ч [войсковая часть] 85954.

Motorized rifle battalions have very similar structures, whether they are based on MT-LBs, BTRs or BMPs. The subunit typically has three motorized rifle companies, a mortar battery, and reconnaissance, grenade launcher, antitank, signal, engineer, and combat support platoons, for a total of approximately 500 soldiers. Since BTRs have less fire power than BMPs, BTR-mounted battalions may have an additional antitank platoon. If the motorized rifle battalions is acting independently, the unit could have attachments including air defense artillery (missile), reconnaissance, and logistical support subunits as needed. A motorized rifle battalion is usually led by a lieutenant colonel, but a major may also be found in command. His staff typically consists of a senior deputy commander, deputy commander for personnel, deputy commander for logistics and maintenance, and advisor for artillery.
Combined Arms Combat
Horse cavalry with horse-drawn artillery and wagon-mounted machineguns was an important aspect of the Russian Civil War. These mobile forces were able to project power over Russia’s vastness, but cavalry clashes were seldom decisive. Sturdy foot-mobile infantry were necessary for decisive battle. World War I proved the effectiveness of combined arms combat and introduced the tank to modern warfare. The Soviet Workers and Peasants Red Army practiced combined arms battle as soon as practical. Artillery was integrated into infantry (later motorized infantry) battalions and tank battalions usually had infantry and artillery attached. Motorized rifle battalions usually had tanks and artillery attached, as well as its own organic artillery. While mortars and infantry direct support artillery batteries remained part of artillery branch, they were easy to integrate into motorized rifle battalions, as they maintained their own training program and used the same vehicles to move their weapons and ammunition. After World War II, the Soviets attempted to form permanent combined arms battalions of organic tank, motorized rifle and artillery companies/batteries, but the logistics and training frustrated the effort. Instead, the infantry, direct support artillery or mortar battery remained an organic part of motorized rifle and infantry units, while tanks and infantry regularly trained together and developed habitual partnerships.13

The Russian Army has realized this long-term goal by regularly using battalion tactical groups incorporating tank and motorized rifle companies and artillery batteries in the same battalion tactical group (BTG).14 This makes coordination by mission, locale and time for the rapid destruction of the enemy possible and enables the battalion commander to tailor his force optimally for each combat mission. The Russians extend this combined arms combat philosophy throughout the organization of actions by their large strategic formations (ob’yedineniye), operational/tactical formations (soyedineniye) and units (chast’) for the fulfillment of their assigned missions.

14 The Russian media has reported that in 2016, that each brigade or regiment (Ground Forces, Airborne, and Naval Infantry) had at least two BTGs in that were completely manned with contract servicemen, and by the end of 2016, the Russian Armed Forces would have 96 BTGs, by the end of 2017-115 BTGs, and by the end of 2018-125 BTGs.

The Role of the Battalion Tactical Group

The Battalion Tactical Group is now a commonly seen ad hoc formation, based upon a motorized rifle or tank battalion with attachments. It has been around in various forms since Soviet times, and is employed by not only the Ground Forces, but also Airborne and Naval Infantry units. The BTG appears to be Russia’s instrument of choice in Eastern Ukraine, prompting some analysts to speculate that Russia was fielding BTGs because it was difficult or impossible to field fully functional brigades. Since Russia now regularly transports brigades and their equipment considerable distances for exercises, it is unlikely that Russia is fielding BTGs in Ukraine due to logistic difficulties, but instead because they believe that the BTG is the most effective formation for combat in those circumstances.15

It is important to note that the BTG was always intended to be a means of projecting a brigade’s combat power, as the idea was discussed in the early years of implementing the brigade system.16 In 2005, well before the introduction of the brigades, Chief of the General Staff, General Yuri Baluyevskiy said: “events in Chechnya have shown that self-sufficient battalions and tactical groups with self-sufficient means of intelligence, communications and provisions operated more successfully in local conflicts. That is why we are considering the possibility of moving away from a strict organizational staffing structure today.”17 General Baluyevskiy is referencing BTGs.

The combined arms BTG was intended to be used as a detachable instrument of the brigade. One lesson learned from Russia in 2008 was the difficulty in deploying troops far from their garrisons. In order to remedy this problem, Russia now routinely mobilizes brigade and division-size units and transports them and their equipment considerable distances before they begin exercises.18 The use of detached BTGs in the Ukrainian theater does not mean that the Russians cannot deploy full brigades. The use of BTGs in this manner may be a way that Russia is handling troop rotations through the conflict. It also could mean that the BTG is the best force mix for this particular environment.

Although the BTGs likely have a common training program, there still are problems. Problems with command and control and suitable employment of attached units are subjects that are not highlighted in open Russian military discussion. There are also logistical and maintenance

issues, although use of the Armata common chassis will mitigate some of them. One reform that has not been successful was the abolition of some logistics and maintenance units in favor of private contractors. Russia is currently trying to rebuild some of its organic logistics and maintenance units that were disbanded, but the process is slow going.\textsuperscript{19} BTGs are not immune to the logistics problems that still plague the Russian military, and BTG commanders still complain about them. There is also reporting that BTGs are augmented by staff at the Army Group and Military District level. Due to the Russian planning process, battalion staffs are quite small by U.S. standards. This augmented staff may substitute for the lack of an on-site higher headquarters (brigade/regiment), but these staff members might also be liaising with the General Staff and advising the unit commander as needed.\textsuperscript{20}

\textbf{The Battalion Tactical Group in Relation to Mission Command}

The Russian military views the tactical, operational, and strategic levels of warfare differently from the West. In the West these levels are typically defined by echelon size (battalion, corps, army, theater, task force, etc.), but in the Russian system these levels are more nuanced, defined by the unit’s scope of mission. For instance, a division operating under an Army Group would be considered to be acting at a tactical level, but if the same division were detached and operating under a Front-level command, it would be considered to be acting at the operational level. By the same token, a brigade is usually considered as acting at the tactical level, but in a conflict with a much smaller opponent—as in the Russian–Georgian War—a brigade could be a “war winner,” and therefore a strategic asset.\textsuperscript{21} In the Russian system, a BTG is a tactical entity.

In the U.S. system, if at lower echelons Mission Command is more of a science than art and higher levels more of an art than science, this situation is even more so in the Russian system. The system of tactics lends itself well to mathematical precision and calculation. The science of command involves the commander picking the best option for accomplishing the mission and adjusting variables as needed. This process is assisted by rigid tactics and predictability that allow such practices as utilizing tables that estimate the percentage of an enemy unit that will be destroyed with a given amount of time from a specified unit (artillery firing tables, etc.). In terms of tactics, from a U.S. military decision-making process (MDMP) perspective, Russian military commanders have limited options for developing plans to accomplish given tasks. Commanders pick from the “menu” of known tactics. Although this would irk a U.S. commander, Russian commanders are comfortable with this system because, although tactics are simple, albeit in aggregate, when multiple simple tactics are combined to accomplish a given task, a given maneuver could appear complex. Since these maneuvers are not

\textsuperscript{19} One factor complicating the matter is that contract troops are funneled into the combat arms, leaving combat support and combat service support roles being filled by conscripts.


developed “on-the-fly” and are instead a collection of simple tasks, the planning process is much less involved than for an equivalent maneuver by a U.S. unit. At the tactical level, this system allows these units to have miniscule staffs in comparison to Western units and do not require extensive operations orders to plan their missions. All that is typically required in a Russian operation order is a map signed by the commander, with a few notes jotted in the margins. Tactics are simple and rigid, but since they are universal, when used in aggregate they can provide great operational flexibility.22

The Battalion Tactical Group in Relation to Operational Art
The BTG has no relationship to operational art in a Russian military context. This is because the term “operational art” has a much different meaning for the U.S. than Russia. In a NATO context it is defined as:

...the use of creative thinking by commanders and staffs to design strategies, campaigns, and major operations and organize and employ military forces. It is a thought process that uses skill, knowledge, experience, and judgment to overcome the ambiguity and uncertainty of a complex environment and understand the problem at hand. Operational art also promotes unified action by encouraging JFCs and staffs to consider the capabilities, actions, goals, priorities, and operating processes of interorganizational partners, while determining objectives, establishing priorities, and assigning tasks to subordinate forces. It facilitates the coordination, synchronization, and, where appropriate, integration of military operations with those of interorganizational partners, thereby promoting unity of effort.23

In practice, this definition has led NATO militaries to think not just about the military aspects of force projection, but also about the coordination of the full gamut of the state’s means of leverage to achieve a desired end state. In contrast, the definition of the term in a Soviet/Russian context is much more military oriented:

Operational art encompasses the theory and practice of preparing for and conducting operations by large units (fronts, armies) of the armed forces. It occupies an intermediate between strategy and tactics. “Stemming from strategic requirements, operational art determines methods of preparing for and conducting to achieve strategic goals.” Operational art in turn “establishes the tasks and direction for the development of tactics.” Soviet operational art provides a context for studying, understanding, preparing for, and conducting war...24

In a Russian context, operational art has typically been thought of in the way that the great Soviet military thinkers (e.g., Tuchachevsky, Svechin, Triandafilov and Isserson) had, focusing mostly on military matters, such as maneuvering of large military formations for optimum effect.25 Modern war is becoming more unpredictable. General Gerasimov, the Russian Chief of the General Staff stated: “In the 21st century, a tendency toward the elimination of the differences between the states of war and peace is becoming discernible. Wars are now not even declared, but having begun, are not going according to a pattern we are accustomed to.”26 While retaining the ideas of its major military theoreticians, there are some signs that

22 Ibid.
Russia may be expanding its definition of operational art to that of a definition more in line with U.S./NATO, due to current interests in new forms, methods, and ways of conducting warfare.27 Regardless of Russian interests in indirect and asymmetric methods (which the West has dubbed “hybrid warfare” or Russian “New Generation Warfare,”) and an increase in the quality of enlisted personnel through a new system of contract manning, in terms of systemic operation little, if anything, has changed at the tactical level for the Russian military. However the self-sufficiency of the BTG does expand the capability of the Russian Army to conduct deep tactical battle and provides a modality for the projection of the brigade or division’s combat power.

In short, Russian tactical leadership, especially as practiced at the brigade level and below, does not relate to operational art as defined by the Russian military, and is difficult to understand through a Western notion of the MDMP and a different world view of present and future war. Furthermore, the highly specialized nature of Russian personnel and training practice means that at the tactical level (generally brigade and below) Russian commanders will be primarily focused on the application of combat power (getting steel on target) and will be far less interested in the diplomatic, informational, and economic aspects of war, as are their Western counterparts. In the Russian system, these areas are generally the responsibility of higher echelons, or other branches of the Russian government.

Elements of Offensive and Defensive Combat

Combat Missions

Soviet and Russian military theorists have long studied the changing nature of warfare. Modern combat will involve greater depth, fluidity and mobility than in the past. Contiguous defensive lines of shoulder-to-shoulder formations will give way to open flanks, meeting battles and the struggle to gain important areas that will undermine the tactical stability of defending forces. While objective lines remain important, linear combat based on linear defensive lines and defensive zones will give way to combat to defeat artillery groupings working in conjunction with maneuver forces. Russian tactical units will be assigned objective limits. Russian maneuver brigades normally are assigned an immediate and subsequent mission, and a mission of the day. The brigade’s immediate objective will usually be the rear of the enemy first-echelon battalion’s defensive combat formation. The brigade’s subsequent objective will usually be the rear of the enemy first-echelon brigade’s defensive combat formation. The brigade’s mission-of-the-day objective will usually be the rear of the enemy’s second echelon brigade’s defensive combat formation. The mission of the day is flexible and will change with the brigade’s restated mission every 24 hours. A first-echelon brigade’s subsequent objective may correspond to the parent army’s immediate objective. Battalions are normally assigned immediate objectives and a direction for further attack.

Getting to and Conducting Battle

Maneuver is the organized movement of troops during combat to a more advantageous position to attack or repulse the enemy. Maneuver makes it possible to seize and hold the initiative and prevent enemy success; however, maneuver alone does not accomplish the mission. Fire is an essential partner of maneuver. The long-range fire battle, especially the effective employment of reconnaissance-strike and reconnaissance-fire assets, makes successful maneuver possible. Tank and motorized rifle tactical units and subunits generally use three basic types of formations when conducting movement to and during the attack: march formation, pre-combat formation, and combat formation.

March Formation

For Russia, combined rail and road movement is often the most effective and quickest way to move brigades and other large units. March planning includes priority for movement, march capabilities (so that the forces and heavy equipment on rail arrive together) and march support in the form of air defense, security of bridges and choke points, supply of POL and material reserves, maintenance support, secrecy, assembly areas, dispersion areas, lager sites, rest sites, information operations cover and misdirection.

Marches can be administrative or under threat. Marches under threat have usually been conducted at night for concealment. Depending on the state of electronic combat and air superiority, marches may be conducted during the day under smoke. The Russians use smoke in a variety of circumstances. It is used instead of building expensive counters to top-attack

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and may be used to screen movement effectively, provided that its particulates serve as a screen against electronic probes. Heavy equipment transports are used to save wear and tear on tanks and artillery pieces. In marches under threat, it is optimal that first echelon brigades have three routes from the final assembly area to commitment. The march column is organized so that the battalions may move directly into combat if needed. March columns must flow smoothly and quickly from the march into battle in combat order determined by the enemy composition and terrain where contact is expected. This provides an advantage in the event of a meeting engagement or overcoming a surprise enemy defense. Marches are usually used in an attack from the depth, meeting engagement or pursuit.

Pre-Combat Formation
The Tsarist and Soviet Army used the pre-battle formation to facilitate rapid and efficient maneuver of their units and subunits from the march to combat formation and back again. The Russian Ground Forces continue to use the pre-combat formation for this purpose. When in pre-combat formation, elements adjust the distance between vehicles and subunits to meet the realities of terrain and enemy forces. A Russian Ground Forces brigade, battalion, company, or platoon can transition from the march to pre-battle formation and back into march formation in a very short period of time. A unit in pre-combat formation is deployed in columns and dispersed laterally with less depth than in the march formation. The pre-battle formation is used when conducting a pursuit or an attack against a defending enemy, if the enemy’s defenses are relatively weak or are effectively suppressed.

Combat Formation
Before engaging in battle, whether on the offense or in the defense, a Russian maneuver brigade and its subordinate units will deploy into a combat formation. These elements may deploy into the combat formation from the march or from a pre-combat formation depending on the mission and expected enemy strength. Instead of deploying into a combat formation, a brigade’s subunits may deploy into different configurations to support other mission-specific requirements. Maneuver brigades typically have a dedicated reconnaissance element, but since subunits usually do not, they form ad-hoc formations to fulfill these missions. Most units not in combat formation are in configurations for fulfilling reconnaissance and security missions. These configurations include reconnaissance detachments, reconnaissance groups, reconnaissance patrols, forward detachments, advance guard, raiding detachments, combat security outposts, combined arms reserves, antitank reserves, anti-airborne/air assault reserves, armored groups, special reserves, and flank and rear security elements.  

Reconnaissance Detachment [разведывательный отряд] - Reconnaissance detachments are typically mounted reinforced companies that are capable of conducting observation, searches, raids, ambushes, installing/removing observation equipment, and, if necessary, engaging the enemy. They move on primary axes in advance of a march, meeting battle or offensive and are normally proceeded by a reconnaissance patrol (platoon). The standard

operating range of a Reconnaissance Detachment varies by mission, but an operational depth of 50 kilometers for company-sized units and 80 kilometers for battalion-sized elements is common.\textsuperscript{32}

Reconnaissance Group [разведывательная группа] - Reconnaissance groups are typically motorized rifle or spetsnaz squads dispatched to reconnoiter in the enemy rear area to locate nuclear delivery systems, enemy forces, headquarters, airfields, signal sites and other important targets. Reconnaissance groups are capable of conducting observation, raids, ambushes, and installing/removing observation and communication equipment. They may be inserted by helicopter, vehicle or on foot.\textsuperscript{33}

Reconnaissance Patrol [разведывательный дозор] - Reconnaissance patrols are typically platoon-sized elements, reinforced with engineers and other specialists, that reconnoiter up to 10 kilometers ahead of the parent unit. Reconnaissance Patrols can be combat, officer reconnaissance, NBC or engineer.\textsuperscript{34}

Forward Detachment [передовой отряд] - A forward detachment is a combined arms force normally built around a reinforced maneuver battalion and capable of independent action. When conducting offensive combat, the forward detachment of a brigade moves well ahead of the advanced guard of the lead brigade but behind the brigade’s reconnaissance patrols. Its mission is to seize key objectives and water crossings in advance of its parent brigade to facilitate the fastest possible advance and to quickly wedge itself deep into the enemy territory or defenses. Sub-elements of a forward detachment may conduct raids against key targets en route to their objectives. A forward detachment is not assigned a specific march route and will attempt to avoid contact with enemy forces until it reaches its objective. Forward detachments often link up with air-landed forces on their objectives. Water-crossing sites of operational and tactical significance are very important forward detachment objectives. When conducting defensive combat, forward detachments are tasked to establish a series of defensive positions in the brigade’s security zone astride main avenues of approach to delay, disrupt, or destroy the advancing enemy. Forward detachments are essential for pursuit operations and will be described in greater detail in the Pursuit section.\textsuperscript{35}

Advance Guard [авангард] - Each first-echelon brigade forms an advance guard from a first-echelon maneuver battalion while moving and expecting contact with the enemy. An advance guard ensures the high speed of the brigade in securing the advance of its parent brigade’s main body. Unlike forward detachments, advance guards move directly on the brigade’s route of advance. It is a security element and does not avoid contact with the enemy; rather, it seeks to defeat all enemy forces encountered. Its goal is to fight through


\textsuperscript{34} Ministry of Defense, USSR, \textit{Military Encyclopedic Dictionary} [Военный Энциклопедический Словарь], 2\textsuperscript{nd} Edition, Moscow: Voyenizdat, 1986, 617.

or fix all opposition to free its parent brigade from deploying its main body. It facilitates the movement of the main body while preventing enemy surprise attacks and overcoming the enemy security zone.\(^{36}\)

**Raiding Detachment [рейдовый отряд]** - A raiding detachment is a reinforced battalion capable of functioning independently, which is dispatched to destroy important military targets, disrupt command and control, occupy key terrain and block enemy reserves. In this effort, it overlaps the mission of forward detachments; conversely, forward detachments may also conduct raids.\(^{37}\)

**Combat Security Outpost [боевое охранение]** - Combat security outposts (CSOs) are security elements formed when a covering zone instead of a security zone is established forward of the main defensive area. CSOs are reinforced platoons deployed from the first-echelon companies of defending first-echelon battalions. They are placed up to 1,000 meters in front of the forward edge of defensive positions. The purpose of a CSO is to conceal the battalion’s main defensive position, prevent enemy reconnaissance, provide early warning, engage enemy forces, and slow the enemy’s rate of advance. Positions for the CSO are normally chosen by the brigade commander and refined by the battalion commander. These positions will be covered by direct fire from antitank weapons from the first-echelon companies’ strong points. CSO positions are improved by engineer obstacles and construction. A CSO is withdrawn only when ordered by the battalion commander with the concurrence of the brigade commander. CSO withdrawal, if ordered, is along predesignated, covered routes that afford whatever cover is available and that do not interfere with the battalion’s defensive fire plan.\(^{38}\)

**Combined Arms Reserve [общевойсковой резерв]** - When organized as one echelon, brigades and battalions often form a combined arms reserve. This is a small force (about one-ninth of the force: a platoon at battalion and a battalion at brigade) that is directly subordinate to the commander. The combined arms reserve, unlike the second echelon, is not assigned a specific mission. This reserve is a contingency force used to meet any unanticipated requirements. Common contingencies include blocking a breakthrough, counterattacking, providing flank security and covering gaps.\(^{39}\)

**Antitank Reserve [противотанковый резерв]** - Antitank elements at the brigade and battalion level form the antitank reserve and are often reinforced with engineer and artillery assets. The antitank reserve is usually employed as a blocking force against an enemy counterattack during the offense, covering threatened areas, open flanks and deployment areas. At the brigade level, it is usually led by the antitank artillery battalion commander.\(^{40}\)

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\(^{40}\) Ministry of Defense of the Russian Federation, *Military Encyclopedic Dictionary* [Военный Энциклопедический
Anti-Airborne/Air Assault Reserve [противодесантный резерв] - This reserve is a mobile, combined arms force created from second-echelon assets. It was added to Soviet tactical units in the mid-to-late 1980s and has been used by the Russians since that time. This development was due to Soviet fears that NATO could deploy a prodigious “air echelon” that would be able to jump over Soviet defensive positions, wreak havoc in the Soviet rear and threaten the operational stability of the defense. The anti-desant reserve is a mobile, combined arms force created from second-echelon assets. It is used in defensive situations where there is a strong possibility that the enemy will air-land forces. If an anti-desant reserve is designated, a combined arms reserve usually will not be formed. The formation of an anti-desant reserve will depend on the tactical situation. Russian units will only create an anti-desant reserve when fighting a highly advanced enemy which has the capability to air-land troops into combat. The anti-desant reserve is composed of combined arms subunits drawn from the second echelon-similar to the combined arms reserve.41

Bronegruppa (Armored Group) [броннегруппа] - When motorized rifle forces have dismounted from their BMPs, BTRs or MT-LBs, they may remain with their dismounted personnel to provide fire support, or they may be withdrawn to form an armored maneuver reserve with a significant direct-fire capability. This grouping is particularly true when the Russian force is defending, occupying blocking positions or engaged in city fighting. Sometimes tanks augment the armored group. (The terms “bronegruppa” and “armored group” can be used interchangeably.) This armored reserve normally is constituted from platoon through brigade. It is particularly common among second echelon subunits. It is often commanded by a deputy commander. This concept was widely practiced during the Soviet-Afghan War and continued in the fighting in Chechnya and Georgia.42

Special Reserve [специальный отряд] - Special reserves, such as chemical defense or engineer, may also be formed, depending on the tactical situation. Special reserves are not normally found at battalion level because of their limited organic assets.

Flank and Rear Security Elements [боковое охранение и охрана тыловых районов] - During the march, every maneuver brigade in the first or second echelon provides flank security for itself using assets taken from its main body. Rear security in a brigade march is provided by the second-echelon battalions. Forces operating alone (forward detachments, advanced guards) provide their own rear and flank security. Flank and rear security elements normally operate up to five kilometers from and paralleling or trailing their parent organizations.

Air Assault Detachment [тактический воздушный десант] - This unit is part of a reinforced motorized rifle company trained to air assault into the rear area where an enemy has broken through. The air assault detachment will cooperate with subunits of the brigade's second echelon in the conduct of a containment or counterattack.

Echelonment of Forces
A Russian maneuver brigade can attack independently, but will most often conduct maneuver combat as part of an army. As part of an army, it may be an enveloping force in a single or double envelopment to encircle an enemy force. It may be part of an army offensive on several axes. It may have a screening mission along a coastline or river. The meeting battle is the preferred form of offensive combat since the enemy has not had time to go to ground and entrench. Attacking an entrenched defending enemy can be costly in time and combat power.

An attack against a defending enemy can be from positions in direct contact with the enemy or from the march. When possible, Russians prefer to attack from the march. Often the first battle will be the covering force battle, where Russian forward detachments push through light enemy defenses and call in air, missile and artillery strikes on them. Air assaults may supplement forward detachment efforts to cut off enemy units in the covering force area.

A breakthrough attack against an entrenched enemy is difficult, and, consequently, it is a carefully choreographed event meshing air and missile strikes, phased artillery strikes, electronic countermeasures (ECM) and obscurants with the deployment of the attacking force from the march to pre-combat to combat formation. It brings the full firepower of the attacker to bear on the defender, either killing or incapacitating him. The attack is designed to rapidly punch through a sector of the defense and widen the gap while pushing follow-on forces through the gap to seize the enemy rear areas and defeat enemy reserve forces in meeting battles.

A Russian maneuver brigade (and subordinate units) will usually form two echelons in both the offense and in the defense. The first echelon typically has one-half to two-thirds of the brigade's combat power, while the second echelon has one-half to one-third. The second echelon is a combined arms force that is assigned a specific mission, and this mission differentiates it from a reserve.

On the offense, the first echelon conducts the main attack. It is charged with achieving the higher headquarters immediate objective and is usually responsible for attaining the subsequent objective. The second echelon is intended to exploit the success of the first echelon, continue the attack, and achieve the subsequent objective of the parent organization. If one sector of the first echelon's attack fails and another succeeds, the second echelon will be committed into only the successful sector. Therefore, the second echelon's attack may be in a different direction than originally planned. The second echelon is committed to combat through gaps between enemy strong points and breaches formed in the enemy's lines as a result of nuclear and conventional fire strikes. Other specific second-echelon missions may be to conduct pursuit, destroy bypassed enemy elements, defeat a counterattack, or replace first-echelon units that are combat ineffective before or during commitment. The Russian defense is designed to defeat or mitigate the effects of enemy nuclear and MLRS strikes, air attacks, tank attacks and air assaults. To do so, it employs the following principles:  

43 The following discussion is based on G. D. Ionin and V.V. Turchenko, Ministry of Defense of the Russian

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Concentration and Dispersal
Concentration of fire: Fires, not personnel and systems, are massed to achieve effect. Fire planning from squad to brigade designates areas of interlocking fire, massed fire, stopping fire and final protective fire. Artillery planning includes individual targets, concentrations, moving barrages, and standing barrages, as well as offensive fire planning to support counterattacks. It even plans for concentrated direct fires.

Disperse laterally and in depth: Defend in depth, limiting the effects of enemy fire and forcing constant attrition on the advancing enemy. Use a deep security zone where possible to draw out the enemy force, use his supplies, disclose his strength and create an opportunity for deep attack. High ground is often vital, but to sit on vital ground is to attract enemy fire. It may be better to defend the approaches while dominating the ground by fire from flank and rear. If it is necessary to put forces on that ground, minimal forces may hold the ground until enemy preparation artillery fire is concluded; the designated force is then quickly moved into position. The second echelon should be strong and tank-heavy.

Activeness and Maneuver
Pre-empt the enemy: The defender cannot be passive and rely on positional defense. The defender must retain or attain the initiative. An aggressive defense is a stable defense. Destroy the enemy nuclear delivery systems. Alter unfavorable force ratios at the last minute or disrupt enemy timetables. Conduct spoiling attacks to disrupt enemy deployment.

Maneuver: Maneuver by fire is key. Maneuver of forces is equally vital. Shift forces from quiet sectors or from the depth for counter-penetration or counterattack. Avoid loitering in assembly areas inviting enemy fires. Move counterstroke forces frequently.

Counter-attacks: Counterattack before the enemy commits his immediate reserve to maintain the stability of the defense.

Counterpenetration: Should the enemy disrupt the stability of the defense and penetrate with sufficient combat power, hold and shape the penetration with the second echelon and reserves while reinforcing first echelon forces. Leave the more decisive counterstroke to the senior commander. Do not just stop the enemy, destroy him.

Reconnaissance: Constant, aggressive reconnaissance in the enemy depth must determine the enemy main axes, location of forces and time table to preempt his attack through long-range fires, maneuver and counterattack.

Conduct deep battle: Long-range fires, air strikes and amphibious and air assault landings will disrupt, damage and delay the attacker. Controlled partisan actions may tie down considerable enemy forces.

Steadfastness: Some areas and lines must be held to maintain the stability of the defense, disrupt the enemy and gain time for the use of outside maneuver to rectify the situation. Defending forces do not have the right to withdraw without orders from the senior commander. This is true even when communications are lost and the force is surrounded. It is better to hold and wait for the counterattack than to break out of the encirclement and lose the combat power and effectiveness of the force. An intact force in the enemy depth reduces enemy possibilities. The senior commander will determine which areas will be held steadfastly and which areas are appropriate for maneuver defense.

Engineering Preparation: Forces in positional defense must be well dug in to survive nuclear, precision and concentrated artillery fire. Second echelon and reserve forces will need to be similarly protected, as will assembly areas and deeper defenses. Obstacles are an important part of defense, and minefields are very effective. Minefields that are laid at the last minute in the path of the enemy advance are particularly effective, since the possibility of enemy detection is lessened, preventing him from having breaching equipment at the exact spot needed. Mobile obstacle detachments, working with the antitank reserve are key assets. Mines can also be quickly laid from helicopters or by multiple rocket launchers. These are especially useful in sealing gaps or frustrating the deployment of the enemy reserve during an attack.

Surprise: The side with the initiative has an advantage in achieving surprise; however, the defender can achieve surprise by concealing the defense, deceiving the attacker as to the location and alignment of the defense or by attacking to win the initiative. Techniques to achieve surprise include:
Avoid stereotypes: Published defensive graphics are a guide, not a directive. Lay out the defense to take advantage of the variations in the terrain without being predictable. Adhere to the norms, but use them imaginatively, remembering that they are averages that will vary due to terrain, mission, capabilities and weather.

Conduct counter reconnaissance: Locate, defeat and destroy enemy reconnaissance efforts. Use dummy positions and radio nets, conduct false movements. Camouflage real and dummy positions. Check the effectiveness of camouflage habitually and particularly from the air.

Create a false forward edge of the defense: Where possible, create a false forward edge to draw enemy artillery preparation and premature deployment for attack. If that is not possible, consider withdrawing the bulk of the force secretly before the enemy air and artillery preparations and then reoccupy the fighting positions.

Counterpreparation: Secretly prepare to conduct artillery and airstrikes before the enemy has an opportunity to conduct his planned strikes.

Maneuver: Maneuver is essential for maintaining the stability of the defense, but maneuver must be covert to avoid enemy detection and counterattack or fire strikes. Prepare routes planning the use of concealment, bad weather, smoke and camouflage to cover movement.

Air Defense: Defeat of enemy aviation, missiles and UAVs is essential to deny enemy air reconnaissance, deter enemy air strikes and prevent or interdict enemy air assaults. Air defense should be multilayered, overlapping and redundant. It should involve missiles and guns so that it can function despite electronic jamming and ECM. Consider the use of particulate smoke.

Anti-desant Defense: Defend against aerial or amphibious raids and insertions by constituting an anti-desant reserve, constructing anti-landing obstacles, stringing overhead wire, mining landing zones and planning artillery strikes on landing zones. Air defense is an essential component against aerial insertions and direct fire artillery, and deployment of the bronegruppa can be an effective addition to the strength of the anti-desant reserve.

Deep battle: Deep battle is the concern of senior commanders 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 brigade main defense. If it cannot establish a security zone, it will establish a forward position that will mimic the forward line of the defense.
Battalions in the first echelon are intended to:
- Engage the enemy as it deploys and transitions from column movement to attack formation
- Repel assaults by the enemy in order to avoid enemy pockets in the defensive area
- Deny enemy breakthrough into the depths of its defense;
- Destroy enemy subunit pockets at established kill zones and lines.

The second echelon (or reserve) is intended to:
- Deny the enemy’s seizure of strong points throughout the depth of the defense
- Prohibit enemy breakthroughs throughout the depth of the defense
- Defeat pockets of the enemy through actions of subunits at designated positions and lines
- Conduct counterattacks
- Reoccupy contested positions at the forward edge of the defense.

The brigade may employ a single echelon if the situation allows or if opposed by a weak enemy. When organized as one echelon, brigades and battalions often form a combined arms reserve. This is a small force (about one-ninth of the force: a platoon at battalion, a company at regiment, and a battalion at brigade) that is directly subordinate to the commander. The combined arms reserve, unlike the second echelon, is not assigned a specific mission. This reserve is a contingency force used to meet any unanticipated requirements. A second echelon battalion does not normally conduct a counterattack. Usually all that is available to counterattack from within the brigade defensive area is the antitank reserve and the combined arms (anti-desant) reserve. If the enemy has managed to penetrate through the first-echelon defenses, it is a robust force. The second echelon (or combined arms reserve) needs to stop the penetration and hold it in place. Stopping the penetration is first priority, and it is safer to stop it from prepared defensive lines augmented with internal fire lines from the antitank and the combined arms reserves. Once the penetration is stopped, an external counterattack can then eliminate the enemy penetration with a flank attack. Of course, if the enemy penetration has been stopped before it has been fully engaged with the second echelon defense, it may be weakened enough that the two reserves can deal with it. What the Russians do not want is to launch a meeting battle from within the second echelon defenses-and lose the battle. Then, the brigade has been split open with no prepared defenses behind it to stop the enemy advance.
Military Decision Making Process

The contemporary maneuver battlefield, under nuclear-threatened conditions, has changed in terms of tempo, reaction time, battle space and lethality. Once battle is joined, the tempo and sudden changes on the battlefield leaves little time to produce and disseminate intelligence and formulate plans and orders. Cyber-attacks and electronic warfare threaten timely communication. Parallel planning must supplant sequential planning. Battle management needs to be decentralized at the tactical level, but under centralized operational control. Tactical commanders need the authority and initiative to conduct battles in order to meet rapidly developing and changing situations in an effective and timely manner. In practice, battle drills are implemented at the squad through battalion levels. These battle drills, in conjunction with combined arms battalions, quick and effective staff procedures, and improved planning tools, aid rapid decision making and troop leading.

Commander and Staff Roles

The US Army uses a commander-driven decision making process where the staff uses direction and guidance from the commander to study the situation and develop courses of action for the commander’s review and approval. The Russian system is different. Although both systems are “commander-driven,” the role of the commander in these systems differ substantially. The Russian commander is much more involved with the orders process. In the Russian system, the commander, not the staff, develops the course of action. Upon receipt of orders, the Russian commander makes his decision based on his orders and understanding of the operational environment, and passes his decision to his staff and subordinate commanders for implementation. His decision has at least three elements: the concept of the fight, tactical missions, and coordination. The concept of the fight specifies which enemy elements are to be destroyed by what resources and in what order; the sector of main effort; and the organization for combat and the concept of maneuver. The tactical missions are specified for the first and second echelons, reserves, artillery, air defense and other subunits. Coordination includes objectives, phase lines, targets and times of link-up and achievement.

The commander often outlines his plan on a battle map, selecting from a collection of well-rehearsed tactical battle drills. Following the commander’s decision, he and his senior commanders make an on-ground reconnaissance of the area that they intend to fight on. Since the role of the commander is different in the Russian system, so is the structure and role of the staff at tactical levels. The Russian tactical staff is normally smaller than Western counterparts, this is due not only to the more active role of the commander, but also due to the emphasis on battle drills and repetition, which lessens planning duties. In addition, the staff makes extensive use of nomograms to support most aspects of staff planning, especially in the areas of logistics, artillery planning, and determining the correlation of forces.44 These nomograms are produced at higher levels (possibly at the General Staff, or one of its subordinate organizations) and are presumably updated as needed so they may be used to develop the staff’s running estimates.

44 A nomogram is a diagram representing the relations between three or more variable quantities by means of a number of scales, so arranged that the value of one variable can be found by a simple geometric construction, for example, by drawing a straight line intersecting the other scales at the appropriate values. For examples, see A. Ya. Vayner, Tactical Calculations [Тактические расчеты], Moscow: Voyenizdat, 1982. The formulae and nomograms in this book have since been computerized, updated and expanded to further speed up planning.
Nomogram Example
Nomogram for the destruction of enemy personnel and weapons with 100mm or 122mm artillery fire or 120mm mortar fire.

Artillery Nomogram Formula (example)

\[ S_i = \frac{N_i \cdot n_i(t)}{m_i} \]

- \( S_i \) the target area in hectares (2.471 acres)
- \( N_i \) the quantity of assigned artillery pieces (mortars) of \( i \) caliber
- \( n_i(t) \) the sustained rate of fire of one artillery piece (mortar) of \( i \) caliber expressed in rounds per minute
- \( m_i \) the quantity of rounds required for the destruction of one hectare of the target area expressed in rounds per hectare.

Example: Determine the area of destruction of enemy personnel and weapons by an artillery strike of 18 artillery pieces in the course of 7 minutes, if a single artillery piece can fire 25 rounds per minute, with the required expenditure of rounds per hectare at 80 rounds.

\[ S = \frac{18 \text{ artillery pieces} \times 25 \text{ rounds per minute}}{80 \text{ rounds per hectare}} \approx 5.6 \text{ hectares} \]

This nomogram is used to determine quickly the planning data for various smaller caliber artillery systems for area fire with mathematical probability of achieving artillery destruction norms.

Example #1: Determine the area of destruction of 12 122mm howitzers against enemy personnel in the open using a 15-minute artillery fire strike. This is shown by the red line.

Begin at the “Duration of Fire” axis and find 15 minutes. Go straight up to find the 122m “Type of Fire” line. Move horizontally left from that point to find the 12 line for the “Quantity of Artillery Pieces (Mortars)”. Drop from that point to the 122mm line for “Personnel and Weapons in the Open”. From that point, go horizontally to the “Area of Destruction” axis to read the answer-33 hectares. When the red line passed through the “Quantity of Rounds” axis, it showed that it will require 600 rounds.

Example #2: Determine the duration of a fire strike by 12 122mm howitzers to destroy enemy personnel in the open in a target area of 20 hectares. This is shown by the blue line.

Begin at the “Area of Destruction” axis and find 20 hectares. From that point, move horizontally to the 122mm line in “Personnel and Weapons in the Open”. From that point,
move vertically to the 12 line in “Quantity of Artillery Pieces (Mortars)”. From that point, move horizontally to the 122mm line in “Type of Fire”. From that point, drop down to the “Duration of Fire” axis to determine the answer-7 minutes. When the blue line passed through the “Quantity of Rounds” axis, it revealed that the mission will require 300 rounds.

Example #3: Determine how many 100mm cannon and the quantity of rounds needed to destroy dug-in personnel and weapons in a 7.2 hectare target area in a ten-minute artillery strike. This is shown by the green line.

Begin at the “Duration of Fire” axis and find 10 minutes. From that point, move vertically to the 100mm line in “Type of Fire”. Mark that point. Next, drop down to the “Area of Destruction” axis and find 7.2 hectares. Move horizontally to the 100mm line in “Covered and Concealed Personnel and Weapons”. Move vertically and determine where the second point on the “Type of Fire” line and this line intersect. They intersect at 36 on the “Quantity of Artillery Pieces (Mortars). The green line crossed the “Quantity of Rounds” axis at 1800. Thus, the mission will require 36 100mm cannon and 1800 rounds.
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Steps of the U.S. Army's Military Decision Making Process

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Another significant difference between the staff systems, are the duties of the staff members. In the Russian system, tactical staff members often command the troops associated with their staff section. (For instance, if the Russian system was implemented in a U.S. maneuver brigade, the brigade S-2 would also be the military intelligence company (MICO) commander.)

Russian tactical staffs spend less time planning than their Western counterparts, but are more involved with the implementation of the commander's orders, by directly tasking their subordinates. (This differs substantially from the U.S. system, where the members of the brigade staff typically directly control few personnel.) After the commander issues his initial orders, the staff and subordinate commanders begin their planning. The staff issues necessary warning orders while checking force ratios, requesting additional supplies, and adjusting frontages or dispositions to attain a mathematical probability of success. (In Russian parlance, Correlation of Forces and Means (COFM) analysis and mathematical verification) Fragmentary orders assist and adjust the parallel planning. The chief of staff produces the final battle map, which is the combat order and is signed by both the commander and chief of staff. There may be a small written annex of two to three pages. With the U.S. system, a
military unit with a weak commander, and a strong staff, could conceivably be successful, as a strong staff may be able to shepherd a weak commander in the right direction. This is not the case with the Russian system, the commander is not just guiding and deciding, but also doing the planning. There is a Russian proverb “as goes the commander, so goes the unit.”

Military Decision Making in Relation to War Fighting Functions
Since the Russians use a much different military decision making process than used in the West, applying the Western concept of War Fighting Functions (WFFs) to their tactics and operations should be done with great care. In practice, the Russians do not discuss or even have a concept of WFF (Movement and Maneuver, Fires, Intelligence, Sustainment, Mission Command, Protection) as distinct elements assigned to various members of the staff. Instead, the WFF are always discussed in aggregate. As the commander is much more involved with the mechanics of planning, he is also responsible for the coordination of the WFFs essential for the execution of the mission. One example of how the Russian system is different from the U.S. system is by looking at how the Russians handle Intelligence, Surveillance, and Reconnaissance (ISR). In the U.S. system, ISR falls squarely in the Intelligence WFF, with the intelligence staff bargaining and compromising with the other WFFs for resources and priorities, such as UAVs, which the brigade’s intelligence staff typically do not directly control. In the Russian system, the commander is responsible for intelligence, along with the other WFFs, and he decides what does and does not get resourced. All assets that are capable of
performing ISR functions, such as the UAV company’s UAVs, the air defense battalions’ radars, the electronic warfare company’s sensors, and the brigade’s reconnaissance battalion and signal intelligence platoon are used as he deems fit, and are networked accordingly. The commander will pull assets as needed to perform other tasks associated with other WFFs, but this is done at his discretion, and never as a compromise among the staff. This system prevents any problems that could arise from a particularly dominant personality on the staff acquiring more resources than would otherwise be allocated. The commander’s personal attention to all of these aspects seems daunting to most persons familiar with the Western MDMP, but not unduly so for Russians. Since a Russian commander usually just selects maneuvers from his well-rehearsed tactical battle drills, the details of WFFs only need to be tweaked as necessary to fit the operational environment. The significance of differences between these systems is that a Russian unit in similar circumstances as its Western counterpart may pursue a radically different “best” course of action due to these differences. In short, a U.S. staff cannot simply “put on their red hats” and reasonably expect to ascertain the decisions of their Russian counterparts, as both are using different systems for military decision making.

Theory of Implementation

The Russian education system continues to emphasize mathematics and science. Consequently, “math anxiety” is not a problem, particularly among military professionals. Mathematical determination articles are a normal part of most Russian professional military journals. Russian officers use mathematical models to aid in their planning. Nomograms and calculations quickly resolve issues such as determining pass times and march durations; duration and density of artillery fire to achieve necessary percentages of kills and equipment destruction in area fire missions; the time and place where the forces will encounter the enemy main force; the optimal march routes; the time required to move from the assembly area and transition from battalion to platoon attack formation; the artillery expenditure required during this transition; or the numbers of trucks and trips required to move tonnages of different cargo. The math does not stop there. A key component of operational and tactical planning is determining the Correlation of Forces and Means (COFM). This methodology is the mathematical determination of the combat power of the opposing sides after making mathematical adjustments for differences in combat systems, quantity and quality of systems, quality and training of the forces, terrain, morale, activity (attacking, defending, withdrawing, flanking, etc.), and combat experience. The Correlation of Forces and Means provides the ability to determine a mathematical probability of success, most advantageous avenues of attack or withdrawal and rate of advance in an operation or battle and can be the decisive determinant in the commander’s decision.\footnote{Ministry of Defense of the Russian Federation, “Correlation of Forces and Means” \[Соотношение сил и средств\], \textit{Military Encyclopedia} [Военная Энциклопедия], Volume 7, Moscow, Voyenizdat, 2003, 583-584.} Determination of the Correlation of Forces and Means used to be a fairly lengthy mathematical drill, but the methodology has been computerized and upgraded. Mathematical models are also widely used for ammunition, fuel and personnel expenditure rates.
Implementation of the Planning Process

Computerization, automation and stream-lined staff procedures are a priority for Russian staff planners. The motorized rifle brigade has five personnel in its operations section (two officers, two sergeants and one civilian). According to a recent Russian estimate, “typical” brigade-level staff procedures take up 200 man-hours per week. Experience shows that this translates to the requirement to produce 1.5-2 pages of printed text or enter 600-800 tactical symbols and operations notes per hour. Fatigue impacts on this output. For a “typical” brigade battle plan, the operations section spends three hours alone on planning rear services (supply and maintenance) support. Previously, this planning could take up to a day. The Russian goal is not simply to make the planning process faster, the Russian goal is to make the planning process faster than that of the potential adversaries. Current Russian estimates suppose that the most-advanced foreign armies require eight hours to produce a battle plan, the Russian goal is to reduce their planning process for a similar Russian force to under six hours. In U.S. military speak, the Russians are attempting to gain a decisive Mission Command advantage by using a shorter OODA (Observe, Orient, Decide, Act) loop vis-à-vis their adversaries (see image above).

Significance of Automated Command and Control

Perhaps the greatest factor that has caused the development of such a different planning process is Russian thinking on future war. The Russian Armed Forces still believe their first priority is high-speed maneuver warfare, and for this purpose, they believe their system is ideally suited. (The Russian Ground Forces do not see a need to implement a planning system that more easily facilitates counterinsurgency or nation building.) Although the study of
battles in the Second World War is rare in the West, these battles are still widely studied in
the Russian military at all levels. The Soviet experience in the Second World War has taught
generations of Russian officers that high-intensity maneuver warfare is extremely fluid. The
best laid plans are quickly overcome by events as the situation rapidly changes. The best way
of military decision making (in the Russian view) is not an in-depth staff planning process
that requires much coordination and de-confliction, but a system where one person (the
commander), who has situational understanding, rapidly issues timely orders to perform
standard tactics and/or battle drills (as appropriate) adjusted for the enemy, terrain, etc.
operational environment) to influence the outcome of the battle. While the U.S. and West
have made great efforts to incorporate technological developments into modern warfare,
there has been relatively little effort to refine the NATO military decision making process.
This is not the case for the Russians. They believe that an automated command and control
system is a key development for Russian attaining information dominance on the modern
battlefield by allowing a Russian commander to more quickly gain situational understanding,
draft and transmit plans, and execute operations more quickly than his adversary, (shorter
OODA loop). As can be seen by the accompanying graphic, the desired Russian end state
is to field a decision making system that cycles faster than the adversary's decision making
system.  Although automated command and control systems may be fielded (in some form
or another) by the U.S. and NATO, these systems will likely have relatively less impact due to
some of the automated command and control systems advantages being mitigated by the
U.S./NATO military decision making process that requires more human inputs, such as staffing
to provide coordination and de-confliction.

The Russian tactical military decision process not only starts with the commander, but is also
executed by him as well. This process is facilitated by well-rehearsed battle drills, permanent
combined arms subunits, quick and effective staff procedures and improved planning tools. It
is a different approach than that of Western armies and does not use their more staff-driven,
war-fighting-functions methodology for military decision making. Although the Russian
system is substantially less flexible than the U.S./NATO system, it does provide one advantage-
speed. (In short, the Russians prefer to sacrifice flexibility for speed in planning and executing
operations.) The Russian personnel system was built to support this system, battle drills are
emphasized for junior officers and their enlisted soldiers, while more senior officers focus
on the study of tactics and their historical employment. The Russians pursue a war fighting
philosophy that in high-intensity maneuver warfare, it is far better to execute a satisfactory
plan early, than a great plan late. Or more simply stated, a Russian commander prefers to
execute a previously rehearsed mission that fulfills the mission requirements adequately, than
attempting to plan and execute a custom planned mission that fulfills the mission perfectly.

46 Blog site of Lieutenant General Sergei Skokov, former Chief of Staff of the Russian Ground Forces, "Assessment
of the Situation in the Military - Part Two" [Оценка обстановки в военном деле - часть вторая], <http://general-
Major General (ret.) Ivan Nikolayevich Vorobyov

Doctor of Military Sciences and Hero of the Soviet Union, Major General (retired) Ivan Nikolayevich Vorobyov has a distinguished military and civilian career. Born June 22, 1922, Major General Vorobyov served as an infantry officer in the Great Patriotic War (Second World War) from June 22, 1942 to May 9, 1945 in positions ranging from rifle platoon to battalion commander. He was three times awarded for actions in combat, and is a recipient of the “Order of the Red Banner” award. In 1950, he graduated from the Frunze Combined Arms Academy, earning a prestigious “Gold Medal” for academic excellence. In 1955 he completed a post-graduate program and taught tactics at the academy for the next seventeen years. Later, he served in the Science Division of the Soviet General Staff, retiring from uniformed service in 1987. Major General Vorobyov is a prolific writer, authoring over 200 papers on tactics and operational art. These works have included writings on principles of combined arms combat; the future of warfare; combat actions under special conditions; fighting at night; military-science methodologies; counterterrorism and peacekeeping operations; and interministerial cooperation during combat operations. Major General Vorobyov continues to author articles and still serves on faculty at the Russian Combined Arms Academy.47 Most of the sources in this, and the following three chapters can be directly or indirectly attributed to his work, as his influence on Soviet, and later Russian, tactics has no Western equivalent. Major General Vorobyov has also written extensively on the importance of the information component of war (including electronic warfare). In the past, Russian military thinkers have thought of combat in terms of space: depth, width and height. Due to Major General Vorobyov’s writings, many Russian officers believe that a fourth value – information - is now equally important.

47 Major General Ivan Nikolayevich Vorobyov’s biography as found at: <dic.academic.ru/dic.nsf/enc_biology/131179/Воробьев>.