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## Short Study: Describing the Major Features of the Russian Battalion Tactical Group Based on their Performance on the Battlefield\*

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On the eve of the ongoing Russo-Ukraine War, the most important land forces element of the Russian Armed Forces was the battalion tactical group (BTG). Before the re-escalation of the war, in 2021 the author had already written a publication, in which he had examined the real capabilities of the BTGs. In that article, the author used the well-known Warfighting Functions (WFF) in order to have a clear view of the BTGs' real capabilities. In that article, the author had got to the conclusion that the main advantages of the BTGs are their fires, fast decision-making process, and intelligence-gathering capabilities. While the disadvantages of the BTGs are the rigidity of their decision-making process, the sustainment, and the force protection. Based on the above, the author stated that if the BTGs can retain the initiative and based on this, they can employ their fires and effectively use their fast decision-making process, they are a formidable and dangerous enemy.

However, the first half year (because after the first six months, there were no BTGs left as combat-capable units) of the ongoing war presents us a totally different picture. The goal of this publication is to find the actual reasons behind the Russian debacles based on the proven WFF analysis. The author had an easier task, thus by examining the actual battles of this war, the real advantages and disadvantages of the BTGs are easier to identify.

The author presented in this article that the rigid decision-making system of the BTGs had spectacularly failed. This has two main reasons: the first is the loss of the tactical initiative because of the low-level tactical independence of the tactical-level commanders; the other is the insufficient quality and quantity of communication systems and equipment. The other advantage of the BTGs (fires) could not or just barely prevail because of the rigid decision-making process and the useless communication system. The fundamental land forces' tactical organisation of the Russian Armed Forces could not react properly to the Ukrainians' tactic based on small-scale limited counterattacks and retrograde operations. Later, the rigid,

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command-centric decision-making process deprived the attacking Russians of the necessary logistic support and tactical flexibility to break through the deliberate Ukrainian defences based on the favourable terrain.

KEYWORDS: Ukraine, Russia, mechanized infantry, decision-making, battalion

## Az orosz zászlóalj harccsoport jellemzőinek bemutatása a harctéri teljesítményük alapján

A jelenleg is zajló orosz–ukrán háború előestéjén az orosz haderő legfontosabb szárazföldi szervezeti eleme a zászlóalj-harccsoport (battalion tactical group – BTG) volt. A háborút megelőzően, 2021-ben a szerző már írt egy cikket, amelyben a BTG-k valós harcértékét vizsgálta. Ebben a cikkben a katonai szervezeteket összefoglalóan jellemző Warfighting Functions (WFF) alapján próbálta meg a BTG-k valós harcértékét megállapítani. Ebben az első cikkben a szerző arra a következtetésre jutott, hogy a BTG-k fő erőssége a tűzereje, a felderítő képessége és a gyors döntéshozatali rendszere, gyengesége pedig ennek a rendszernek a merevsége, valamint a logisztikája, illetve az erők megővésének képessége. Ez alapján a szerző azt állította, hogy a BTG egy veszélyes, magas harcértékű szervezet, amennyiben sikerül a kezdeményezést megragadnia és a gyors döntéshozatali rendszerének, a katonák egyszerű, erősen specializált kiképzésének köszönhetően az elsőprő tűzerejét a megfelelő sebességgel alkalmazni.

A jelenleg is zajló háború első fél éve – eddig léteztek ugyanis szervezetszerű BTG-k – azonban ettől világosan eltérő képet mutat. Jelen publikációval a szerző célja az volt, hogy ismét a WFF-ra támaszkodva megtalálja az orosz harcászati kudarckok okait. A szerzőnek a BTG-k valós képességeinek értékelésekor könnyebb dolga volt, mivel a háború csatáit, ütközeteit vizsgálva világosan levonhatók a következtetések, hogy az orosz BTG-k mely tulajdonságai voltak előnyösek, melyek hátrányosak.

A szerző a cikkben megállapította, hogy a gyors, de merev döntéshozatali rendszer teljesen kudarcot vallott. Ennek két fő oka van: az első a harcászati kezdeményezés gyors elvesztése a parancsnokok alacsony kezdeményezőkézsége miatt, a második pedig az elégtelen minőségű híradó rendszer. A BTG-k másik erőssége (tűzerő) pedig nem, vagy csak ritkán tudott érvényesülni az előbb említett túlságosan merev döntéshozatali rendszer, valamint a lassú és elégtelen kommunikációs rendszer miatt. Az orosz haderő legfontosabb szárazföldi szervezeti eleme nem tudott reagálni az ukrán haderő által az első napokban alkalmazott, korlátozott célú támadásaira és halogató harcra épülő harceljárásaira. Később pedig a merev, parancsorientált döntéshozatali rendszer megfosztotta a kedvező terepre támaszkodó, létszámában nagyjából egyenlő ukrán védelem áttöréséhez szükséges logisztikai támogatástól és harcászati rugalmasságtól.

KULCSSZAVAK: Ukrajna, Oroszország, gépesített lövés, döntéshozatal, zászlóalj

### 1. Introduction

The Russian Battalion Tactical Group (BTG) has been the main tactical formation deployed by Russia in the Ukrainian war since 2014. It is a modular tactical organisation that is formed from a brigade and deploy combat forces to the conflict zones. It has been around since the Soviet times and is employed by not only the Ground Forces but also Airborne and Naval Infantry units.<sup>1</sup>

The Russian BTG, although similar in name to the NATO's formation, does not correspond to the NATO's standard Battalion Battlegroup.

1 Takács 2021, 49.

In this study, my aim is to describe the BTG again, as I did previously. I will describe their features based on the Warfighting Functions (WFF) and then I will evaluate their performance on the basis of what we have seen in Ukraine since 24 February 2022.

In this study, I will use the term “motorised rifle” instead of “mechanised infantry”, because the correct translation of the Russian expression is “motorised rifle”.

## 2. *Structure and personnel*

Briefly, the BTG is the basic tactical-level unit of the Russian Army and Airborne Forces (VDV), based on a peacetime brigade, usually consisting of 800-1200 personnel. With this, we have arrived at the first thing that I have not mentioned in my previous study, namely that the BTGs are very heterogenic. The main reason for this is the “mother” unit. One can imagine the difference between a motorised infantry BTG based on the professional soldiers of a guard infantry division and a BTG based on the conscripts of a “normal” motorised infantry division. The “standard” BTG normally has 3 motorised infantry companies, a tank company, an artillery battalion, an air defence battery, an engineer company, an armoured reconnaissance platoon, and of course logistics and staff elements.

The typical Russian BTG engaged in Ukraine had at least these units, however, most BTGs had been reinforced with additional recon, tank, or EW (electronic warfare) elements.

Furthermore, we now have clear evidence that the BTGs deployed were nowhere near their full strength. According to leaked information and captured documents instead of roughly 460-540 personnel, the new table of organization for a standard motorised rifle battalion (which is the core of a BTG) appears to be a little more than 340.<sup>2</sup> It means that the average BTG had approximately 650-700 personnel at its disposal. The difference is even more dramatic if we compare this with the numbers of the 120 BTGs<sup>3</sup> deployed near the Ukrainian border on the eve of the invasion.

In the view of the personnel, up to a third of the soldiers deployed were high-quality contract soldiers (volunteers) recruited to form the non-commissioned officer (NCO) corps of a modernised and professional Russian Army. They served primarily in combat, EW, and fire roles. Supporting units consisted mainly of lower-quality conscripts.<sup>4</sup>

In my previous study, I stated that the presence of conscripts in a unit may not have all negative effects. For instance, with specialised training, they might be able to

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2 Kofman and Lee: Not Built for Purpose: The Russian Military’s Ill-fated Force Design. War on The Rocks, <https://warontherocks.com/2022/06/not-built-for-purpose-the-russian-militarys-ill-fated-force-design/> (Downloaded 03.06.2022.)

3 Stewart and Ali: 80% of Russia’s forces around Ukraine in attack positions. U. S. official says, <https://www.reuters.com/world/europe/80-russias-forces-around-ukraine-attack-positions-us-official-says-2022-02-23/> (Downloaded 03.06.2022.)

4 Dr. Grau, Bartles 2016, 38.

perform some specific tasks at a very high level. Here, I was wrong. The main reason for this is that the Russian conscripts are poorly trained, poorly equipped soldiers.<sup>5</sup> To make matters worse, in many of the Russian units the commanders told the soldiers that they were going to participate in another exercise. The devastating effect can be explained by poorly trained soldiers being surprised by incoming fire. As an infantry officer, I have to add that in a unit where the commander can tell such a big lie to his troops, the morale and mutual trust must be at a very low level.

Furthermore, I wrongly suggested that the Russians could benefit from the harmony between their rigid decision-making and the limited capabilities of their conscripts. The poorly trained conscripts led by poorly qualified officers in a low-trust environment, could not perform even the most basic tactical tasks in order to save their mere lives.

### *3. Technology and equipment*

It seems that all military researchers, and most importantly Russian intelligence, have overlooked the fact that Russians were not alone in developing their armed forces. The Ukrainian Armed Forces have been receiving intensive training from Western (mainly the US, British, and Canadian) militaries. This training focused on adapting effective forms of warfare against an armoured offensive, creating an effective NCO core, and, most importantly, abandoning the old Soviet-style leadership principles and adopting mission command.<sup>6</sup>

In the meantime, the core of the military equipment deployed by the Russians dates back to the end of the Cold War, at best to the early 2000s. Most importantly for my recent study, the core of the motorised rifle units used BTR-82s and BMP-2s and the VDV troops used BMD-2s.

BTRs and BMPs have their own disadvantages, but they also have their advantages, as I explained in my previous study. Their weak side is protection and night fighting capabilities. Their strong side is armament and manoeuvrability. However, manoeuvrability is restricted by the fact that the BTRs are wheeled vehicles, therefore the terrain can easily hamper their freedom of movement. A young tree line or a very muddy road makes it impossible for the BTR-80 to pass, therefore, the high speed of the vehicle can only be exploited on good quality roads and large open fields.

The other caveat of the BTRs is the fact that they can only fire accurately from short distances (the BMP-2 and 3 have stabilised turrets), which also helps the defender. Finally, the limited night-fighting capabilities of the Russian infantry units meant that the Russians could only conduct meaningful operations in good visibility.

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5 Posard and Holynsk: Russia's Problems with Military Professionalization. the Rand blog, 21.03.2022. <https://www.rand.org/blog/2022/03/russias-problems-with-military-professionalization.html>

6 Bonenberger: Ukraine's Military Pulled Itself Out of the Ruins of 2014. <https://foreignpolicy.com/2022/05/09/ukraine-military-2014-russia-us-training/> (Downloaded 06.03.2022.)

In terms of crew-served and individual weapons, both sides used the same AK and PKM derivatives. But in the case of portable anti-tank missiles, the Ukrainians have gained a huge advantage by using the weapons they have received from the West. The two common features of these weapons are that their operators can be easily trained in less than a week and that they pose a lethal threat to all Russian armoured assets.

Even non-specialists can see that these weapons pose a serious threat to Russian armoured and mechanised forces. It is even more serious when you consider that Russian armoured vehicles from the late Cold War era have relatively thin armour compared to their Western counterparts. This constellation led to tragic consequences, which I will discuss later in "4.6. Protection".

#### *4. The way the BTGs fight in Ukraine*

Since the Russians have a different military philosophy, applying the Western concept of Warfighting 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 Manoeuvre, Fires, Intelligence, Sustainment, Command and Control, Protection) as distinct elements assigned to various members of the staff. Instead, the WFFs 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.<sup>7</sup>

Nevertheless, at the tactical level, the main characteristics of armed combat are not based on military philosophy but on brutal and blood-written laws, unchanged since Sun-Tze. Therefore, I believe it still makes sense to use the WFFs as a tool to precisely describe the features of a given military unit.

In my previous paper, I mixed up the order of the WFF elements, starting with the most important one, "Command & Control", and I hope that the gentle reader will agree with me – at the latest at the end of my study – that this WFF is most important one.

##### *4.1. Command&Control*

Command & Control is the most important WFF, because one can have the best equipment or the toughest troops, yet, if they are not led properly, they will certainly fail.

In my previous study, I found that the Russian decision-making process is more rigid and the commander is more involved in the decision-making process, therefore the Russian BTGs' staff is significantly smaller than a NATO Battalion Battlegroup's staff.

I explained that this rigidity has its own setbacks, such as the difficulty of adapting to the fast and radical changes in the tactical situation on the battlefield. Furthermore, if a commander is deeply involved in the planning process he will be

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<sup>7</sup> McDermott and Bartles 2020, 34.

greatly needed at the time of execution, and if the commander is not available (because of a communication breakdown or he has simply become the causality) or simply because the situation requires extremely rapid adaptation, most of the time the reaction of the BTGs' command may be late and/or inappropriate.

However, I also noted that this rigidity can also have its own advantages. I found that "the Russian military decision-making process is faster than the NATO-style. This is because there is much more emphasis on the use of drills and well-rehearsed tactics, and the staff also apply a wide range of mathematical nomograms in their planning."<sup>8</sup>

Now we can see the pros and cons of the Russian-style decision-making process at the tactical level. In my view, it is indispensable for the Russians to seize and retain the initiative if they are up to exploit the advantages of their decision-making process. If they lose the initiative, only the disadvantages of their decision-making process will be in effect. As a result, they have to react to swift changes on the battlefield and the rigidity of their decision-making greatly hampers them to react appropriately.

In terms of initiative, in this case we can talk about initiative at the operational and tactical levels. The initiative at the operational level means that the Russian Combined Arms Armies (CAA) are advancing at high speed and achieving their objectives according to their timetable, despite local effective resistance from the Ukrainian defenders. This initiative can be maintained through careful planning of the following issues:

- the appropriate grouping of forces (dividing into echelons, carefully selecting and concealing the main axes of advance, etc.);
- setting achievable goals and having a timetable that assures maintaining the initiative (always be "a step before the defender");
- providing all the necessary combat- and combat service support to the manoeuvre elements, which require extraordinarily accurate and hard work from the operational level units' staff.
- The tactical level (battalion and below) initiative can be maintained by:
  - having an accurate situational awareness;
  - having solid control over the troops by their commander;
  - having a solid connection with the supporting elements (such as tanks, artillery, engineers, air defence);
  - having well-trained troops at our disposal in order to own the ability to swiftly react to any kind of incident and by this swift reaction, maintaining the tempo and still achieving the units' goals.

In the early days of the war, we could see that most of the Russian units were trying to retain the initiative by advancing swiftly on roads, bypassing small pockets of resistance in order to reach their objectives. But after the Russians' initial failure at swiftly taking over Kyiv and overthrowing the government, the initiative seemed to be slipping out of their grasp.

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8 Takács 2021, 55.

At the tactical level, command and control is less a matter of art than of rigorous training. Successfully advancing against an enemy that effectively conducts mobile defensive operations requires a well-trained and well-led advance force. The features of such a force are as follows:

- squads, platoons, and companies can execute drills extremely quickly,
- the commanders are capable of making good decisions swiftly under an extreme level of stress,
- the advancing infantry and armoured units can call for artillery or air support in a matter of minutes,
- the soldiers must be capable of reporting the enemy with the “3D-s” (direction, distance, description),
- the squad leaders must be capable of leading their squad after the initial shock of incoming fire,
- the platoon and company commanders must be able to give clear orders in a matter of seconds to appropriately react to the contact,
- the commanders must have a stable communication system to gather information from their subordinates and also give orders,
- company and battalion commanders must have the authority to change their scheme of manoeuvre to fulfil their original task but in another way.

Two factors helped the Ukrainians in February and early March. The first was that the weather limited the movement of the Russian armoured columns on tarmac roads. These roads often went through urban areas or forests and marshes. It is well known that these areas help the defender’s flight, and the Ukrainians took advantage of this, which brings us to the second factor.

Due to highly inaccurate intelligence (see below), the vanguard of the advancing Russian forces were paramilitary forces, neither trained nor equipped for regular military operations. These forces were easily destroyed by Ukrainian ambushes. After the paramilitary sub-units, came the vanguard sub-units of the mechanised infantry BTGs. Movement tactics and techniques will be discussed later, but for now, suffice it to say that these platoons and companies had also suffered heavy casualties.<sup>9</sup>

As I discussed above, at the tactical level, effective command and control depends on the personal skills of commanders and the training of their sub-units. Individual soldiers need to report accurately, commanders need to understand the reports, assess the situation, and give the right orders in a matter of seconds. They simply cannot wait for the BTG commander, especially since the BTG HQ may be more than 5 km away in the event of an advance.

As a researcher using open sources, I cannot assess the level of training and the personal competencies of the Russian tactical level commanders and the level of training of their platoons and companies. Albeit it can clearly be seen that when the forward units encountered resistance, they were unable to carry out the necessary tactical tasks and could not implement the tactics described in their own manuals.

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9 Mendrick, Freeman, Kilner 2022.



Of course, we should bear in mind that these tactical victories were hyped in the Western media in the first 2-3 weeks of the war. In this case, objective conclusions can only be drawn only from the change in the front lines. From this, I conclude that the effectiveness of the Russian C4I (Command&Control, Communications, Computers, Intelligence) system and the advantages of this fast but rigorous system were only present until the initiative at the operational level was retained by the Russians. But by the time when the small tactical defeats had led to causalities that affected the combat power, that initiative had been lost. And from that moment on, the Russian BTGs could no longer enjoy the benefits of their quick decision-making system, but only suffer from its drawbacks.

In my previous study, I wrote that 'It is a question that can only be decided on the battlefield: which warring party will achieve success, the one that is faster or the one that is more detailed and sophisticated'. Deducted from the number of Russian troops who actually entered Ukraine (see part 2), it is clear, that the Russian invasion forces were not superior in numbers, but they were fewer than the Ukrainian military. It means that the overwhelming shock tactics favoured by the Russian military philosophy and the strict and swift decision-making system could not be utilized and exploited.

#### *4.2. Movement and manoeuvre*

The nature of warfare has radically changed since the end of the Cold War. Modern combat will involve greater depth, fluidity, and mobility than in the past. Continuous defensive lines of shoulder-to-shoulder will give way to open flanks, meeting engagements, and the struggle to gain important areas that will undermine the tactical stability of defensive forces.<sup>10</sup>

The above-cited statement has a charming irony when we consider that in this war, not a bold manoeuvre or a swift attack, not even an operational-level breakthrough has been successful or without intolerably high casualties.<sup>11</sup>

In order to meet the requirements of the 21<sup>st</sup> century's joint forces combat, the Russian BTG has to be able to perform troop movements and conduct combat manoeuvres in a very fast way. According to all relevant Western, Russian (and even Hungarian) field manuals, the troop movement is always a planned, organised, and continuously led activity. The goal of troop movements is to move a unit from its departing positions to a desired area. The unit must arrive at an exact time and in full combat strength. To achieve these goals, the units conducting troop movements have to use formations and battle order.

In this war, the Russians tried to reach their goals (capture Kyiv, Kharkiv, Odesa, and Mariupol) by conducting long tactical marches. The main countermeasures that could be implemented by the Ukrainians against these operations are IEDs and ambushes. To counter these countermeasures the force, conducting the march must

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10 U.S. Army FM 7-100.2, *Opposing Force Tactics*, 4–3.

11 This paper was finalized before the launch of the successful Ukrainian Kharkiv offensive. This operation is a successful example of manoeuvre warfare and will be described in a later study.



thoroughly organise their own security, for instance proper road recce, vanguard, and side-guard. The most important of these the existence of multiple secure roads that ensure freedom of manoeuvre. The latter was not available because of the “rasputyitsa”, which resulted that even tracked vehicles could not leave paved roads.

The security of the marches was not organised properly either. The main reason for this may be that after the easy victories in early 2014, the Russians expected easy victories again. Because of this false anticipation, the Russians thought it would be an advantage rather than a caveat, if their main forces were to pass through urban areas and the Ukrainians could welcome them as liberators and the insecure would at least decide to stay put.

These two factors (unfavourable terrain, and incorrect assessment of the Ukrainians’ attitude) were the key reasons behind the phenomenon that the Russians instead of carrying out bold manoeuvres and disrupting the Ukrainian defences, had suffered heavy losses and were bogged down in bitter street fights.<sup>12</sup>

In the first three weeks of the war (during the time of manoeuvre warfare), the Russians tried to retain the initiative by maintaining a high operational tempo. At the tactical level, the offense always consisted of two elements: manoeuvre and fire support.

The key is the coordination between these two elements within the manoeuvre element and also the fire-support element. The tactical-level commander (company, platoon, squad leader) has to coordinate the fire of the fire-support element regarding:

- where is the enemy,
- how big is the enemy,
- how much time and ammunition he has for the fire mission,
- from which direction is the manoeuvre to be conducted (in order to avoid fratricide).

All of these must be done thoroughly, often under enemy fire (extreme stress), and with signs and signals that are redundant to assure flawless coordination between the manoeuvre and fire-support element.

Due to the inadequate intelligence and the limited freedom of manoeuvre the advancing Russian BTGs had to conduct these tactical tasks without possessing the initiative. However, the operational-level initiative was on the Russians’ side but just because they tried to retain this, the advancing units were rushed forward without adjusting the timetable or allowing fordetours favourable to the situation. Naturally, it resulted that the Russians run into multiple ambushes.

I assume, now it is clear that the key factor to advance successfully is to retain the initiative. At the tactical level, the most important element is the coordination of fire and manoeuvre, the most important element of which is the coordination between the sub-ordinate units, the adjacent units, and the superior unit.

To do all this, the attacker must have well-trained, well-led, and forged-together units in which both leaders and soldiers are capable of conducting what they have learned during training, even under an extreme level of stress.

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12 <https://www.understandingwar.org/backgrounder/russia-ukraine-warning-update-russian-offensive-campaign-assessment-february-26>

In my previous study, I wrote that conscripts can meet these requirements if the training is effective and appropriate. After 24 February 2022, it turned out that the conscripts of the Russian BTGs' infantry companies were not appropriately trained. From open sources, I cannot judge whether the time or the quality of the training was inadequate, but it is clear that Russian conscripts and neither their commanders were not up to this task.<sup>13</sup>

The other important element of this part is the manoeuvres conducted in combat. Fire and manoeuvre are the components of the strike, and it is impossible to achieve success without the precise coordination of these two components. To successfully carry out manoeuvres, one must precisely coordinate fire and movement, and the troops must be well-trained and well-led if communication breaks down, or there is a need of changing the plan during conducting the manoeuvre, the conducting units can still achieve their goal.

In this war, we have seen that the Russian forces, after thorough preparation, were capable of carrying out beautiful tactical manoeuvres, but most of these manoeuvres were only small tactical successes. The only exception was the breakthrough at Popasna, which led to the cutting of the T1302 road leading to the Severodonetsk-cauldron.<sup>14</sup>

#### 4.3. Intelligence

At battalion level, the officer in charge of the intelligence staff section is also in charge of reconnaissance, but since most manoeuvre units at the battalion level do not have dedicated reconnaissance assets, regular units from the battalion units are assigned for this purpose on an ad hoc basis. The main difference between the Russian BTG's intelligence officer and the NATO-style S2 officer in charge is that the NATO S2 officer in charge does not directly command reconnaissance units, whereas the Russian S2 officer in charge does.<sup>15</sup>

Both before and after 24 February, the main methods of gathering information at the tactical level were the recon tasks made by tactical recon units, drones, electronic intelligence, and recon by force manoeuvres. This conflict is the first in which UAVs (Unmanned Aerial Vehicles) have been present in significant numbers on both sides and have had a dramatic impact.

In my previous study, I wrote about the capabilities of Russian drones. I found that they can provide accurate and up-to-date information from the Ukrainians to the intelligence staff, as well as the artillery units.

However, in this war, Russian drones proved to be less effective than in the War for Donbas between 2014 and 2021. They proved to be inadequate in number and

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13 Kofmann, Lee: Not Built for Purpose: The Russian Military's Ill-Fated Force Design <https://warontherocks.com/2022/06/not-built-for-purpose-the-russian-militarys-ill-fated-force-design/> (Visited 30.09.2022.)

14 <https://www.understandingwar.org/backgrounder/russian-offensive-campaign-assessment-april-20> and <https://www.understandingwar.org/backgrounder/russian-offensive-campaign-assessment-march-9>

15 National Security and Defence, No. 1–2, Razumkov Centre, 2019, 40.

very vulnerable to the the newly imported Western MANPADs and even the late Soviet Iglas. Furthermore, due to the abovementioned deficiencies (paragraph 4.1.), the information gathered was received late by the staff of the BTGs, if it was received at all. The BTGs' staff processed the information very slowly and it led to the situation that the platoons and companies almost never received appropriate orders at the appropriate time.

Of course, I have no proof of this as an open-source researcher. That is why I examined the events that happened near Voznesensk with a vanguard BTG or how the river crossing operations on the Siverskiy Donets had failed spectacularly. In these operations, I could see that the manoeuvre units had conducted seemingly inappropriate to the situation after some changes had occurred after the initial contacts. Based on my tactical-level experience, the main reason for this was the fact that sub-unit commanders had not received new orders (FRAGO) regarding the changing situation, or even worse, they were not allowed to change their course of action.<sup>16</sup>

The other important element of intelligence at the tactical level is technical intelligence. In the war between 2014-2021, the Russian electronic warfare (EW) units proved to be very effective (both gathering information and jamming Ukrainian communication), which led to the deduction that in case of an escalation, the Russian forces will conduct their operations in a total EW dominance. But to everyone's surprise, the first three months seem to have been just the opposite. The communications system of the Russian BTGs proved to be very ineffective, unable to maintain and operate an encrypted digital communications system, which led to the situation that front-line commanders had to use commercial UHF radios or the civilian GSM-system to communicate. Of course, it resulted that the Ukrainians could easily listen to Russian communications, with the well-known consequences.<sup>17</sup>

One interesting reason for this is that EW assets have a feature that if one jams the enemy's communications, it will also have a serious negative effect on its own communications system. That is why Russian commanders did not like to use EW assets during military exercises, because it hampered the manoeuvre units to conduct spectacular manoeuvres effectively (the author had encountered the same phenomenon during Hungarian and also NATO military exercises).<sup>18</sup>

The other prosaic reason for this is the available number of these assets. As I mentioned, between 2014 and 2021, the Russians used their EW assets. This has led to the conclusion that the Russians are capable of doing the same at a strategic level. However, it seems that neither the number of assets nor the trained personnel are sufficient to support a full-scale invasion of Ukraine.

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16 This is just the author's deduction, that based on the soviet-era military philosophy, even if appropriate information had reached the BTG staff in time from their subordinates or recon elements, they did not have the autonomy to change the BTG's course of action without the permission of the division CO who was also strictly led by the corps CO.

17 Cranny-Evans and Withington: Russian Comms in Ukraine. A World of Hertz, <https://rusi.org/explore-our-research/publications/commentary/russian-comms-ukraine-world-hertz> (Downloaded: 07.06.2022.)

18 Szatmári 2022, 49.

Because of all of the factors mentioned in this part of my study, I judge that the intelligence capabilities of the Russian BTGs were inadequate. The reason for this was the inappropriate amount of available assets, the poor communications and very poor information processing capabilities. These factors had led to grief consequences for the Russians.

#### 4.4. Fires

The fires system of a BTG consists of two main parts:

1. the fires of organic, direct-firing weapons,
2. the fires of organic and reinforcing indirect firing weapons (artillery).
  - The successful destruction of a target requires the use of a system known as a kill chain. The most widely known military kill chain model is the “F2T2EA”, which includes the following phases: Find: identify a target.
  - Fix: fix the target’s location.
  - Track: monitor the target’s movement.
  - Target: select an appropriate weapon or asset to use on the target in order to create desired effects.
  - Engage: apply the weapon to the target.
  - Assess: evaluate the effects of the attack, including any intelligence gathered at the location.<sup>19</sup>

This is an integrated, end-to-end process described as a “chain” because an interruption at any stage can disrupt the entire process.

Of course, these elements are executed by multiple units and/or individuals that need to be well-coordinated. To be well coordinated, it is indispensable to have flawless communication, standardized and thorough training, and authority to make a decision. To make a decision, again, it is essential to have good communication and a high level of situational awareness. Without all of these, it is almost irrelevant how much firepower a unit has, as it will not be able to carry out fire missions effectively.

To understand the fires that we have seen in Ukraine, we have to divide the war into two parts (at the time of finalizing the manuscript). The first (shorter) part is the era of manoeuvre warfare, and the second (longer and ongoing) is the era of stationary warfare. Fundamentally, the Russian BTGs possess overwhelming superiority in terms of firepower over their NATO counterpart.<sup>20</sup>

However, this firepower needs to be coordinated, and we have seen that in Ukraine this was (and most of the time still is) not the case. It has two reasons, the first, which I explained earlier, is the lack of communication and the poor C4I. The other is that because of the inadequate force generation before the war, the personnel of the Russian BTGs were nowhere near 100%. It has led to the fact that whole regiments were often deployed instead of BTGs. This is a problem when we

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<sup>19</sup> Tirpak 2000.

<sup>20</sup> Grau and Bartles: Getting to Know the Russian Battalion Tactical Group  
<https://rusi.org/explore-our-research/publications/commentary/getting-know-russian-battalion-tactical-group> (Visited: 15.04.2022.)

consider that even officially the Russian tactical fundamental unit is the BTG, a regiment that is not a combat-capable military formation. The staff of the regiment is not prepared for planning and coordinating high-intensity military operations, and naturally, it has led to drawbacks of using indirect fires, even from units within the BTG or regiment itself.<sup>21</sup>

Organising the system of fire is one of the main tasks of a commander. At the tactical level, however, the principles are universal, and the Russians organise their fires in a similar way to NATO, or the Hungarian Defence Forces. The system of fire is formed by taking into account:

- the firing capabilities of all types of weapons involved;
- their close integration;
- their effect when combined with the engineering obstacles and natural barriers.

The readiness of the system of fire is determined by:

- manning of the firing positions;
- prepared range cards and firing data;
- the presence of missiles and ammunition.<sup>22</sup>

In the second part of the war (stationary warfare), with a few exceptions, the main way the Russians solved their tasks was indirect artillery fire.<sup>23</sup> That is why I insist on emphasising here that artillery effectiveness does not depend only on the calibre and effective firing range. It is important, but at the tactical level it is secondary to the speed of the kill chain and the coordination between the artillery and the manoeuvre units (infantry, armoured). In the conduct of an attack (which is still the main, decisive form of military operations), success depends on the coordination between fire and manoeuvre, and on the proximity that the infantry can close up to the artillery fire. NATO (and also Hungarian) field manuals set the attacking infantry to close up to 3-400m (depending on whether the order of battle is armoured, combined, or disembarked), however, the Russian field manuals are much more permissive.<sup>24</sup> It means that the attacking Russian infantry closes up to almost right behind the artillery fire, which results that right after the artillery strikes (with all of its devastating effect) comes the assault of the infantry. However, this method requires very close and precise coordination.

In a war like this, decisive attacks are not conducted by a single motorised infantry BTG, therefore the coordination lies at the brigade, moreover at the division HQ. To appropriately coordinate a large-scale attack, it is indispensable to have well-trained and intelligent staff officers, excellent situational awareness, and flawless communication system. As I described above, the communications system was far from perfect. Of course, I cannot assume the training level of the Russian staff officers, but the results speak for themselves: the decisive Russian attacks towards

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21 Kofman and Lee.

22 Grau and Bartles 2016, 88.

23 <https://www.understandingwar.org/background/russian-offensive-campaign-assessment-may-12>

24 Grau and Bartles 2016, 106.

Kyiv, Odesa, and Kharkiv failed. Nevertheless, I must add that when the frontlines became stationary, the artillery fire became more effective (see Severodonetsk).<sup>25</sup>

Artillery can conduct two basic types of fire missions: pre-planned fire missions, and fire missions on call. After months of fighting, it is clear that pre-planned fire missions can be conducted effectively, but on-call fires and repeated fire missions after BDA (battle damage assessment) are most of the time late and inaccurate.

Of course, there are multiple aspects of Russian artillery in this war, but the focus of my study is on the BTG motorised infantry, and I think from all of them we can see that the seemingly overwhelming firepower could not be exploited because of poor coordination and communication.

It is more difficult to examine the direct fires of the BTG, therefore in combat in which direct fires are used, there is no time to examine. Direct fire is the main element of the strike, the basic way to execute tactical tasks. As I wrote above, to successfully execute tactical tasks, fire and manoeuvre have to be perfectly coordinated. From open sources, I do not have valid information regarding the organization of direct fires within the Russian motorised infantry companies. However, as I wrote above, the inability to maintain a high operational tempo after the first contacts allows me to deduct that these fires were poorly organised even though the advantage of BTGs' equipment is firepower.

#### 4.5. Sustainment

Organising the logistics of this huge military campaign is an extraordinary task both in scale and complexity. The sheer volume of all kinds of supplies needed in a high-intensity military operation is enormous, and not just in terms of ammunition.<sup>26</sup> In a high-intensity operation, a mechanised infantry BTG consumes a huge amount of fuel, spare parts, the soldiers require food, water, and medical equipment. And of course, do not forget the casualties and damaged vehicles flowing constantly backwards. Managing and controlling all of these require a high level of coordination and constantly secured supply routes.

The Ukrainians (with the help of mostly American and British trainers and advisors) have correctly recognized that the Achilles heel of the Russian military is the logistics system. Just like in asymmetric warfare, the defending side (who most of the time is the underdog) attacks not the manoeuvre units who are well-trained and can react swiftly. Instead, they attack the logistic units which are less trained and the convoys are harder to protect than a column of MBTs and IFVs of mechanised infantry units. With this method, the Ukrainians could cut the logistic ties between the manoeuvre units and their supplies, effectively hampering the Russian advance.

Both this Ukrainian tactic and the Russians' poor organizing capabilities due to their small and not properly trained staff, caused serious logistic problems and these problems led to the total halt of offensive operations in some directions.

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25 <https://www.understandingwar.org/backgrounder/russian-offensive-campaign-assessment-june-10>

26 Alex Vershinin: The Return of Industrial Warfare. <https://rusi.org/explore-our-research/publications/commentary/return-industrial-warfare> (Downloaded: 20.06.2022.)



#### 4.6. Protection

Protection has multiple aspects such as armour, engineering works, avoiding fratricide, EW protection, etc. Of course, the Cold War-era Soviet military equipment (BMP-2, BMD, T-72) did not focus on protection, but rather on speed and firepower. As a result, the Russians tried to use a wide range of direct and indirect fires before their attacks in order to destroy all the assets that could hurt them. But if we look at section 4.4. of my study, we can see that this was not successful.

In the first three weeks of the war (manoeuvre warfare), we could observe enormous Russian casualties.<sup>27</sup> It became clear even to the public that the military equipment of the late-Soviet era could not protect the soldiers using them. And because of the poor C4I, the Russians could not preventively destroy dangerous assets (e.g.: anti-armour weapons), therefore the proactive measures of protection did not work either.

Protection can be enhanced by careful planning and risk management. In the first three weeks of the war, it was not the case. Russian airborne units conducted insanely brave operations but these missions failed with high losses. Motorised infantry BTGs were ordered to swiftly advance numerous kilometres into enemy territory. These daring assaults resulted in the battle of Brovari and the battle of Voznesensk, which were all lost by the Russians with high casualties. The last attempt to execute large-scale manoeuvres was the river-crossing attempts on the Siverskiy Donets river, with the well-known tragic consequences.

However, as an open-source researcher, I cannot judge the quality of the planning done by the Russian military staffs before these operations. But the failures and high losses lead me to conclude that there was no appropriate risk management before these operations, or that the results were neglected.

All of these factors (lack of armoured protection, lack of coordination, lack of risk management) allow me to state that the protection WFF is one of the weakest aspects of the Russian motorised infantry BTG.

#### 5. Summary

In my previous study, I stated that the Russian BTG, however, has its own caveats (like all military units in the world), but is still a formidable fighting force.

I stated that Sustainment, Protection, and Command&Control can be the disadvantageous WFFs of the motorised infantry BTGs, but the speed of their decision-making and the overwhelming firepower can balance these disadvantages, moreover, due to this speed and firepower, they can retain the initiative and successfully reach their goals even against high-quality NATO forces.

On finalizing this study, I have to state that my previous assessment was not entirely correct. Of course, if we look at the “catalogue”, we can see a formidable fighting force. What is more difficult to assess is the most important aspect, the

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<sup>27</sup> Kofmann and Lee.



people inside the system. It could only be assessed after training and/or working together with Russian forces (which, of course, is out of the question for a NATO country's officer), or, as we do it now, through assessing their performance on the battlefield.

Having done so, I can state that the Russian motorised infantry BTG is unable to carry out decisive actions against an equal enemy. Of course, some factors support the opinion that the Russian BTG is a competent fighting force:

- Russian forces reached the outskirts of Kyiv in two days, which is a more than 50km-advance;
- Russian forces advanced from the Crimea more than 50km to the west and more than 100km to the east, which are again formidable deeds;
- right before the attack, the Russian forces were fewer in number than the Ukrainian forces.

However, despite all of these, I still maintain that the failure to reach the initial goals of the campaign is a result of the incompetent Russian strategic military leadership. The other reason for the debacle is that the Russian motorised infantry BTG is nowhere near as powerful as the sheer numbers would suggest. The main reasons for this are:

- ineffective decision-making system, which is rigid and unable to quickly adapt the new tactical situations;
- a useless communications system that hampers the commanders from continuously leading their troops and sending appropriate reports to their superiors;
- slow and inaccurate kill chain - mainly due to the above-mentioned two factors;
- extremely poor performance in the fields of Sustainment and Protection WFFs.

Additionally, by the time of finalizing this actual study, there are hardly any combat-effective, organic motorised infantry BTGs left in the Armed Forces of the Russian Federation. Therefore, one can state that it is not important to further analyse the performance of the mechanised infantry and armoured forces in this war.

But I have to highlight that the war is very far from over. Furthermore, in this war, the burden of the fight is still on the infantry and armoured units. Moreover, it seems that in spite of the rapid development of drones and cyber-warfare, conventional war is still being fought by infantry in an extremely brutal milieu.

Therefore, further assessment and analysis are required to understand the needs of the near future war, which capabilities and features need to be enhanced in what direction, in order to successfully deploy our own mechanised infantry and armoured units.

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