

A Contrarian Review of Political and Military Ramifications after 300+ Days of Conventional Conflict in the Ukrainian Theatre of Operations

*Introduction: Zero Sum Games*

As is our wont, a substantial portion of our research resources are dedicated to developing and refining contrarian research theses. “Cf.:", our research letter, is a lament occasioned by our often thankless focus on the unloved, the unpopular, the unmentionable, and the unthinkable—an extension of our belief that our expertise lies in identifying the asymmetric opportunities that present themselves with the impending collapse of stable disequilibria.

We define “stable disequilibria” primarily as prices shifted out of equilibrium by external and usually artificial forces, though supply and demand disequilibria can also be forced into stability by concerted intervention. As it requires effort to maintain a stable disequilibrium, the structural “pull” to equilibrium within these dynamics, an ever-present force gravitating towards natural balance, is the feature that interests us most. Naturally, the challenge for the analyst is identifying those stable disequilibria that are most likely to collapse, and predicting when they will do so.

Of the many sources of stable disequilibria, the most visible typically involve government interventions in markets. After a fashion, this is a statement almost too obvious to repeat. After all, government interventions tend to mimic the repeated and blunt application of a cudgel to a harp seal. Moreover, government officials have found among voters in the “liberal” Western democracies a ravenous (and pathologically high time-preference) appetite for interventionist policies and the distribution of largess from the public treasury. The curious analyst need only read from, e.g., the Congressional Record of the United States to uncover dozens of crude and ill-advised examples of heavy-handed interference in a given quarter.

Of course, these efforts take various forms, many that work at cross purposes or attempt to effectuate entirely contradictory aims. Of the classic examples upon which we have long made maudlin observation is the propensity of technocrats to restrict with one hand the supply of a good, and then attempt with the other to deploy from the public coffers subsidies against inevitable supply-crunch driven price increases. Restrictive zoning coupled with rent control policies are among the most pervasive and frustrating examples, but various “green” energy policies and health care reform interventions present equally widespread and maddening case studies.

While the catalyst for the collapse of these stable disequilibria is easy to identify (the removal of either or both of the paired policies of supply restriction and economic subsidy) timing the moment of reversion is a different matter entirely. To borrow from Keynes: “Technocratic regulation can stay irrational longer than you can stay solvent.”

Against this background, we find it difficult to avoid the conclusion that two of the most significant stable disequilibria in our direct experience or, indeed, our reading of modern economic history, are currently on the verge of collapse and reversion. The first, an economic bubble in the western economies, we will address in a future research letter. The second, and the focus of this issue, is a disequilibrium fuelled and perpetuated by the nearly unbridled and unlimited efforts of no less than twelve sovereign nations. Added to the mix are a slew of security services (internal and external), dozens if not hundreds of media outlets, and essentially all the serious “big tech” players in the West. So extensive and potentially existential to Western powers is the maintenance of the current, artificially induced cognitive dissonance that, in order to

sustain it, direct and indirect costs of over USD 1 trillion and the sacrifice of at least quarter of a million lives will be expended by the various powers that be in service of this deception before the Spring of 2023.

Rare among stable disequilibriums, the instant case is substantial enough to cripple the fiscal positions multiple sovereigns, and this despite their ability to print essentially unlimited amounts of reserve or quasi-reserve currencies to fund their obfuscation efforts. Also rare among such opportunities, mounting physical, supply chain, and logistics constraints will eventually defy the efforts even the most profligate governments to continue "kicking the can down the road" (one cannot print crude oil, after all), making the task of pin-pointing the collapse of this stable disequilibrium far easier than might otherwise be expected.

In this research letter we intend to make the case that the present effort to obscure an essentially inevitable set of events represents the most significant contrarian thesis in several generations, and that, as the bitter end approaches, several Western democracies have bound together to prevent the general public from understanding the rank impotency of the West in the face of the consequences that will likely follow.

Despite these efforts at obfuscation, we project with moderate confidence that the Armed Forces of Ukraine will collapse and hand a military victory to the Russian Federation prior to 30 June 2023, and with high confidence that the Armed Forces of Ukraine will collapse and hand a military victory to the Russian Federation prior to 30 September 2023. The consequences of a Russian victory in Ukraine and the collateral impacts to NATO, the European Union, The United States, and the Ukraine are explored in the text *infra*.

As a final introductory note, we would like to remind the reader that war is serious business. We take no pleasure in the need to make bloodless assessment of the gruesome machinery of armed conflict, particularly in present case, one that has likely already snuffed out more than two hundred thousand lives. Moreover, difficult as it may be, objectivity requires us to shed any patriotic or sentimental inclinations we might otherwise wish to express. These have a tendency, particularly in the current conflict, which is rife with propaganda and appeals to baser emotions, to augment confirmation bias and the analytical poison of wishful thinking.

- Vaduz, January 2023

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*Expositive Method: "Winners and Losers"*

*Loser: The North Atlantic Treaty Organization ("NATO")*

*NATO as an Expansive (Rather than Defensive) Alliance*

Identifying surprise reversals is the essence of cogent contrarian analysis. Accordingly, we present our findings and editorial commentary against the template of "Winners," those subjects of negative conventional wisdom that have been (or that we expect will be) contradicted by subsequent events, and "Losers," those beneficiaries of positive sentiments that have been (or that we expect will be) frustrated.

In many ways this is the both the largest, in that the follow-on effects are the most dramatic, and easiest of our contrarian projections, to the extent that we find ourselves surprised that our view, that NATO faces what amounts to total defeat in the Ukrainian conflict, controversial. It is a failure of NATO's own making, as the most cursory examination of the public record and the "facts on the ground" would reveal even to the novice analyst that NATO has set for itself impossible victory conditions and bound itself irrevocably to any failure. Specifically: by equating Ukrainian victory with the withdrawal of Russian forces from Ukraine...

Our message is clear. NATO stands with Ukraine. For as long as it takes. President Putin started this war. He must end it. By withdrawing his forces from Ukraine. And President Lukashenko should stop the complicity of Belarus in this illegal conflict.

...and equating Ukrainian defeat with a defeat of NATO:

And of course very much of the support that NATO Allies have provided – the javelins, the air defence systems, ammunition – that they have provided to Ukraine, that has been taken from existing stocks. So by doing that, they have reduced their stocks. But that has been the right thing to do, because it is important for all of us, that Ukraine wins the battle, the war against the invading Russian forces. Because if Putin wins, that is not only a big defeat for Ukrainians, but it will be a defeat and dangerous for all of us, because it will make the world more dangerous and it will make us more vulnerable for further Russian aggression.<sup>1</sup>

Formed in the early 1950s as an organisation designed to implement the mutual assistance obligations in the North Atlantic Treaty, NATO has expanded far beyond the objectives as outlined by Hastings Lionel Ismay, 1st Baron Ismay KG, GCB, CH, DSO, PC, DL, the first Secretary General of the organisation. Ismay is somewhat famous for his summary to the effect that NATO purpose was: "To keep the Soviet Union out, the Americans in, and the Germans down."<sup>2</sup>

By any public measure, as a military alliance NATO has been a resounding success, expanding from 12 founding members to 30 today, members who in 2021 wielded a combined defence expenditure of just over USD 1 trillion.<sup>3</sup> In the process, NATO has expanded its eastern frontier, which was once limited to Russia's border with Norway above the Arctic Circle, to include Estonia Latvia, Lithuania, Poland, Slovakia, Hungary, Romania, Bulgaria, and Turkey. This relentless eastern march was in direct contradiction to promises, though their exact nature is the subject of angry debate, made to Russia in the 1990s. These assurances were designed to assuage fears (some shared by the West at the time) that to allow Germany to rise to great military prowess once more would be an intolerable threat to the continent.

As German reunification began to appear in the public dialogue in 1989, German Chancellor Helmut Kohl received back channel communications from the Soviets that they might consent to such

<sup>1</sup> NATO Secretary General Jens Stoltenberg, "Pre-ministerial press conference" (October 11, 2022).

<sup>2</sup> "NATO Declassified" [https://www.nato.int/cps/en/natohq/declassified\\_137930.htm](https://www.nato.int/cps/en/natohq/declassified_137930.htm)

<sup>3</sup> "Defence Expenditure of NATO Countries (2014-2021)" (March 31, 2022).



a move, but only if Germany were to pull back from NATO. For his part, speaking on January 31, 1990, German Foreign Minister Hans-Dietrich Genscher repeated (and not for the first time) "... whatever happens in the Warsaw Pact, an extension of NATO's territory to the east, that is, nearer to the borders of the Soviet Union, will not happen."<sup>4</sup>

In February of 1990, during meetings between the United States and the Soviet Union in Moscow, then United States Secretary of State James Baker agreed with General Secretary Mikhail Gorbachev's insistence that any expansion of NATO was unacceptable. NATO, as Baker described it to agree with the point, was a much different animal:

Baker: ...it is quite possible that the [U.S. Commission on Security and Cooperation in Europe] forum could be used for the ratification of agreements developed within the framework of the "two + four" mechanism.

We fought alongside with you; together we brought peace to Europe. Regrettably, we then managed this peace poorly, which led to the Cold War. We could not cooperate then. Now, when rapid and fundamental changes are taking place in Europe, we have a propitious opportunity to cooperate in the interests of preserving the peace. I very much want you to know: neither the President nor I intend to extract any unilateral advantages from the processes that are taking place.

Some other details. We indeed are not speaking in favor of Germany being neutral. The West Germans have also said to us that they do not consider such a decision to be satisfactory. I would like to explain why.

If Germany is neutral it does not mean it will not be militaristic. Quite the opposite, it could very well decide to create its own nuclear potential instead of relying on American nuclear deterrent forces. All our West European allies and a number of East European countries have made it known to us that they would like the United States to keep its military presence in Europe. I do not know whether you support such a possibility. But I would like to assure you that as soon as our allies tell us that they are against our presence, we will bring our troops home.

Shevardnadze: I do not know about your other allies, but a united Germany may demand it.

Baker: If that happens, our troops will return home. We will leave any country that does not desire our presence. The American people have always had a strong position favoring this. However, if the current West German leadership is at the head of a unified Germany then they have said to us they will be against our withdrawal.

And the last point. NATO is the mechanism for securing the U.S. presence in Europe. If NATO is liquidated, there will be no such mechanism in Europe. We understand that not only for the Soviet Union but for other European countries as well it is important to have guarantees that if the United States keeps its presence in Germany within the framework of NATO, not an inch of NATO's present military jurisdiction will spread in an eastern direction.

We believe that consultations and discussions within the framework of the "two + four" mechanism should guarantee that Germany's unification will not lead to NATO's military organization spreading to the east.

[...]

I want to ask you a question, and you need not answer it right now. Supposing unification takes place, what would you prefer: a united Germany outside of NATO, absolutely independent and without American troops; or a united Germany keeping its connections with NATO, but with the guarantee that NATO's

<sup>4</sup> Sarotte, M.E., "Not One Inch, America, Russia, and the Making of Post-Cold War Stalemate," Yale University Press (2021).

jurisprudence or troops will not spread east of the present boundary?

Gorbachev: We will think everything over. We intend to discuss all these questions in depth at the leadership level. It goes without saying that a broadening of the NATO zone is not acceptable.

Baker: We agree with that.<sup>5</sup>

On the United States side, a similar transcript of the conversation agrees closely with the Soviet version.<sup>6</sup>

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I have got one or two other points. We don't favorably view a neutral Germany. The FRG says that this is not a satisfactory approach. A neutral Germany in our view is not necessarily going to be a non-militaristic Germany. It could well decide that it needed its own independent nuclear capability as opposed to depending on the deterrent of the United States. All our allies and East Europeans we have spoken to have told us that they want us to maintain a presence in Europe. I am not sure whether you favor that or not. But let me say that if our allies want us to go, we will be gone in a minute. Indeed, if they want us to leave we'll go and I can assure you that the sentiment of the American people is such that they will want us to leave immediately. The mechanism by which we have a US military presence in Europe is NATO. If you abolish NATO, there will be no more US presence.

We understand the need for assurances to the countries in the East. If we maintain a presence in a Germany that is a part of NATO, there would be no extension of NATO's jurisdiction for forces of NATO one inch to the east. At the end of the day, if it is acceptable to everyone, we could have discussions in a two plus four context that might achieve this kind of an outcome. Maybe there is a better way to deal with the external consequences of German unification. And if there is I am not aware of it. We don't have German agreement but we have mentioned it to Genscher and he said he wants to think about it. Dumas liked it and now I have mentioned it to you.

Gorbachev: Basically, I share the course of your thinking. The process is underway. We have to adjust this process. We have to adjust this new reality and not be passive in ensuring that stability in Europe is not upset. Well for us and for you regardless of the differences there is nothing terrifying in the prospect of a unified Germany. But this is simplistic. First of all, we both are interested in improving European conditions and we can't simply stand by. Now what kind of Germany are we going to face in the future? How can it be included in world structures?

Second, there are different perspectives in London, Paris, Budapest and Warsaw. Yesterday I had a talk with Jaruzelski. He knows that you are here today and Kohl and Genscher will be here tomorrow. Given that, he wants to call and talk. The German question is the key question for him. It is critical to the Poles.

Baker: That's right.

Gorbachev:

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Figure I: Extract from Declassified Transcript of Conversation between Secretary of State Baker and General Secretary of the Communist Party Mikhail Gorbachev<sup>7</sup>

The "2+4 treaty" allowing for the reunification of Germany was the result, and Eduard Shevardnadze signed the pact on behalf of the Soviet Union on September 12, 1990.

Whatever the precise nature of NATO commitments to the Soviet Union in the 1990s, in light of NATO's expansionist history and the seemingly Western-created "Maidan Revolution" that brought a Western-aligned government into power in Kiev in 2014, Russian President Vladimir Putin might be forgiven for wondering aloud if

<sup>5</sup> "Record of Conversation Between Mikhail Gorbachev and James Baker in Moscow", The Gorbachev Foundation Archive, Fond 1, Opis 1. (February 9, 1990).

<sup>6</sup> On the fraught topic of NATO promises to the Soviet Union, See Generally: Sarotte, M.E., "Not One Inch, America, Russia, and the Making of Post-Cold War Stalemate," Yale University Press (2021). Though this excellent work by Sarotte goes on to attempt to minimise the import of the "not shift one inch eastward" exchange, clearly today the Russians feel deceived by the 1989-1990 negotiations with the West over German unification.

<sup>7</sup> "Memorandum of Conversation from 2/9/90 meeting w/USSR Pres. Gorbachev & FM Shevardnadze, Moscow, USSR", United States Department of State, Declassified FOIA 199504567, National Security Archive Flashpoints Collection, Box 38, George Washington University (February 9, 1990).

NATO remains a purely defensive pact. After all, the United States' habit of tinkering in the domestic affairs of powers in the region suggests that U.S. and NATO intentions in Eastern Europe and beyond had, not even a decade later, evolved quite some distance from the entity Baker seemed to be describing in 1990. In alarmingly laudatory tones that have aged poorly in today's environment, the Guardian had this to say of such American operations in 2004:

Ten months after the success in Belgrade, the US ambassador in Minsk, Michael Kozak, a veteran of similar operations in central America, notably in Nicaragua, organised a near identical campaign to try to defeat the Belarus hardman, Alexander Lukashenko.

That one failed. "There will be no Kostunica in Belarus," the Belarus president declared, referring to the victory in Belgrade.

But experience gained in Serbia, Georgia and Belarus has been invaluable in plotting to beat the regime of Leonid Kuchma in Kiev.

The operation - engineering democracy through the ballot box and civil disobedience - is now so slick that the methods have matured into a template for winning other people's elections.

[...]

Officially, the US government spent \$41m (£21.7m) organising and funding the year-long operation to get rid of Milosevic from October 1999. In Ukraine, the figure is said to be around \$14m.<sup>8</sup>

Whatever the true level of 1990-era Western written commitments to the Soviet Union vis-a-vis eastward expansion, the careful analyst of international relations understands that nation-states act on the basis of their perceptions, no matter what the underlying reality may be. Fortunately, in the instant case, we do not have to speculate that, in the years that followed 2004, Putin could not help but have bristled against the expansionist efforts of the West (both overt and clandestine). In fact, he objected to these rather explicitly, and not for the first time, in December of 2021:

Regarding your question about guarantees or whether things depend on the negotiations, our actions will not depend on the negotiation process, but rather on unconditional guarantees for Russia's security today and in the historical perspective.

In this connection, we have made it clear that any further movement of NATO to the East is unacceptable. Is there anything unclear about this? Are we deploying missiles near the US border? No, we are not. It is the United States that has come to our home with its missiles and is already standing at our doorstep. Is it going too far to demand that no strike systems be placed near our home? What is so unusual about this?

What would the Americans say if we stationed our missiles on the border between Canada and the United States, or between Mexico and the United States? Haven't Mexico and the US had territorial disputes in the past? Which country owned California? And Texas? Have you forgotten? All right, nobody is talking about this now the way they are talking about Crimea. Very well. But we are trying to avoid talking about the creation of Ukraine as well. Who created it? Vladimir Lenin did, when he established the Soviet Union. This is set out in the 1922 Treaty on the creation of the Soviet Union and in the 1924 Constitution. True, this happened after his death, but in accordance with the principles he formulated.

But the matter at hand concerns security, not history, but security guarantees. This is why it is not the negotiations themselves but the results that matter to us.

We remember, as I have mentioned many times before and as you know very well, how you promised us in the 1990s that [NATO] would not move an inch to the East. You cheated us

<sup>8</sup> "US campaign behind the turmoil in Kiev," The Guardian (November 26, 2004).

shamelessly: there have been five waves of NATO expansion, and now the weapons systems I mentioned have been deployed in Romania and deployment has recently begun in Poland. This is what we are talking about, can you not see?

We are not threatening anyone. Have we approached US borders? Or the borders of Britain or any other country? It is you who have come to our border, and now you say that Ukraine will become a member of NATO as well. Or, even if it does not join NATO, that military bases and strike systems will be placed on its territory under bilateral agreements. This is the point.

And you are demanding guarantees from me. It is you who must give us guarantees, and you must do it immediately, right now, instead of talking about it for decades and doing what you want, while talking quietly about the need for security guarantees to everyone. This is the point. Are we threatening anyone?<sup>9</sup>

### *Ukraine and NATO's Eastward Ambitions*

Having thrown down the gauntlet, first by pressing for the admission to the alliance of Ukraine, which, despite occasional vacillations with changing leadership, has been involved with NATO since 1992 and has been exercising with NATO at least since 2010, and then by defining victory conditions in the Ukraine-Russia conflict as the complete removal of Russian troops from the territory of Ukraine, NATO has committed itself to a Herculean task.

Contrary to Ukrainian expectations, we assess that Ukraine will not be admitted to NATO, and that Russian troops will not be expelled from Ukraine's territory. We rather think that Ukraine will at the very least be bifurcated into a neutral and essentially disarmed "West Ukraine," which may even fall prey to expansionist Polish interests,<sup>10</sup> and, to the east, a new state or states composed of territory annexed into Russia.

Even on its own terms, these developments would be a categorical loss for NATO, and we assess that the resulting blow to the credibility of the alliance to fulfil its primary purpose (to serve as a military counter to Russian interests) is likely to reduce the organisation to hollow irrelevancy.

In the wake of such a defeat, we assess that the influence of the United States in European military affairs will likely collapse as its reputation as the global hegemon is savaged, as European states consequently come to resent the plight that American dominance has left them in, and they are forced to manage their own national defences.

We explore our reasoning in detail *infra*, giving us occasion to identify our next "loser":

### *Loser: The United States European Command ("USEUCOM")*

A central (if not the central) *raison d'être* for USEUCOM (or EUACOM) is (or was) to form a protective shield guarding Europe from forces to the east. That premise was most acute in the late 1980s but, even as late as 1987, there were serious doubts from American commanders that the United States could meet all its commitments on the continent. To wit:

Today there are slightly more than 317'000 service-men and women assigned to the U.S. European Command, dedicated to deterring future war in Europe. The total includes more than 200'000 soldiers, 61'000 airmen, 35'000 sailors, and 3'200 Marines. Together, they constitute the most visible manifestation of the U.S. commitment to defense of NATO.

[...]

#### *Mission*

The primary mission of the command is to provide combat-ready forces to support the U.S. commitment to NATO. The purpose of these forces is to deter war by demonstrating to any potential aggressor that the costs of aggression will far

<sup>9</sup> Vladimir Putin's Annual News Conference (December 23, 2021).

<sup>10</sup> Ukrainian spokesmen insist that such rumours are Russian disinformation.

outweigh any possible benefits. In addition to deterring an actual attack, however, U.S. forces also prevent the Soviets from using their military power to intimidate and coerce our European allies into an accommodation that would be contrary to the interest of freedom and democracy on both sides of the Atlantic. [...]

#### Reinforcement

The United States is committed to provide NATO 10 divisions, 37 tactical aircraft squadrons, and a Marine amphibious brigade within 10 days of mobilization. Despite progress in the past several years, we do not have sufficient airlift and sealift assets to move the required personnel and equipment to Europe as scheduled. In addition to complicating efforts to implement our strategy in Europe, current reinforcement difficulties increase the importance of avoiding any reductions in the level of forces in-theater, as any reduction would place further burdens on already inadequate strategic-lift assets.

To compensate in part for limitations on our ability to deploy troops rapidly from the continental United States, [USEUCOM] for a number of years has been increasing the amount of heavy equipment pre-positioned in-theater. The ultimate goal of the program is to have the equipment for six divisions stored in Western Europe, thus significantly reducing the number of aircraft and ships required to support the reinforcement effort. [...]

#### Sustainability

Our stockage of essential war materials determines how long a conventional defense in Europe might be conducted. Although there has been continual improvement over the last five years, stocks of major equipment, repair parts, and ammunition are still not sufficient in a number of cases to meet agreed NATO standards.... Shortages of key items could seriously hinder a successful defense if attacked.<sup>11</sup>

It is difficult not to view as prescient the late General Galvin's admonitions, particularly given his articulation of the USEUCOM mission (i.e. "...to provide combat-ready forces to support the U.S. commitment to NATO.") and one of the secondary purposes of that mission (i.e. to "...prevent the Soviets from using their military power to intimidate and coerce our European allies into an accommodation that would be contrary to the interest of freedom and democracy on both sides of the Atlantic.")

One expects that General Galvin would be distressed to learn that, in the interim, and despite a consistent annual military expenditure of over 3.00% of GDP with peaks of nearly 5.00% of GDP during the period of 2000-2020, the United States has significantly reduced its combat capability in and around Europe. Likewise, struggling for relevance after the fall of the Iron Curtain, the focus of mission statement of USEUCOM began to slip after 1990. Currently, it reads:

USEUCOM executes a full range of multi-domain operations in coordination with Allies and partners to support NATO, deter Russia, assist in the defense of Israel, enable global operations, and counter trans-national threats in order to defend the Homeland forward and fortify Euro-Atlantic security. Should deterrence fail, USEUCOM is prepared to fight alongside Allies and partners to prevail in any conflict.<sup>12</sup>

As it would seem that, at least in the Ukraine, "deterrence" has "failed," even by the standards of USEUCOM's current and rather watered-down mission statement, an important question follows: what would USEUCOM need to do to "...fight alongside Allies and

<sup>11</sup> Galvin, General John R., USA, Supreme Allied Commander: Europe; Commander in Chief, United States European Command, "Maintaining Peace in Europe," *Defense Magazine* (November-December 1987).

<sup>12</sup> "United States European Command, Mission Statement." (December 2022).

partners to prevail..." against Russian forces in Ukraine? What, in other words, would the path to "victory" look like? And, what would be required to give NATO forces a fighting chance of pulling one off?

In analysing this question, we approach the problem by assessing how the United States Military (and those coalition "partners" that might be persuaded to participate) might, at its post-modern peak, prosecute this USEUCOM mission. In defining this post-modern "peak" we draw from the 2002 comments of Stephen A. Bourque:

In 1990 the U.S. Military was at the highest state of readiness and training in its history. Critical to the success of the post-Vietnam Army were changes in how it fought (AirLand Battle Doctrine) and trained (Performance Orientated Training) and a manpower procurement system that accepted only the most motivated and trainable young recruits. Officers and non-commissioned officers, many veterans of the Vietnam War, initiated changes in training and equipment that led to the revitalized Army of the 1990s.<sup>13</sup>

An additional advantage of adopting this tact of analysis is the wealth of information available on the composition, strategy, and tactics of the First and Second Gulf Wars, fertile ground for the sage student of military history to cultivate.

We assume for the purposes of this thought experiment that nuclear escalation is avoided so as to cleanly assess the challenges presented by a purely conventional conflict between the belligerents. There is a certain elegance in this analytical method as the current (and much diminished, as discussed infra) U.S. V Corps, once the primary contingent of U.S. forces in Europe assigned to defend e.g., the Fulda Gap, and one of the primary formations to participate in the Second Gulf War, has, as of March 2022, deployed a headquarters element "V Corps (Forward)" to join other advanced V Corps elements in Poznan, Poland, a response to the Russian campaign in Ukraine.

#### *USEUCOM 1987-1991: A Loss of Strategic Capability Alignment*

With the fall of the Berlin Wall and the end of the Cold War, the United States has preferred, since as early as 1991, to focus away from large, standing groupings of mechanised forces designed for extended land engagements, leaning instead on its traditional "aviation and aerospace" power projection, and the deployment of expeditionary forces with, by nature, limited endurance (forces which have, as a consequence of these limitations, found themselves overextended in Iraq and Afghanistan).

A material demonstration of this re-alignment can be seen in the quasi-permanent relocation of so much V Corps equipment away from Europe and to Kuwait and Iraq in 2003, a circumstance that accelerated the shift away from preparation for extended ground combat in Europe against a near-peer enemy (despite the fact that defensive missions on the European continent remain a significant component of NATO's mission). The result has been an unfortunate misalignment between USEUCOM's capabilities (in particular, endurance in an extended conventional conflict on European soil) and the long-standing perception of the United States as, far and away, the primary lender of first and last resort of military and intelligence assets to NATO's mission. Consider:

These reforms culminated at virtually the same time as the Soviet Union began to dissolve into almost a dozen independent republics, and Germany, separated into halves for fifty years began the process of unification. Public opinion in both the United States and Germany no longer supported the stationing of so many American troops in Europe. In the spirit of all these

<sup>13</sup> Bourque, Stephen A., "Jayhawk! The VII Corps in the Persian Gulf War," Department of the United States Army (2002).

changes, therefore, the U.S. government started to reduce its military presence there.

However, the fighting ability of the U.S. Army in Europe received a major test before the troops came home. Iraq invaded Kuwait in the summer of 1990. A hastily formed coalition rushed forces into Southwest Asia. Soon they were strong enough to prevent any additional Iraqi attacks southward into Saudi Arabia. These forces were not, however, robust enough to evict Saddam Hussein's troops from the small kingdom of Kuwait. In November 1990, the president of the United States ordered the U.S. VII Corps to leave its garrisons in Germany and deploy to Saudi Arabia. The arrival of its armor-heavy forces would finally give the coalition "an offensive option."<sup>14</sup>

Despite a more recent change in emphasis even further away from peer or near-peer adversaries and towards asymmetric conflict and counterinsurgency ("COIN") operations, the military doctrine of the United States Armed Forces in major combat operations in 1991 and 2003 remained similar to its 1985-1989 aspirations. Specifically, a focus on the use of stand-off weapons to reduce Ground Based Air Defence ("GBAD") risks coupled with attacks on Command, Control, Communication, and Intelligence ("C3I") infrastructure. The aim being to permit United States Air assets to quickly establish air superiority via ground and carrier-based air assets deployed from afar to a given theatre of operations. Implicit in these doctrines is the assumption that the United States will be able to establish such superiority, as much of its war-fighting experience and ethos depends on the "third dimension" (e.g., the ability to engage in essentially unrestricted manoeuvre warfare and "deep battle" operations including vertical envelopment via Air Assault and Airborne/Paratroop operations).

From this platform, and with the vertical envelopment dimension secured, the light infantry and heavy mechanised ground formations of an expeditionary force are expected to be free to assault under a pervasive close air support umbrella and enjoy deep-battle fire superiority not just via highly mobile HIMAS and 155mm artillery systems, both of which are dependent on U.S. electronic warfare superiority for their survivability in theatre, but also stand-off weapons which can be targeted against small pockets of GBAD resistance or targets far behind the lines.

It is a substantial part of the origin mythos or "lore" of the post-modern U.S. military that its unrivalled dominance when employing these doctrines, a legend well established in 1991 and reinforced in 2003, establishes U.S. force projection capabilities as equal to the task of neutralising and turning in its favour any conflict anywhere in the world. Even today.

As the sine qua non of this particular military ethos, and the origins of the now crumbling unipolar environment, can be found in 1991 via the decisive victory of coalition forces during Operation Desert Storm, it seems most prudent to examine that conflict in some detail.

### *Operation Desert Storm as the Gateway to Unipolar Hegemony*

In addition to the probative value of analysing the watershed role of the U.S.-Iraqi conflicts in constructing the 21st century self-image of the Armed Forces of the United States, employing these military operations as a benchmark against which to assess the capabilities of the United States Armed Forces to conduct large-scale conventional operations as they exist in 2022-2023 also seems an essential analytical exercise. This is particularly so as any serious attempt to eject Russian forces from Ukraine, a definitively counter-offensive operation, would require a series of operations similar to the ejection of Iraqi forces from Kuwait in 1991 (also a large-scale counter-offensive operation).

Gulf War I entailed the deployment and combat participation of

<sup>14</sup> Bourque, Stephen A., "Jayhawk! The VII Corps in the Persian Gulf War," Department of the United States Army (2002).

956'700 coalition personnel<sup>15</sup>

This mass was arrayed against some 650'000 Iraqi personnel collected in Kuwait and across the border in Iraq.

Total U.S. forces deployed: 697,000; peak personnel strength: 541,400

Total other coalition forces: 259,700 at peak personnel strength

Country	No.	Country	No.
Afghanistan	300	Norway	50
Argentina	300	Oman	6,300
Australia	700	Pakistan	4,900
Bahrain	400	Philippines	Unknown
Bangladesh	2,200	Poland	200
Belgium	400	Qatar	2,600
Canada	2,000	Romania	Unknown
Czechoslovakia	200	Saudi Arabia	100,000
Denmark	100	Senegal	500
Egypt	33,600	Sierra Leone	Unknown
France	14,600	Singapore	Unknown
Germany	Unknown	South Korea	200
Greece	200	Spain	500
Hungary	50	Sweden	Unknown
Italy	1,200	Syria	14,500
Japan	Unknown	Thailand	Unknown
Kuwait	9,900	Turkey	Unknown
Morocco	13,000	United Arab Emirates	4,300
Netherlands	600	United Kingdom	45,400
New Zealand	Unknown	Zaire	Unknown
Niger	600		

Figure II: Table of Coalition Forces at Peak Deployment Levels<sup>16</sup>

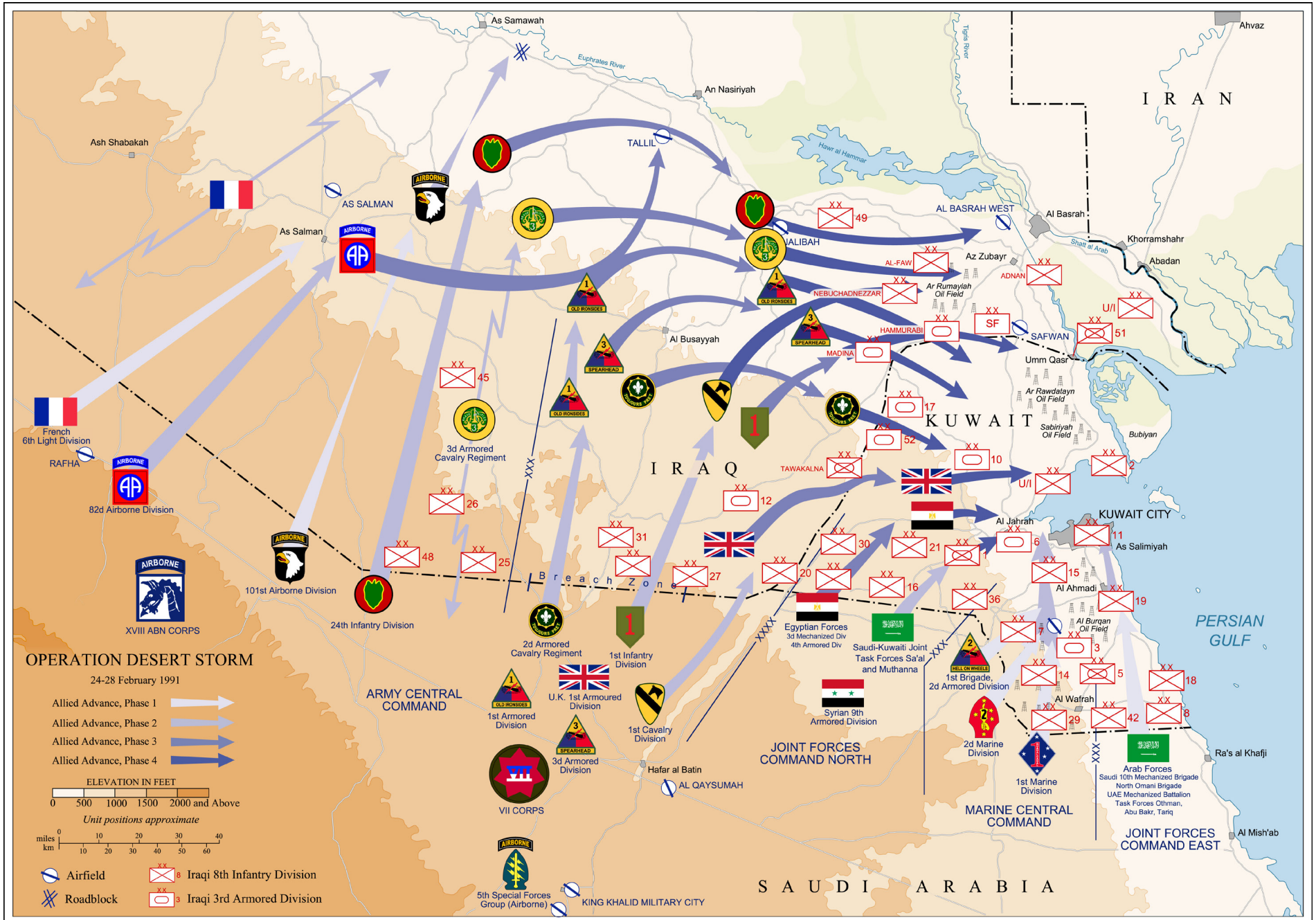
Our own analysis strongly suggests that, as of this writing, the Russian Armed Forces have massed on the order of 550'000 troops in and around the Ukrainian theatre, including forces staged in Belarus near the Ukrainian and Polish borders. Given the similar mission requirements that would meet NATO's self-proclaimed victory conditions (i.e.: to expel an invading military body by engaging a force of more than half a million military personnel in and immediately behind the occupied territory, a force that includes many mechanised formations with shortened supply lines owing to the adjacency of the invading country) an examination of the personnel and material required to prosecute the two Gulf Wars, and in particular Gulf War I (August 1990-February 1991), seems particularly apt. Specifically, such an operation would require an order of battle at least proportionately suggestive of that deployed in the First Gulf War to eject Iraqi invaders from Kuwait, a country of ~17'800 square kilometres. It seems prudent, therefore, to explore those operations in some detail by way of comparison.

As a reminder, and in keeping with the doctrine of early establishment and exploitation of air superiority to support U.S. ground operations, operations in the Kuwaiti theatre began with a wave of stand-off attacks, including significant use of Tomahawk land attack cruise missiles ("TLAM") and then air operations, including those prosecuted by F-117 "Nighthawk" stealth fighters (a quasi stand-off weapon) designed to reduce Ground Based Air Defence ("GBAD") installations, eliminate the anti-air and close air support threat of the Iraqi Air Force, and thereby establish air superiority to enable the deployment of airborne air and ground surveillance assets (e.g., E-3 Sentry and E-8C Joint STARS), to give airborne and air assault forces protection to enable the vertical envelopment dimension without fear of enemy spoiling attacks, and to use protected artillery, air-to-ground, and close air support operations to

<sup>15</sup> Lyla M. Hernandez, Lyla M., et. al., Editors, "Gulf War Veterans: Measuring Health," Committee on Measuring the Health of Gulf War Veterans, Institute of Medicine (1999).

<sup>16</sup> Ibid.





reduce Iraqi armour and infantry formations in and around fortified defences.

The opening rounds of the Gulf War air campaign were necessarily focused on establishing air superiority by eliminating as a threat both the Iraqi Air Force and GBAD installations not just in Kuwait, but all the way into Iraq up to the Iraq-Iran border, particularly after, in a surprise move, the lion's share of the Iraqi Air Force fled to Iran (rather than the expected Jordan). This meant establishing a pervasive no-fly zone of some 455'800 square kilometres (~438'000 over Iraq, and ~17'800 over Kuwait). These air superiority operations occupied over 800 fighter/dual role aircraft from Air Force, Navy, and Marine formations, part of a 2'500+ fixed wing commitment by coalition forces.

Responsibility for executing the primary mission of the ground campaign to unseat Iraqi forces from Kuwait fell largely to U.S. VII Corps, a formation constituting nearly 1'500 tanks, 1'300 infantry fighting vehicles, 550 mobile artillery pieces, and 120 MLRS launchers, encompassing the 1st Armoured Division, the 3rd Armoured Division, and the 1st Infantry Division reinforced with the 2nd Armoured Division (Forward) and the 2nd Cavalry Regiment, i.e.: nearly 150'000 troops. They were joined by 101st Airborne Division whose planned 250km deep air assault was supported by 400 helicopters, the 82nd Airborne Division, the French "Division Daguet," custom forged for the operation from the French 6th Light Armoured Division, the British 1st Armoured Division, and other allied forces.

As is well known, the coalition forces involved essentially routed Iraqi forces and, just 100 hours after breaking the departure line, a cease fire was called. In all, some 950'000 troops, of which 700'000 were of the U.S. Armed Forces, were deployed against some 650'000 Iraqi troops during the operation. Coalition forces suffered a mere 292 KIA (of which only 147 were the result of enemy action) 467 WIA, and 776 wounded in other circumstances. Equipment losses included 31 tanks, 30 infantry fighting vehicles, one artillery piece, and 75 aircraft. Estimates for Iraqi casualties range from 20'000-50'000 killed, more than 75'000 wounded, and more than 100'000 captured.<sup>17</sup>

As a origin myth for the invincibility of the United States Armed Forces and her allies, one that extended into the 21st century, it is compelling. Unfortunately, this myth is pinned on a United States Military that simply no longer exists.

### *Securing the Ukraine Theatre for Air Operations as a Prelude to a Land Assault*

Despite the marked disparity between the Armed Forces of the United States as they existed in 1991 and the status of those forces today, and by way of giving every benefit of the doubt to the United States military for our first approximation, our analysis proceeds with an examination of what an effort similar to the 1991 execution of Desert Storm would require to repeat the performance in today's Ukrainian theatre.

Given that the astoundingly low KIA/WIA rate was afforded almost entirely by the quick, pervasive, and expansive extension of an air superiority umbrella over the entire Kuwaiti theatre of operations and beyond it into critical "buffer areas," areas that could support anti-air and stand-off weaponry that would threaten U.S. and allied forces in the theatre, how might such an umbrella be deployed over the Ukrainian theatre of operations and into sufficient buffer areas beyond the borders of Ukraine to afford a similar level of protection?

On a first approximation, this would require extension of air superiority (or at least very effective GBAD suppression) dominance some distance into Russian airspace. In the absence of such protection, the risk to NATO's airborne surveillance and in-air re-

<sup>17</sup> For extensive discussion on troop dispositions, order of battle, and the casualty figures of the conflict See Generally: Bourque, Stephen A., "Jayhawk! The VII Corps in the Persian Gulf War," Department of the United States Army (2002).

fuelling assets (e.g. the E-8C Joint STARS,<sup>18</sup> KC-135 Stratotanker,<sup>19</sup> and E-3 Sentry aircraft<sup>20</sup>) would be significant. Operating ranges of the AN/APY-1 or AN/APY-2 airborne radar of the E-3 Sentry are around 320km. The AN/APY-7 side-looking, phased array of the E-8C is limited to an effective range of around 250km. Active operations in the east and southeast of Ukraine would bring these platforms deep into Ukrainian airspace, dangerously within range of GBAD emplacements in Russia, Belarus, and occupied Ukraine.

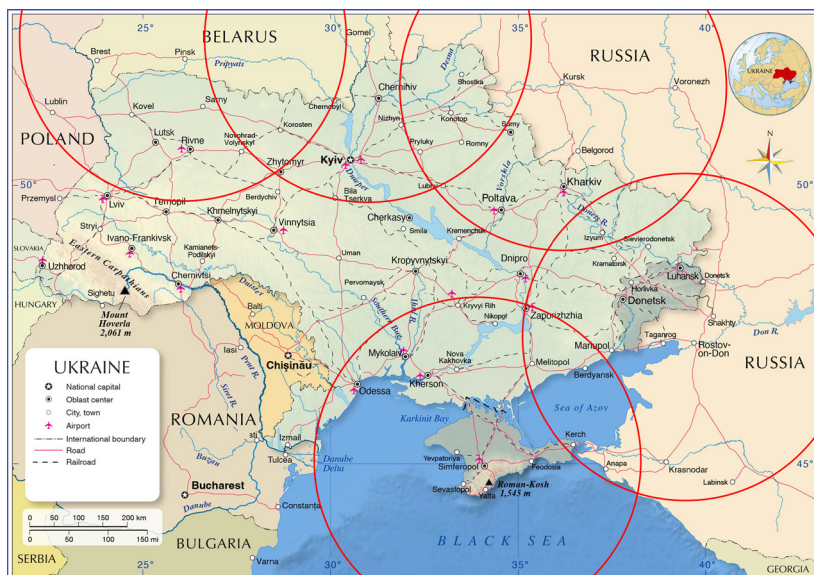


Figure III: Theoretical Air Defence Coverage of S-300VM and S-400 GBAD Platforms with 48N6P01, RM83ME, or 40N6 Anti-Air Missiles<sup>21</sup>

While the effective combat radius of the F-15 Eagle, the mainstay tactical fighter and air superiority asset deployed by the United States for deep air superiority roles is in excess of 1'800 kilometres, enough to carry it 500km past Moscow even if flown from airbases in north-western Poland, deploying from these distances would mean running the air-defence gauntlets of GBAD emplacements in Belarus, and require ~20-30 minutes of travel time for the 800-900km trip to the south-eastern area of Ukraine even at a prohibitively fuel-thirsty Mach 2.5, the craft's top speed. The F-35 Lightning II, likewise, has extended combat range (up to 1'400km) but is limited to a top speed of Mach 1.6, nearly doubling the travel time into south-eastern Ukraine from safe-haven Polish bases.

Combat ranges of other aircraft (the F-22 Raptor: 850km, the F/A-18 Hornet: 740km, the F-16 Fighting Falcon: 550km) make combat air patrol ("CAP") or ground support operations over eastern and south-eastern Ukraine all but impossible without in-air refuelling assets stationed over western Ukraine, highlighting the criticality of air superiority to protect, e.g., KC-135 Stratotankers over central Ukraine.<sup>22</sup>

Short of stationing precious air assets in western Ukraine, where they would be vulnerable to Russian stand-off weaponry while on the ground, to enable effective air operations of the sort enjoyed by coalition forces during the First Gulf War over a eastern or south-eastern area of combat operations would therefore imply extending the GBAD and air superiority umbrella (as well

<sup>18</sup> At least one of these aircraft was operating in Poland near the border with Ukraine in March of 2022 and we expect others have since been relocated to Germany and/or Poland.

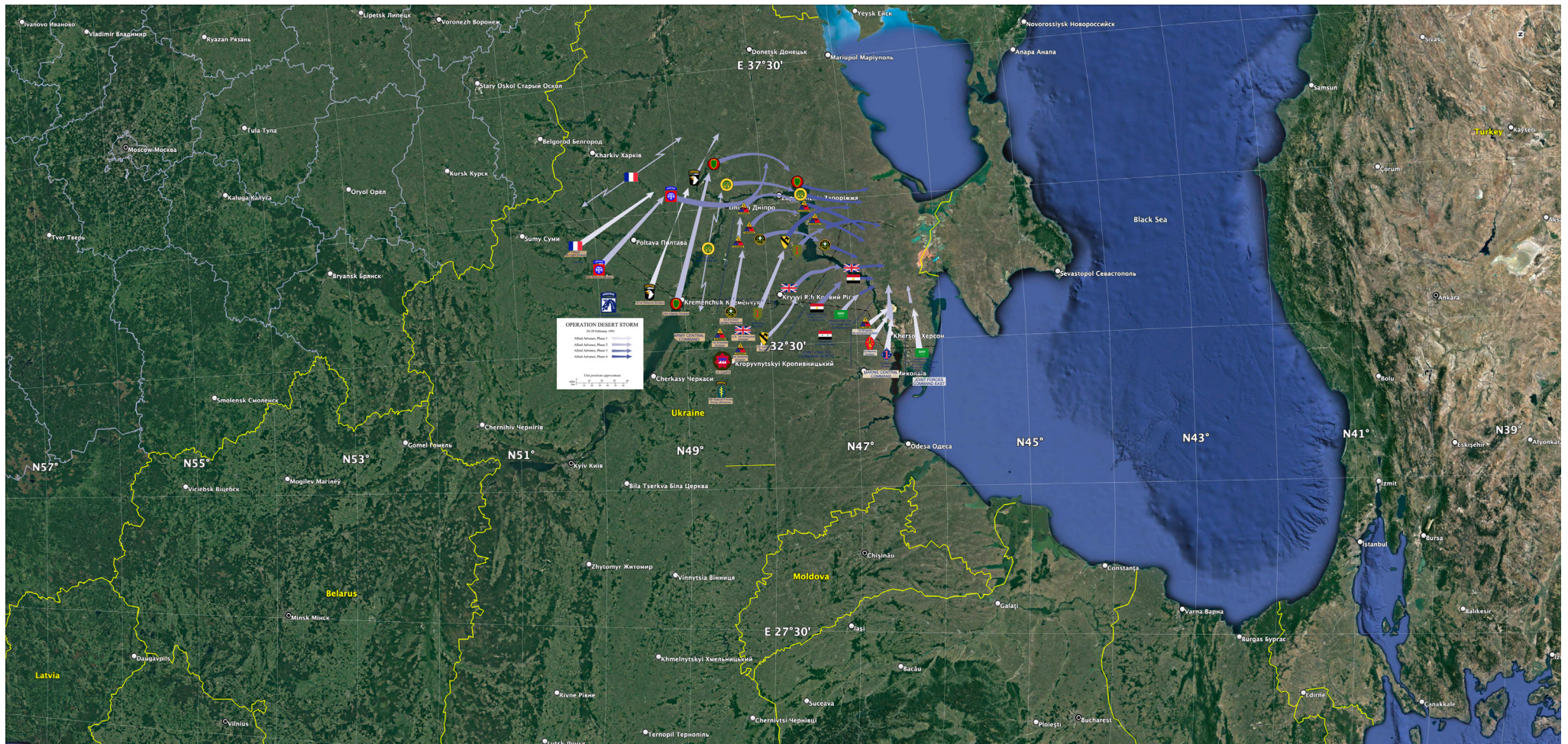
<sup>19</sup> Several KC-135 units are already operating in the area around the Ukraine theatre, and no less than seven conducted a ferry to Germany's Ramstein air base in December 2022, likely as refuelling escorts for American fighter aircraft being deployed from the United States to Germany.

<sup>20</sup> Several of these have been seen routinely orbiting near the Ukrainian border since the beginning of hostilities in the Ukraine theatre.

<sup>21</sup> ~finnem primary research.

<sup>22</sup> For detailed performance information on Western combat aircraft and airborne sensor and intelligence platforms, See Generally: Janes All the World's Aircraft: In Service 22/23 Yearbook," and "Janes C4ISR & Mission Systems: Air 22/23 Yearbook," (2022).





*Ukraine Theatre of Operations with Operation Desert Storm Overlaid (to Scale)*



as protection against sea-borne air defence) beyond Ukraine and at least 50-100km into Russian and Belarusian airspace, all of the Sea of Azov, and at least half of the Black Sea. This no-fly/GBAD suppressed zone would constitute an area of more than 1'250'000 square kilometres, or 2.5 times the area secured during the two Gulf Wars. It would have to be accomplished without two critical elements of the Gulf War air campaigns: the presence of Al Kharj Air Base in Saudi Arabia only 500km south of the border with Kuwait and where the United States Air Force's 36th Tactical Fighter wing was stationed, and the presence of hundreds of carrier-based aircraft in the Persian Gulf.

In 1990-1991, the United States relied heavily on the force projection and protection of her carrier battle groups to deploy air assets for air superiority, close air support, and force protection. Carrier battle groups centred on the USS Dwight D. Eisenhower and the USS Independence were both on station in the Persian Gulf by August 8, 1990, immediately adjacent to the shores of Kuwait, permitting their aircraft to be over their area of operations quickly and with combat fuel loads on board. Those carrier groupings were to be joined later by four more for a peak concurrent total of six carrier battle groups. Eventually, the aircraft carriers USS John F. Kennedy, the USS Saratoga, the USS America, the USS Midway, the USS Ranger, and the USS Theodore Roosevelt, all participated in the conflict.

Unfortunately, the Ukrainian theatre lacks a suitable body of water to host American carrier battle groups. Stations in the south-eastern Mediterranean Sea would entail transiting Turkish airspace en route to Bulgaria or over the Black Sea to the coast of Ukraine (which would put such flights at risk of interdiction by the anti-air platforms of Russian Black Sea Fleet and GBAD emplacements in Crimea). More "NATO-friendly" stations in the Ionian or Adriatic Seas would leave aircraft operations from carrier groups with a 1'500km round trip to the southernmost edge of the Ukrainian theatre.

Even if geography was not an impediment, the deployment by Russia of hypersonic anti-ship missiles such as the 3M22 Zircon would make even North Atlantic and North Sea duties for American Aircraft carriers rather risky, a lesson Russia learned when it lost the cruiser Moskva, the flagship of the Black Sea Fleet, presumably to a Ukrainian RK-360MC Neptune anti-ship missile.

Ignoring for the present these constraints, the ground operations of any significant conventional effort in Ukraine appear daunting.

### *The Scope of Ground Operations Against the Russian Presence in Ukraine*

As of this writing, the area of what is regarded as modern Ukraine that is occupied by Russian forces is some 87'000 square kilometres, or an area of nearly five times the Kuwaiti theatre of operations in 1991. In 1991, the onset of ground operations into Kuwait was prefaced by the staging of forces across a line of departure of 540km in length situated approximately 20km from the forward Iraqi positions. For the purposes of comparison, we present an overlay of the situation and the manoeuvres undertaken by the coalition forces from February 24, 1991 imposed over the eastern and south-eastern Ukrainian theatre.

With the benefit of this visual representation several serious impediments to such an operation are given stark focus:

First, while the coalition forces which conducted Operation Desert Storm had 261 days to build up forces on friendly soil close to a practical line of departure (Saudi Arabia agreed to host such forces on August 6, 1990 and the first American elements were on their way by August 7, 1990), it is difficult to imagine that multiple echelons of mechanised equipment would be permitted by the Russians to make unmolested the 850km trek across the Ukraine from the Polish border to any reasonable line of departure to assault Russian forces on the left bank of the Dnieper.

Complicating such an effort, as of this writing, Russian force-

es have concentrated much of their stand-off weapon strikes on Ukrainian infrastructure, in particular rail networks, with an emphasis on lines of communication between Poland (the primary transshipment point for NATO hardware bound for the Armed Forces of Ukraine and the ongoing field of battle in Ukraine's east and southeast).

Rail infrastructure adequate to move the heavy equipment employed by a large mechanised force (particularly main battle tanks, artillery, and infantry fighting vehicles) is an essential part of deployment logistics. Dozens or more vehicles can be transported quickly and efficiently by a single train, saving fuel, reducing wear-and-tear on equipment, and freeing up a substantial contingent of personnel that would otherwise be required to drive the equipment to assembly points near the front (and would be casualties of any spoiling attacks on logistical movements). The lack of such infrastructure in Ukraine presents a serious impediment to the transportation challenges that would face a coalition, particularly given the Russian focus on "deep battle" operations (e.g. conducting spoiling attacks on formations in assembly points or en route to assembly points). The vulnerability of manned convoys of heavy equipment during transport emphasises how essential a protective air-superiority umbrella against such Russian efforts would be.

Second, even prior to a move to staging and assembly areas near the proposed line of departure, such equipment as would be deployed in Ukraine has to be brought to e.g. Poland for further transshipment into the theatre. Even assuming a combat contingent comprised of only half of the heavy equipment deployed in Desert Storm, this implies logistics for 750 main battle tanks, 600 infantry fighting vehicles, 275 artillery pieces, and 60 MLRS platforms. If significant airborne and/or air assault operations are planned (and the dependence by the Armed Forces of the United States on vertical envelopment to execute its manoeuvre warfare doctrines suggests that they would be), in excess of 200 helicopters should also have to be brought to the area of operations.

At present, only a portion of such equipment is present on the European continent and it is difficult to see where it might be diverted from in meaningful scales.

Turning for a moment to the early efforts to move units to the Middle East in preparation for Desert Shield and Desert Storm:

[General] Saint and [General] Franks both believed it was important to start moving units out of Europe immediately. Although Third Army and Central Command wanted logistics units first, Saint also wanted to shake out the deployment system, a task he knew would be difficult. The only unit he had that could move on short notice was the cavalry regiment. With Franks' telephonic approval, [Colonel] Holder's cavalrymen began immediately. Operating from five railheads and working twenty-four hours a day, the regiment began sending its equipment to North Sea ports. By Thanksgiving Day, 22 November, almost all its equipment had been loaded on ships and was en route to Saudi Arabia.

[...]

To augment rail transport the corps used, for the first time in memory, barges on the Main and Rhine Rivers to move large numbers of vehicles down to the ports of Bremerhaven, Antwerp, and Rotterdam. The scale of the deployment was impressive: The 3rd Armored Division alone used 57 trains and 200 barges to move its equipment.

Of the larger sea lift:

The Navy used 72 ships, but few met their designated readiness dates. Finally, the Department of Defense chartered 213 ships of various kinds and nationalities to carry equipment and sup-

plies to Saudi Arabia.<sup>23</sup>

As of late 2022, the United States reports some 64'500 active military personnel in Europe, only some fraction of which could be described as "combat personnel". Of active personnel, the largest contingents are 35'700 stationed in Germany and some 12'500 in Italy.<sup>24</sup> The vast majority of personnel expected to participate in operations in the Ukraine theatre along the lines of our scenario (a figure that would have to exceed 150'000-200'000 to bring to bear 75'000-100'000 combat personnel, a figure that provides very little combat margin compared to Russian formations) would have to be transported from elsewhere.

If sufficient surplus numbers could even be identified, heavy equipment not already on the European continent would have to be diverted from the Middle East, the United States, and elsewhere, implying a sea lift to the same northern ports used to move VII Corps out into positions during the Gulf War. For forces originating on the eastern seaboard of the United States (i.e. depots near the United States Army Armor School at Ft. Benning, or armoured units transported to eastern ports from the Sierra Army Depot in Northern California), this would mean transiting the North Atlantic and the North Sea. Protecting the over 100 ships required to mount such a sea-lift would require substantial escort and anti-submarine protection from Russian attack submarines and stand-off weapons. Complicating matters, much of the corpus of the anti-submarine doctrine of the United States relies heavily on airborne sensor and anti-submarine platforms like the P-8 "Poseidon", the P-3 "Orion", and the SH-60 "Seahawk", which require either ocean-faring or land-based platforms to deploy, and pervasive air superiority protection to assure their survivability.



Figure IV: A U.S. Navy P-8 Poseidon Anti-Submarine Aircraft

Third, ignoring the problems of logistics and force protection and assuming an adequate force could, in fact, be assembled in theatre, a reasonable line of departure of the scale employed by coalition forces in the Gulf War (i.e. about 20-50km west of the Dnieper river) would subject such a force to very serious manoeuvre warfare vulnerabilities. The left flank of such an operation would be vulnerable to attack from anywhere along the 400km border between Ukraine and Russia, and the rear from more than 500km of frontage on the Ukraine-Belarus border. Ground assaults by Russian forces from either front would be advantaged by shorter supply lines from outside-theatre safe-haven depots (250km from likely staging areas in Belarus and 50km from Russia versus over

<sup>23</sup> Bourque, Stephen A., "Jayhawk! The VII Corps in the Persian Gulf War," Department of the United States Army (2002).

<sup>24</sup> United States Department of Defense, Defense Manpower Center (September 30, 2022).

### *Impediments: Large Scale Conventional Operations by Current Forces*

800km from the Polish border to our hypothetical coalition force).

Carrying hostilities into these outside theatre areas with spoiling attacks would entail significant political risks for both sides. In Russia's case, attacking Poland would guarantee increased NATO involvement in the conflict. In NATO's, strikes on the Russian motherland beyond the current, proxy-launched, sporadic stand-off and sabotage attacks, or operations against facilities in Belarus, invites similar escalation by Russia.

Even assuming the logistical challenges could be surmounted, the United States Military's ability to mount large-scale, conventional operations on a defensive (much less counter-offensive basis) on the scale of the Gulf War, much less against a peer or near-peer adversary on the European continent, have been reduced to essentially non-existent.

The current size, state, and disposition of the Armed Forces of the United States bears little to no resemblance to the forces of 1991 or 2003, much less the European deployments of the mid-1980s. Neither can the "major continental powers" expected to contribute to NATO's military mission (Germany and France) be much relied upon. They too have double spent the "peace dividend" afforded by the fall of the Berlin Wall and taken the opportunity to reduce force levels and military spending to fractions of their Cold War allocations.

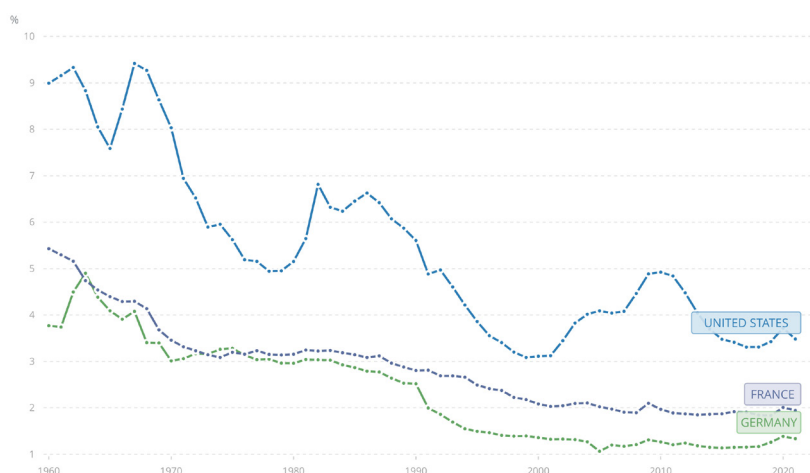


Figure V: Military Spending (% of GDP)<sup>25</sup>

In 2006 the NATO Defence ministers agreed to a military spending floor of 2.0% of GDP.<sup>26</sup> France and Germany violated the pact almost immediately along with virtually every other NATO member. Even at its highly reduced levels, U.S. military spending remains almost five times that of the next three largest NATO contributors (the United Kingdom, France, Germany) combined.

Predictably, this means troops levels have seen precipitous declines, far below the level where any major conventional effort should be attempted even if the political will to do so should exist. With the possible exception of Poland, the existence of said political will is a proposition for which evidence is scant at best.<sup>27</sup>

As an aside, in the context of the United States' one-way subsidising of European military security for such an extended period, United States taxpayers would seem to have cause to wonder to what end, exactly, they have been funding the free education, healthcare, utopian energy and climate aspirations, and generous social programs of various European governments.

Even assuming that a force sufficient to attempt major ground and air operations could be assembled, it hardly seems clear that the practical expertise to execute on such an operation still exists. With a 20-year gap since the end of the invasion of Iraq in April of 2003, essentially no combat veterans of major conventional oper-

<sup>25</sup> The World Bank.

<sup>26</sup> "Funding NATO," NATO Press Office (December, 19 2022).

<sup>27</sup> See our further examinations of The Bundeswehr and L'armée de Terre infra.



ations remain in Western service and, despite rhetoric alluding to the goal of "defeat" or "unconditional surrender" of Russian forces in Ukraine, the current challenges facing NATO on the European continent increasingly involve a far better resourced adversary than militia or light mechanised forces characterised by white Toyota pick-ups with mounted .50 calibre crew-serviced weapons, or irregular light infantry forces with no air support and little or no ability to wage electronic warfare. The last 20 years of United States combat experience has been almost exclusively against such forces, forces that lack the resources even to deploy uniforms or body armour, content instead to blend into the local citizenry and melt away soon after any initial contact with their U.S. adversaries.

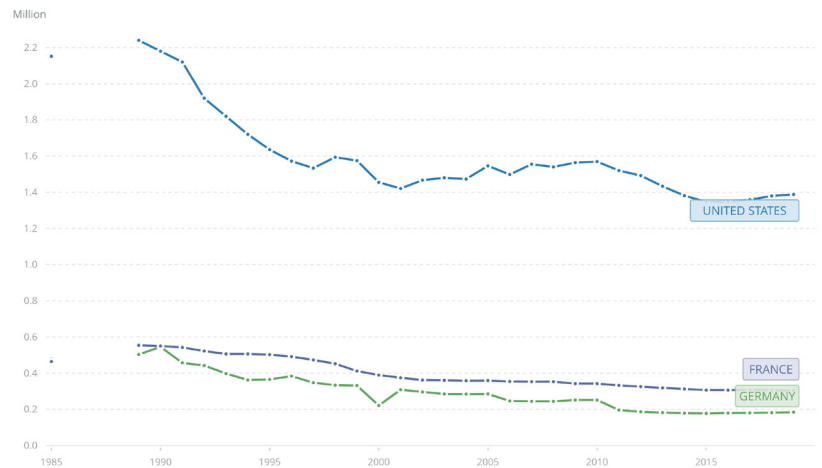


Figure VI: Military Personnel (Millions)<sup>28</sup>

The implications to USEUCOM should be clear. Even assuming that, within 270 days or less, some contingent of United States military forces could be assembled to any reasonable line of departure to assault current Russian formations east of the Dnieper river, our estimations of the capabilities of such forces against a near-peer are dire indeed. Even this assessment neglects to consider the serious to existential challenges that face any attempt to establish air superiority over any meaningful portion of the Ukraine or the immediate theatre of operations, or the extensive logistical efforts required to deliver such a force to the European continent.

We find it hard to imagine that even the most optimistic analyst could expect anything approaching a myth-creating "rout" of 1991 or 2003 vintage under the present circumstances. If, as we expect, such a conflict would require far more extensive sacrifices in blood and treasure, the careful analyst must ask two questions:

First, would such an operation be politically feasible to undertake?

Second, though conceding to Russia significant territorial gains in Ukraine would constitute a significant blow to NATO and USEUCOM, as it would constitute a complete failure of General John R. Galvin's 1987 articulation of its mission...

...to provide combat-ready forces to support the U.S. commitment to NATO. The purpose of these forces is to deter war by demonstrating to any potential aggressor that the costs of aggression will far outweigh any possible benefits. In addition to deterring an actual attack, however, U.S. forces also prevent the Soviets from using their military power to intimidate and coerce our European allies into an accommodation that would be contrary to the interest of freedom and democracy on both sides of the Atlantic....

...would mounting a costly or, worse, unsuccessful operation against Russian forces in Ukraine not do an order of magnitude more damage to USEUCOM?

<sup>28</sup> The World Bank.

*Loser: The Western Intelligence Apparatus*

In our estimation there is virtually no way to avoid the conclusion that, over the last twenty years, USEUCOM has manoeuvred itself into a lose:lose dilemma.

As a general matter, the reputation of Western intelligence Agencies, of which the United States, and the United Kingdom serve as the main NATO contributors, have not fared well in recent years. That said, the SIGINT, IMINT, and ELINT infrastructure of the so called "Five Eyes"<sup>29</sup> and, in particular, the space-borne surveillance platforms of the United States, should offer NATO and her allies a distinct advantage in the reconnaissance battle. This is to be expected. And while, certainly, the 20th and 21st Centuries have seen a wholesale move away from a reliance on HUMINT and towards high-tech intelligence collection, the agencies of the United Kingdom and the United States regard as a fundamental part of their organisational DNA their collective experience and successes in the Second World War. As a result, and against the experience of notable successes in their COIN operations, these bodies have a tendency to view their clandestine services and paramilitary assets with perhaps more optimism than is warranted. Unfortunately for this view, much has changed since World War II and the heart of the Cold War, and it is not at all clear that this particular species of self-regard within western intelligence agencies has evolved to match that reality.

Likewise, it could be said that, since World War II, the analysis corps of these agencies, particularly those with responsibility for developing strategic intelligence, have not showered themselves with glory in their traditional spheres of responsibility.

In our estimation, a series of failures and missteps by these agencies bear a significant part of the blame for the current predicament NATO and the West find themselves caught in, and ongoing miscalculations, particularly a serious misalignment between agencies' perception of their capabilities and reality, threaten to exacerbate their plight even further.

In the Ukrainian theatre of operations, all three spheres of intelligence (strategic, tactical, and clandestine/paramilitary services), elements which should have (and were expected to) proved a decisive advantage, have disappointed.

*Loser: The Heirs to the OSS, SOE, and Operation Gladio*

The wartime feats of Office of Strategic Services ("OSS") and the Special Operations Executive ("SOE"), effectively the organisations responsible for clandestine espionage and covert paramilitary activity in Europe during World War II, served very much the same role to the origin ethos of western intelligence as the Gulf Wars did for the Armed Forces of the United States. Their collection and analysis of intelligence, organisation and direction of otherwise fragmented (and fractious) partisan and resistance groups, and direction of commando raids or behind-the-lines sabotage activity served as a template for any number of programs during the Cold War that followed victory in Europe and Japan. Unfortunately, much like the American Military, the successor organisations to the OSS and SOE have drifted such that the reality of their composition and cultural makeup has materially diverged from their self-assigned goals.

It is a mantra of the reality facing an intelligence organisation (mostly repeated by intelligence officers) that because their activities are secret, they get all of the blame for failures, and none of the credit for successes. Be that as it may, incidents like the defection of Kim Philby, the Bay of Pigs, fall of the Shah of Iran, the failure of Operation Eagle Claw (to rescue the American hostages held in Iran), the Soviet invasion of Afghanistan, and the Collapse of the Soviet Union are obvious and much touted examples that highlight two facts:

First, strategic intelligence collection and analysis is hard.

Second, so are clandestine, asymmetric operations conducted

<sup>29</sup> Australia, Canada, New Zealand, the United Kingdom, and the United States.

in hostile environments.

With respect to the first, intelligence officers are often quick to blame the political element to which they report as unable or unwilling to accept contrarian analysis (which, in the intelligence field, is often the most critical sort) a plight with which we naturally sympathise. On the other hand, political "consumers" of intelligence are equally judgemental about the quality of analysis presented to them, or prone to assert that material produced by agencies is of such a high volume that filtering the "wheat from the chaff" is impossible.

That said, political decision-makers, particularly those in the West, are rather allergic to casualties and even more so to making public decisions that may have political consequences. This rather spineless lack of resolve when it comes to policy-making provides ample incentive to resort to clandestine (read: deniable) "quick-fixes" with small teams (read: low casualties) that rely on secrecy and surprise to enable success even in the face of highly asymmetric environments. For their part, the agencies responsible for pulling off such operations appear unable to resist the siren songs of the World War II "Jedburgh" teams who parachuted behind the lines in France to organise the Maquis; a ringing that, tennitis-like and even 80 years later, still sounds in their ears. Often, this seems to cause such agencies to overestimate the utility of such operations in the modern environment.

Our perspective, in particular with respect to the application of intelligence to the Ukrainian theatre, is somewhat different. We assess that, over the last decade or two, it is Western intelligence agencies themselves that have become politicised. Almost blindly so. And that this condition has had significant, negative impacts on NATO's efforts vis-a-vis Ukraine.

In the wake of the February 24, 2022 invasion of Ukraine by Russia, a series of articles apparently describing sabotage incidents began to appear in the press. From breaks in Belarusian rail traffic,<sup>30</sup> to hints of Western intelligence agencies on the ground in Ukraine,<sup>31</sup> and sabotage actions both in Crimea,<sup>32</sup> and deep behind the lines in Russia itself,<sup>33</sup> hints that Western clandestine services have been conducting paramilitary operations have been numerous. More recently, those suspicions have evolved into near certainty.<sup>34</sup>

Students of the history of NATO intelligence operations will not be surprised. NATO's explicit "behind the lines" mandates extend back to the beginning of the Cold War with "Operation Gladio," the organisation of armed, "stay-behind" operatives who would attempt to sew dissension and chaos in the event of a successful Soviet invasion and occupation of Western Europe.<sup>35</sup> The parallels to the success of such operations during World War II should be obvious. But certain lessons should have been learned from the scandal that followed when it was suggested that, between 1965 and 1983, elements of these forces conducted attacks against left-wing groups in Italy and elsewhere, with at least tacit approval by the intelligence agencies which originally organised them.<sup>36</sup>

In our estimation, however, such operations as have apparently been mounted against Russia appear to have had little material

<sup>30</sup> Sly, Liz, "The Belarusian railway saboteurs who helped thwart Russia's attack on Kyiv," *The Washington Post* (April 23, 2022).

<sup>31</sup> Schmitt, Eric, et. al., "Commando Network Coordinates Flow of Weapons in Ukraine, Officials Say," *The New York Times* (June 25, 2022).

<sup>32</sup> Pleasance, Chris, "FSB reveals X-ray of '23-ton bomb that blew up Crimea bridge' as eight men are arrested and accused of helping Ukrainian spies carry out attack," *The Daily Mail Online* (October 12, 2022).

<sup>33</sup> Stewart, Will, "Huge blast hits major Putin oil refinery in latest suspicious explosion to hit Russian infrastructure amid suspicions of Ukrainian sabotage," *The Daily Mail Online* (December 15, 2022).

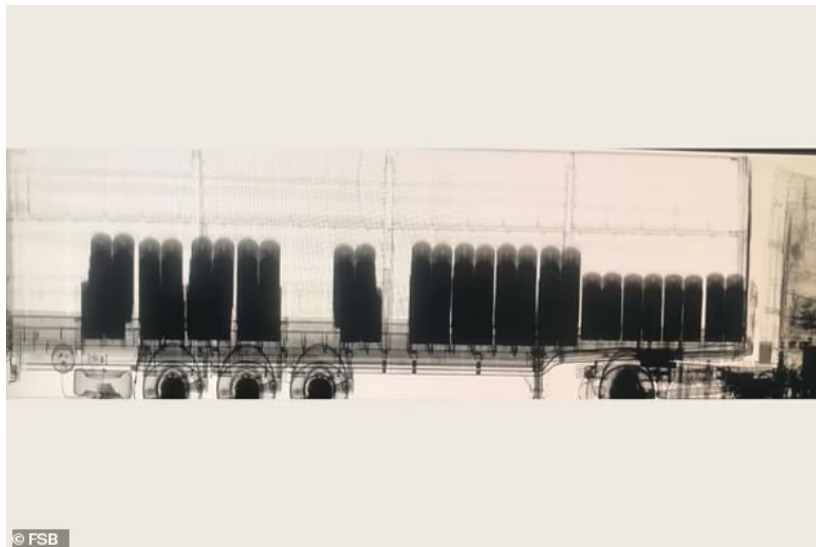
<sup>34</sup> Murphy, Jack, "The CIA is Using a European NATO Ally's Spy Service to Conduct a Covert Sabotage Campaign Inside Russia Under the Agency's Direction, According to Former U.S. Intelligence and Military Officials," (December 24, 2022).

<sup>35</sup> Pedrick, Clare, "CIA Organized Secret Army in Western Europe," *The Washington Post*, (November 14, 1990).

<sup>36</sup> See Generally: Williams, Paul L., "Operation Gladio: The Unholy Alliance Between the Vatican, the CIA, and the Mafia." (2015).

impact, and at considerable risk to precious HUMINT resources. To wit:

The NATO ally's campaign overseen by the CIA is only one of several covert operations efforts being undertaken by Western nations in Russia, according to two former U.S. special operations officials. Alarmed by Russia's February invasion, other European intelligence services have activated long-dormant resistance networks in their own countries, who in turn have been running operatives into Russia to create chaos without CIA help, according to a former U.S. military official. In addition, as has been widely reported, Ukrainian intelligence and special operations forces are running their own operations behind Russian lines.<sup>37</sup>



*Figure VII: Purportedly an x-ray image of the truck believed to have exploded on the Crimean Bridge on October 8, 2022. The Russian FSB has alleged that western intelligence used the driver as an unwitting suicide bomber in the attack.*

To explore our views it is useful to consider the efficacy and scope of the clandestine missions that continue inspire such efforts. In particular: Operation Jedburgh, the paramilitary operations run in occupied France before and during the invasion of Normandy, operations which are described by one historian as: "...central to, if not the literal beginning of, the history of U.S. Covert Operations."<sup>38</sup>

From June 6, 1944 ("D-Day") to July 14, 1944, with orders to link up with local resistance forces and conduct clandestine operations, eighteen 2-4 man "Jedburgh Teams" parachuted into occupied France, typically in close proximity to key rail arteries, primarily in Brittany, Central, and Southern France.

Brittany, owing to the deep water ports that were of particular interest to both the Allies and the Germans, and, more importantly, the three German paratroop and two mobile divisions stationed there, only a few hundred kilometres from the beaches of Normandy. The Allies were understandably eager to cut these forces off from the rest of the French mainland.

In Central and Southern France, the Jedburgh teams were assigned to hinder the transportation of reinforcements, particularly armoured divisions, that may be sent north to counter the amphibious landings. The German 2nd SS Panzer Division ("Das Reich") was a case in point.

The 2nd SS Panzer had been stationed in Montauban, just north of Toulouse in southernmost France, in order to be able to respond to an Allied invasion either from the Mediterranean or the Atlantic coasts. Because of its reserve mission, the division was fully

<sup>37</sup> Murphy, Jack, "The CIA is Using a European NATO Ally's Spy Service to Conduct a Covert Sabotage Campaign Inside Russia Under the Agency's Direction, According to Former U.S. Intelligence and Military Officials," (December 24, 2022).

<sup>38</sup> Beavan, Colin, "Operation Jedburgh", Penguin Books (2006).

prepared to react quickly and move its armour by rail wherever it might be ordered.

That order came on June 8th, 1944, when 2nd SS Panzer was instructed to move north to assist in driving the Allied invaders into the sea. This order was followed by a much more aggressive one on June 12th, commanding an entire SS Panzer corps (two SS Panzer divisions and more than 35'000 men) from the Eastern Front into France and to Normandy. Other forces from Brittany, the Netherlands, Poland, even Scandinavia were later commandeered and sent to northern France.

2nd SS Panzer's material (some 1'400 vehicles) and more than 15'000 men ran into trouble immediately. Repeated cuts in the rail lines, cuts which were quickly repeated further down the track as soon as repaired, had tried the patience of the 2nd SS Panzer commander. He resorted to the roads instead (and reprisals against civilians that saw him sentenced to death in absentia after the war) and, for his trouble, was subjected to repeated ambushes mounted by between five and six thousand maquisards, commanded by Tommy Macpherson, the Jedburgh who had jumped into southern France with "Team Quinine".

2nd SS Panzer slogged through ambush after ambush. Further north, with vehicles bunched up after repeatedly encountering armed roadblocks, armoured columns were vulnerable to Allied air attack, and often arrived at bridges just days or hours after they had been bombed by the Allies. The constant use of road rather than rail transport burned precious fuel, and ate away at machinery, particularly tank treads and engines.

The lead elements of 2nd SS Panzer finally arrived in Saint-Lô seventeen days later. A journey that should have taken three days had instead occupied nearly three weeks. In addition, so reduced were the division's forces, that its original mission, to engage the Allies directly and drive them into the sea, was scrapped. Instead, what remained of the formation was used piecemeal to supplement soft points or gaps in the German lines.

The performance of Team Quinine remains one of the stand-out successes in the history of clandestine operations, and some commentators have gone so far as to give Macpherson and his maquisards credit for saving the Allied forces from a serious quagmire or worse. Yet, Team Quinine was only one of many Jedburgh formations. 98 teams were eventually dropped into France. Even Team Quinine's many-thousand irregulars were but part of a much larger behind-the-lines force. From 20'000 members in 1943, the Maquis swelled to over 100'000 members by the summer of 1944.

The collective successes of these operations in France were so significant that even the Germans, including a figure not less notable than Field Marshal Gerd von Rundstedt, overall commander of German defences in France, found themselves impressed:

The terrorist movement crippled certain parts of France. Cases became numerous where whole formations of troops were surrounded for many days and, in isolated locations, simply killed off.<sup>39</sup>

Even the Allies were surprised by the efficacy of these asymmetric operations:

The combined action of resistance groups and Allied air forces has achieved success beyond expectation in restricting German troop movement by rail.<sup>40</sup>

As the Allies streamed across France, irregular forces grew exponentially. If one includes in the census the French Forces of the Interior ("FFI"), they numbered nearly 400'000 in late 1944. French General Marie-Pierre Kœnig, for example, was given over-

39 War Diary of Field Marshal von Rundstedt.

40 21st Army Group Intelligence Summary (June 23, 1944).

all command of the FFI in June 1944 and, after unifying various resistance groups, commended a force of 200'000 men, all irregulars.

The Allied military planners of 1948-1950 could be forgiven for wanting to replicate, to the best of their ability, the successes of behind-the-lines operations in France and elsewhere during World War II. In the spirit of the unquenchable thirst to fight the last war, one sees NATO's Operation Gladio as a natural extension of those successes. One finds it easy to imagine said planners daydreaming images of tens of thousands partisans in Eastern and later Western Europe darting about, cutting rail lines, ambushing Soviet columns, sabotaging fuel dumps, and generally causing havoc behind the lines and within the occupation zones. One finds this easy because it is clear this is exactly what NATO planners had envisioned for Operation Gladio. In the Cold War era, Gladio efforts were extensive. All over Western Europe, secret arms caches were created, members recruited, often under the supervision of former SOE members.<sup>41</sup>

To be certain, a glimmer of intelligence can be detected in what appear to be recent clandestine attacks on Russian assets. Disrupting, even for a period of a few days, petroleum flows through pipelines in cold environments can cause a "freeze-up," as stationary petrochemicals solidify, blocking the main line pipeline, the gathering system, the separation equipment, and shutting in the wells themselves. In such circumstances, the entire infrastructure could prove unusable until the spring thaw. In this context, with local temperatures expected to dip below -25C or even -30C, the apparent December attack on the Russian oil and gas facilities in Angarsk, Irkutsk Oblast, may have larger consequences for Russia's Western Siberian oil basin, the largest oil and gas producing region in the country and one that produces as much as 200'000 barrels of oil per day.

And it is difficult not to see in the rather substantial rumours of railway sabotage in Belarus shades of the night-time heroics of the 16 year old French schoolgirl "Tetty," who, with her young friends, salted the axles of the German 2nd Panzer SS's unguarded rail-cars with a special abrasive powder brought in by the Jedburghs and which seized up the rolling stock expected to transport the division's armour.

Nevertheless, no degree of vigour of imaginings by NATO planners and Western intelligence agencies can transform the current conflict in Ukraine into any semblance of the circumstances that surrounded and defined the success of clandestine operations in World War II.

Firstly, the D-Day drops of Jedburgh teams were prefaced by years of planning, preparation on the ground in France, training of the teams, which were drawn from a cadre of seasoned military officers with extensive martial experience already in hand, and coordination with local, irregular forces that, despite (or perhaps because of) the German occupation, numbered in the tens of thousands.

Further, aside from the Germans, the territory the Jedburghs were parachuting into was populated with a citizenry who were, by-and-large, friendly to the Allied cause or, at least, too fearful of involvement to be eager to inform on the teams to the Germans.

In addition, because, even in occupied France, Allied air power had established a long-standing record of successfully flying in men and material to support behind-the-lines units, cells on the ground in occupied France could depend on re-enforcement and supply of weapons and other equipment by air, in particular by the Royal Air Force's No. 138 (Special Duties) Squadron which, with its

<sup>41</sup> For detailed analyses of the Gladio operations See Generally: Ganser, Daniele, "Terrorism in Western Europe: An Approach to NATO's Secret Stay-Behind Armies", *Whitehead Journal of Diplomacy and International Relations*, South Orange NJ, Winter/Spring 2005, Vol. 6, No. 1, and Ganser, Daniele, "Secret Warfare: Operation Gladio and NATO's Stay-Behind Armies", *Parallel History Project on Cooperative Security*, ETH Zürich.

sister organisations, eventually dropped 1'500 agents into France, extracted a fair number in the other direction, and flew countless moonlight supply drops to resistance grounds in-country.

The conditions on the ground in Russia and Belarus present challenges not present in France. Even assuming teams have access to pre-placed caches of equipment (which seems to be the case), in these areas, Western forces have no air power component, no way to supply teams with weapons or military supplies except organically in territories where such material is strictly controlled, a limited ability to reinforce teams with personnel without running them into the theatre by normal civilian land or sea travel from the west (a dangerous proposition at best), and a far more limited, far less prepared corps of potential personnel who, unlike most of the officers who became Jedburghs, have not had several years to learn the local language.

With respect to personnel, an operation the size of that mounted by the OSS and the SOE on D-Day would exhaust most if not all of the field-ready operators in the United States' 1st Special Forces Operational Detachment-Delta, and the United Kingdom's Special Air Service (typically the go-to resources for operations with similar mission profiles) combined, leaving those units unable to address any other mission for the duration. Instead, the majority of would-be agents likely would have to be of Russian or Ukrainian extraction, presenting a challenge if elite military training is a pre-requisite for the tasks expected of them.

Similar operations from a more recent conflict may present a better comparable to assess the challenges that face Western intelligence agencies that aspire to mount effective clandestine paramilitary (rather than merely intelligence) missions in Russia or Belarus. Not coincidentally, those more similar operations were designed and overseen by a former Jedburgh, Major William Colby, who with "Team Bruce" had parachuted into France in late summer to organise resistance with the mission of protecting the southern flank of General George S. Patton's 3rd Army as it began its drive on the German border. Later, Colby reprised his role in Norway, where his Jedburgh team sabotaged rail lines to frustrate German efforts to retreat to the Reich.

In 1961, Colby was the Central Intelligence Agency's ("CIA") Saigon, Vietnam station chief, a position from which he oversaw a quickly expanding program of infiltration, intelligence collection, disinformation, and sabotage against North Vietnam. Given his direction, that the methods used closely resembled the tactics of the Jedburgh teams comes as no surprise. Colby found his authorisation in National Security Memorandum 52, which, among other American troop commitments to Vietnam, envisioned a dramatic expansion in the CIA's program of training agents for insertion behind enemy lines and directed the United States Army Special Forces ("Green Berets") and United States Navy SEALs to conduct agent training.<sup>42</sup>

Under the expanded program, the Green Berets and SEALs trained teams to pilot innocuous-looking "junk" boats to land agents, generally Vietnamese, in North Vietnam by water, and "Sea Commandos" to mount night-time hit-and-run coastal raids. More daring, Colby created from whole cloth clandestine squadrons of aircraft designated to drop agents into North Vietnam by parachute. He acquired a number of C-47 aircraft, which, painted black, would be used for night flights along with the borrowed "First Flight Detachment," a Taiwan-based, clandestine transport squadron of C-123 aircraft (the natural successors to the Royal Air Force's No. 138 (Special Duties) Squadron). Colby recruited pilots from the South Vietnam Air Force, and even tapped Nationalist Chinese pilots, whose own experience flying clandestine missions over similar terrain in mainland China for the secret Nationalist

42 For an excellent review of the "long-term agent" program during the Vietnam War, along with a number of other clandestine activities during that period, See Generally: Plaster, Major John, "SOG: The Secret Wars of America's Commandos in Vietnam," Simon and Schuster (2019).

Chinese 34th Squadron permitted them to train the new crews to conduct the night-time, treetop level missions required to penetrate the well-defended airspace of North Vietnam.

The first drops of the three to eight men teams began in spring of 1961. In that year, teams "Atlas, Castor, Dido, Echo, and Tarzan" were all either killed, captured and turned as "doubles," or, much to the embarrassment of the CIA, saw their members paraded out in public trails. By 1964, when, in the wake of the Bay of Pigs, the CIA was forced to turn the program over to the military, twenty two teams had been dropped and only four continued to report back on their missions. By 1968, 54 long-term behind-the-lines agent teams had been dropped in the Jedburgh tradition. A counter-intelligence review that year made it apparent that essentially every team, over 350 agents in total, had either been captured, killed, or was under North Vietnamese control. All that was left was to attempt to feed back disinformation to confuse the counter-intelligence apparatus of North Vietnam.

One historian called the complete collapse of the long-term agent insertion program in Vietnam "...the greatest U.S. wartime counter-intelligence failure of the past half-century..."<sup>43</sup>

The record will show that there were many causes for the debacle of the long-term agent program in Vietnam, including highly-effective efforts by Hanoi's Ministry of Security, infiltration of the South Vietnamese intelligence apparatus by North Vietnamese agents, excellent work by the Air Defence Corps of North Vietnam in identifying the radar profile of the clandestine flights so as to let the flights through, track them, and have counter-intelligence teams waiting to intercept incoming teams, and, certainly, the difficulty in training new agents "from scratch," a necessity for the program as occidental candidates with clandestine or commando experience may have been in good supply, but certainly could not be expected to act freely on the ground in North Vietnam.

Still, from our perspective, the experience highlights a more fundamental flaw: the long-term agent program in Vietnam attempted to reproduce the dramatic successes of the Jedburgh teams in World War II despite the fact that the preconditions that fostered those successes were simply not present.

Instead of a corps of experienced, military officers and non-commissioned officers who, in a pinch, could pass for a local behind-the-lines, the Vietnam program had to rely on recruits from a much smaller and less able pool, and from a military or civilian organisation that lacked the clandestine institutional expertise and traditions that were present in the United States and the United Kingdom in 1943-1944. This deficiency had the effect both of limiting the scope of operations, and necessarily limiting sabotage missions to annoying pinpricks at best, rather than any material disruption in supply or transportation logistics (e.g.: cutting rail lines for material flowing into South Vietnam).

Conditions on the ground in North Vietnam could not have been more different than those in France from 1943-1944. No willing, or even deferential, population of locals would be waiting to receive South Vietnamese agents on the ground. Quite the contrary, such was the social control and anti-Western sentiment in North Vietnam that landing agents faced an almost universally hostile environment.

Neither was there a corpus of thousands or tens of thousands of resistance fighters, networks essential to provide support, shelter, protection, intelligence, and evasion and escape resources, on the ground in North Vietnam for South Vietnamese agents to organise or integrate with.

Because the CIA's command of the air was far more limited than the Allies in 1944, supplying in-place teams was risky. Many of the resupply missions that were mounted resulted in the capture of the material and equipment (particularly damaging, radio gear, codes,

43 Plaster, Major John, "SOG: The Secret Wars of America's Commandos in Vietnam," Simon and Schuster (2019).



and communications protocols) permitting the North Vietnamese counter-intelligence apparatus to learn a great deal about the tactics and methods being used.

Finally, there is the question of the immense resource and asset expenditure that the program required: the essentially non-stop operation of a pair of clandestine aircraft squadrons, training efforts by the SEALs and Green Berets, the diversion of the most promising South Vietnamese candidates into the agent program, and, most critically, the utilisation of existing intelligence (rather than paramilitary) assets in North Vietnam to support the long-term agent missions (support that certainly exposed otherwise secure behind-the-lines assets as they attempted to interact with the captured and turned agent teams).

Unfortunately, we see many parallels between the failed long-term agent program in Vietnam, and Western efforts to mount clandestine operations in Russia and Belarus. Because of the environment on the ground, agents expecting to operate in Russia or Belarus will need to be drawn from native Russian or Ukrainian candidates, a small pool to begin with. Unless a great secret has been kept for many years, there is no mass of potential resistance fighters or fifth columnists in Russia and Belarus waiting to receive agents from the West with open arms and willing to be organised into an irregular fighting force. Quite the contrary, for all appearances, the Russian population overwhelmingly supports President Putin, and with respect to conflict with the West, appears even more hawkish than he has heretofore demonstrated. Certainly, the West is in no position to insert agents or material into Russia or Belarus by air. Finally, it is difficult to ignore the risk to traditional intelligence assets created by co-opting them to support agents with paramilitary missions, missions that necessarily bear a much higher risk of discovery and capture, risks which will, by association, be shared by the traditional assets.

Unfortunately, it seems clear that the Western efforts are poised to make all the same mistakes that doomed the Vietnam long-term agent program. The effort "...involves long standing sleeper cells that the allied spy service has activated to hinder Moscow's invasion of Ukraine by waging a secret war behind Russian lines,"<sup>44</sup> and "other European intelligence services have activated long-dormant resistance networks in their own countries, who in turn have been running operatives into Russia to create chaos"<sup>45</sup> "...using caches of explosives and gear [emplaced] more than a decade previously."<sup>46</sup> The effort apparently entails sabotage missions as "...railway bridges, fuel depots and power plants in Russia have all been damaged in unexplained incidents since the Kremlin launched its full-scale invasion of Ukraine in February."<sup>47</sup>

In addition to the risks to the assets, and the difficulty in imagining that the described efforts could be conducted at any sort of scale required to have a material impact on Russian war-fighting capabilities, there is the very real risk of reprisals. Given the comparative ease with which Western nations are subject to infiltration, and the highly vulnerable industrial and civilian infrastructure in Europe and the United States, one is forced to wonder if anyone has bothered to conduct a proper risk-reward analysis against a scenario where Russia decides to mount similar operations. Against this possibility, it seems difficult to us to justify operations merely because they "...let Russia's leaders know that they can be hit in their backyard,"<sup>48</sup> a tactic that, after more than half a year, seems to have had little if any impact on Russian decision-making.

We are rather of the opinion shared by former CIA officer Douglas London: "Though their military value can be debated, such acts

44 Murphy, Jack "The CIA is Using a European NATO Ally's Spy Service to Conduct a Covert Sabotage Campaign Inside Russia Under the Agency's Direction, According to Former U.S. Intelligence and Military Officials," (December 24, 2022).

45 Ibid.

46 Ibid.

47 Ibid.

48 Ibid.

might play to Putin's greatest concerns and have outsized impact on his escalatory calculus."<sup>49</sup> Unfortunately, we suspect our analysis of Mr. Putin's "escalatory calculus" differs materially from Mr. London's.

Regretfully, it seems apparent that decision-makers in the Western intelligence agencies have not, even 80 years later, been able to transcend the origin myths stemming from their successes in World War II. We hope, but doubt, that the result will not be damaging, if not catastrophic. Either way, it is difficult, if not impossible, to construct a realistic scenario in which the heirs to the OSS, SOE, and Operation Gladio do not emerge from the present conflict as distinct losers.

### *Loser: Space- and Air-based Intelligence Platforms*

One of the daunting spectres that must, ghostlike, inevitably appear to haunt the planning of any adversary considering military operations against the United States or one of her allies, is the prospect of facing the platform of space-based intelligence capabilities fielded by, among other entities, the United States' National Reconnaissance Office ("NRO"). And daunting it is, the prospect of being constantly under the eyes and ears of pervasive, omniscient, global surveillance infrastructure composed of KH-11 "Keyhole" satellites providing image intelligence with resolutions measured in inches, Synthetic-Aperture Radar birds to penetrate cloud cover and provide radar imaging intelligence down to the level of vehicle and troop movements, infrared collection sensors providing early warning of even small missile and rocket launch "blooms," or geostationary "Orion" signals intelligence platforms capable of collecting every cellphone call or portable radio transmission across entire countries.

As a reputation, these capabilities are perhaps well-earned. The United States has a long history of aggressive development of aerial and space-based image and other intelligence collection. Case in point: her commitment to the U2 "Dragon Lady" reconnaissance aircraft and its ability to violate Russian airspace with high-altitude impunity so vexed the Soviet Union in the 1960s that it purpose-designed the V-750VN missile for the S-75 Dvina SAM system to reach the 70,000+ foot altitudes required to deal with the intruding aircraft. It was a development that set up an escalating conflict between aircraft and MBAD systems that arguably served as the launching point that transformed Russia into the global leader in integrated air defence system development and deployment today and, in parallel, launched the United States into space-borne efforts to counter the threat to her reconnaissance aircraft.

And yet, in the months since April of 2022, in the Ukrainian theatre, one sees little sign of the overwhelming strategic and tactical advantages that the West's pervasive space-based intelligence platform with high-resolution and real-time image, radar, and signals intelligence, augmented by various airborne collection systems, should be providing.

Certainly, it is not for want of trying. There are hints and more than hints that the West has provided and continues to provide Ukraine with a rich flow of intelligence, particularly targeting and related tactical information:

Throughout the war, the United States has provided Ukraine with information on command posts, ammunition depots and other key nodes in the Russian military lines. Such real-time intelligence has allowed the Ukrainians — who U.S. officials acknowledge have played the decisive role in planning and execution — to target Russian forces, kill senior generals and force ammunition supplies to be moved farther from the Russian

<sup>49</sup> Ibid.

frontlines.<sup>50</sup>

In November of 2022, a set of documents emerged, purportedly hacked from NATO or Ukrainian systems, dated June of 2022 and that featured long lists of target descriptions and precise locations.

Memo A4154		SECRET//REL TO UKR	<input type="checkbox"/> THREAT <input checked="" type="checkbox"/> IMMEDIATE <input type="checkbox"/> PRIORITY <input type="checkbox"/> ROUTINE
<small>THIS INFORMATION IS PROVIDED ONLY FOR INTELLIGENCE PURPOSES IN AN EFFORT TO DEVELOP POTENTIAL INVESTIGATIVE LEADS. IT CANNOT BE USED IN CONNECTION WITH ANY FOREIGN OR DOMESTIC COURT PROCEEDINGS OR FOR ANY OTHER LEGAL, JUDICIAL, OR ADMINISTRATIVE PURPOSES.</small>			
EW Jammer Locations – 10 June 1300Z – 1600Z			
-----Kharkiv's Ka-----			
<b>Dovhenke (49.01900, 37.32193)</b>			
(S//REL TO USA, CAN, GBR, UKR) A Russian Borisoglebsk-2 Jammer was located near 49.01524, 37.33028, as of 10 June 2022 at 1515Z. (Previously Reported)			
<b>Sukha Kamianka (49.08955, 37.34573)</b>			
(S//REL TO USA, CAN, GBR, UKR) A Russian Zhitel Jammer was located near 49.07692, 37.31965, as of 10 June 2022 at 1445Z. (Previously Reported)			
-----Donets' Ka-----			
<b>Terny (49.09470, 37.96243)</b>			
(S//REL TO USA, CAN, GBR, UKR) A Russian Borisoglebsk-2 Jammer was located near 49.08391, 37.95985, as of 10 June 2022 at 1445Z.			
<b>Kolodiaz (49.08313, 37.88127)</b>			
(S//REL TO USA, CAN, GBR, UKR) A Russian Zhitel Jammer was located near 49.10053, 37.90130, as of 10 June 2022 at 1515Z.			
-----Luhans' Ka-----			
<b>Kadiivka (48.56477, 38.64570)</b>			
(S//REL TO USA, CAN, GBR, UKR) A Russian Jammer was located near 48.55643, 38.64244, as of 10 June 2022 at 1530Z. (Previously Reported)			
-----Kherson's Ka-----			
<b>Velyka Oleksandrivka (47.31919, 33.29731)</b>			
(S//REL TO USA, CAN, GBR, UKR) A Russian Borisoglebsk-2 Jammer was located near 47.31437, 33.28556, as of 10 June 2022 at 1530Z. (Previously Reported)			
<b>Biliaivka (47.32346, 33.70020)</b>			
(S//REL TO USA, CAN, GBR, UKR) A Russian Jammer was located near 47.32785, 33.69820, as of 10 June 2022 at 1430Z. (Previously Reported)			

*Figure VIII: A Document Purporting to be NATO Targeting Intelligence Addressed to the Armed Forces of Ukraine*

Hinting that such documents were authentic, a number of successes, particularly in the early phase of the conflict, strongly suggested the Armed Forces of Ukraine were in possession of good tactical intelligence, evidenced as Russian supply depots or ammo dumps behind the lines fell prey to accurate HIMARS fire or other strikes.

However, these successes, which have been universally, loudly, even exaggeratedly touted by Ukrainian sources as they occurred, have become fewer and further between. A 2023 New Year's day strike on assembled Russian troops in Makiivka that killed at least 89 (or 400 according to Ukrainian sources) and wounded many more<sup>51</sup> has been amplified to such an astounding degree that the reverberations only serve to highlight what unusual news such small victories have become for a Ukraine that now struggles to find good tidings to highlight.

Descriptions vary, but it appears that, in the New Year's Day attack, between 4 and 8 HIMARS rockets (with some suggestion that

<sup>50</sup> Barnes, Julian E., Cooper, Helene, "Ukrainian Officials Drew on U.S. Intelligence to Plan Counteroffensive: Overcoming a reluctance to share their strategy, the Ukrainians were able to use U.S. resources to identify key Russian targets," *The New York Times* (September 10, 2022).

<sup>51</sup> Ebel, Francesca, "Dozens of Russian soldiers killed in massive Donetsk missile strike," *The Washington Post* (January 2, 2023).

some but not all the rockets were shot down by Russian air defence assets) targeted a vocational school where a company-sized contingent of Russian troops was barracked in close proximity to or just above an ammunition dump. The assembly was quite contrary to typical Russian practice, learned the hard way in February and March of 2022, to disperse troops and supply depots to avoid such occurrences. Speculation immediately followed that the unusually precise strike was enabled by signals intelligence efforts triangulating a collection of troop smart phones.

Though the strike made for excellent headlines, a buried lede in a Washington Post article calling the attack "one of the deadliest attacks on Russian forces since the start of the invasion" might lead the cautious analyst to explore a particular contradiction: combined with airborne or other ground-surveillance assets, this sort of signals "traffic analysis" is a classic component of developing tactical and targeting intelligence, an analysis effort that maps networks between signal or movement profiles to identify collection points (fuel and ammo depots, resupply hubs, refitting and repair facilities, troop concentrations). These processes are the "bread-and-butter" of NATO and, particularly, American tactical intelligence generation efforts, raising the question: why do they not seem to have been exploited to better effect?

As in other spheres of martial dominance, the United States proved the utility of its tactical intelligence gathering apparatus by using it to remarkable effect in 1991 and 2003. Supplemented by airborne ground surveillance radar systems much better able than satellite to provide detailed real-time tactical intelligence, like the E-8A Joint Surveillance and Target Attack Radar System ("JSTARS") (Which one General called "...the single most valuable intelligence and targeting collection system in Desert Storm.")<sup>52</sup> real-time targeting information provided eager coalition pilots with a steady diet of Iraqi armour and troop concentrations to attack. In addition, MLRS systems using precision guided GPS rockets famously savaged Iraqi units, in particular the elite Republican Guard, in preparation for the coming ground offensive.

The historically-minded military analyst could be forgiven for expecting scenes of Russian occupiers in eastern Ukraine withering under salvo after salvo of accurate fire, unable to escape from the ever-present "eye in the sky" and unable to rely on steady resupply as depots and convoys coming into Ukraine from Russia find themselves exposed and attacked at every turn. But such analysis commits the same error that has driven so many reversals of expectations of western dominance in the present conflict: it is not 1991 or 2003, and the Ukrainian theatre of battle is not Eastern Arabia.

In both Gulf Wars, coalition forces enjoyed pervasive air superiority, permitting their expensive and vulnerable airborne reconnaissance and command platforms essentially free-reign over the skies of Kuwait and, later, Iraq. A substantial effort to reduce GBAD platforms, and the threat of near instant targeting of any air defence battery bold enough to launch on coalition aircraft (to not mention plain old eyeball surveillance from coalition close air support assets), permitted these platforms to approach quite closely to concentrations of Iraqi forces. With operating ranges of about 250km in the case of JSTARS, this permitted coalition forces to collect real-time intelligence on the locations, dispositions, and movements of Iraqi forces.

By contrast, in the Ukrainian theatre, NATO's airborne assets have contented themselves, quite wisely in all likelihood, with loitering over Poland near the Ukrainian and Belarus borders or, further north, just inside Lithuanian or Latvian airspace, more than 800km from the Dnieper river. In fact, it seems clear that no NATO fixed-winged aircraft have entered Ukrainian airspace since the beginning of the conflict. As a result, a key source of the sort

<sup>52</sup> Tagg, Lori, "JSTARS plays critical role in Operation Desert Storm", United States Army (January 16, 2015).

of real-time targeting info required to mount precision attacks on potentially mobile targets has been removed from the equation.

As a rule, signals intelligence generally provides much greater range, as passive sensing does not require the energy emission, reflection, and return path that active collections do. And, it is routine to see United States Army operated Beechcraft RC-12 "Guardrail" SIGINT platforms running direction-finding spokes from patterns over Lithuania and Poland, but such signals intelligence provides less information about the nature of targets it pinpoints, and is highly susceptible to spoofing besides (it is much easier to create spurious radio signals to simulate a headquarters unit than it is to create false radar returns with the same effect). And, even though the propagation of radio signals permits detection and triangulation at much further ranges, 800km is still a stretch for platforms operating in Poland and Lithuania.

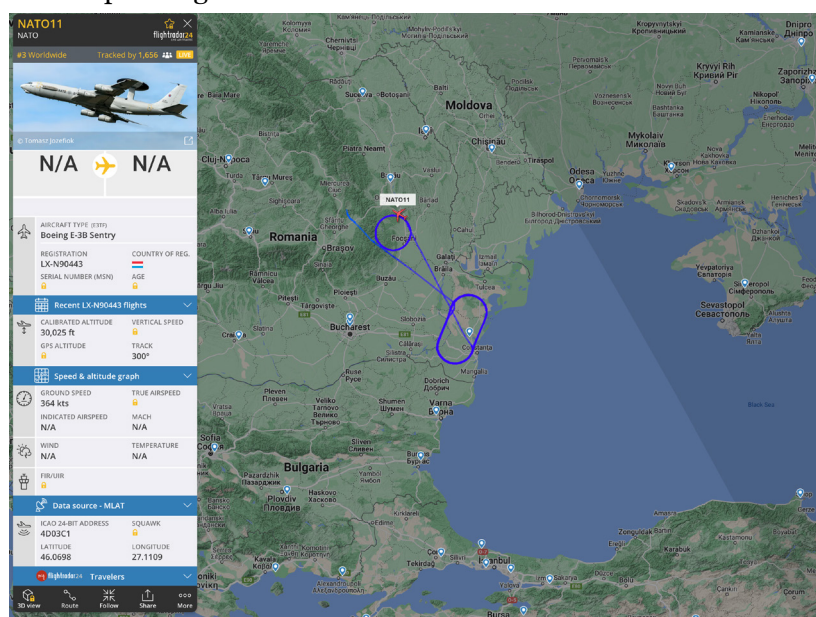


Figure IX: A NATO E-3B Sentry Airborne Warning and Control System ("AWACS") Aircraft in Racetrack Patterns over Romania (January 2023)

Putting aside for a moment these challenges, a more fundamental constraint would appear to be at work against the Armed Forces of Ukraine. Assuming for the moment that solid, real-time, actionable target intelligence is being provided to units near the front-line (i.e. within conventional and rocket artillery range), executing a precision attack in a timely fashion is not a trivial exercise. In the Gulf Wars, coalition forces had the benefit of near-constant close air support assets loitering nearby and ready to be called to deliver ordnance to targets within fifteen minutes or less. The Armed Forces of Ukraine have no such resource in theatre. They must instead rely on other indirect fire platforms, principally conventional and rocket artillery.

Coalition forces in the Gulf War also utilised conventional and rocket artillery to attack targets provided to them by surveillance platforms, but those units, particularly the MRLS systems, operated essentially without fear of counter-battery attacks, both because the Iraqi forces lacked counter-battery radar or other targeting systems, and because coalition air power had so reduced Iraqi indirect fire capabilities owing to its own exceptional counter-battery targeting, that the Iraqi forces had few indirect fire options available to them.

The Armed Forces of the Ukraine, on the other hand, face an adversary with significant counter-battery capabilities. Helped by the novel use of small and difficult to defeat drones, and good counter-battery radar systems, the Russians have proved quite successful at reducing Ukrainian artillery capabilities and, by some

estimates, now enjoy 5:1 or even 10:1 superiority when it comes to daily indirect fire missions. Given the critical difficulties supplying Ukraine with 155mm, 152mm, or 122mm artillery ammunition, we only expect this ratio to worsen for Ukraine. To wit:

The difference in numbers between Russian and Ukrainian artillery was not as significant at the beginning of the conflict, with just over a 2:1 advantage: 2,433 barrel artillery systems against 1,176; and 3,547 multiple-launch rocket systems against 1,680. [...]

The UAF had ammunition to support these systems in high-intensity warfighting for just over six weeks. Ammunition had been depleted by regular explosions at Ukrainian arsenals as a result of Russian sabotage. From 2014 to 2018, there were six such explosions, which destroyed more than 210,000 tonnes of ammunition, a large part of which were 152-mm shells and rockets for MLRS. For comparison, during the five years of the war in Donbas, the UAF spent about 70,000 tons of ammunition in total.

[...]

Ukraine maintained artillery parity for the first month and a half and then began to run low on munitions so that, by June, the AFRF had a 10:1 advantage in volume of fire. Evidently, no country in NATO, other than the US, has sufficient initial weapons stocks for warfighting or the industrial capacity to sustain large-scale operations.<sup>53</sup>

Under the circumstances, it is difficult to see sophisticated Western intelligence collection platforms, which appear to be highly dependent for their efficacy on pervasive air superiority in their area of operations to enable close air support missions, protect indirect fire assets from counter-battery attack, and allow airborne intelligence craft to close with the enemy, as anything other than a net loser in this conflict.

*Loser: The United States Defence Industry (Provider of Wunderwaffen to the West)*

It is a recurring theme in this edition of our research letter that many aspects and components of Western (and, in particular, American) military hegemony depend on perceptions of capabilities that were evident and proven in conflicts like the Gulf War, or global counter-terrorist and counter-insurgency operations. Leaving aside the fact that the militaries of the West have found themselves in substantially reduced circumstances since 1991 (and 2003), the corollary to the original theme is that, contrary to expectations, the conflict in Ukraine presents altogether different environments. The result is a set of circumstances that are proving rather hostile to the once unquestionable image of Western indomitability. Still surprising to us, however, is the degree to which individual Western weapons systems have also proven dependent on operational environments characterised by a set of conditions most favourable to NATO's militaries.

In fact, and despite receiving top billing as the next Wunderwaffen de jour for the Armed Forces of Ukraine, a number of Western systems and platforms have delivered only a fraction of their advertised effectiveness, or proved more useful to Ukraine overall when sold on the black market for hard cash. As an aside, given the pervasive and hyperventilated excitement the announcement of each new miracle weapon grant has received in the media, it is difficult for the observant analyst not to suspect some level of informational coordination might be at work.

To some extent, performance disappointments in lethal platforms are to be expected. After all, while Western weapons systems are necessarily purpose-built and highly mission specific, they face multi-year (or decades) long development cycles. It is not remotely unusual for the mission they were designed to address to be obso-

<sup>53</sup> Zabrodskyi, Mykhaylo, et. al., "Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022", The Royal United Services Institute for Defence and Security Studies (November 30, 2022).



lete or obviated by the time such systems are pressed into service.

Additionally, in delivering these systems and, in fact, all war material, to Ukraine piecemeal, either because of the fractious political process of U.S. and NATO in obtaining the required approvals, the critical mass of hardware required to make an impact is never reached, and Russian forces have had the opportunity to pick off small collections of the latest "game-changer" system before any sort of combined-arms force could be assembled around them.

Nevertheless, we cannot help but react with dismay to an alarming reality that has emerged in the course of our research: so many systems and the manner in which they were designed to be deployed are highly-dependent on the presumption that the force utilising them will concurrently enjoy Western (read: American) standards of pervasive air superiority on the battlefield and all the ancillary benefits that entails. Combined with the repeated media blitzes of gushing praise, it is almost inevitable that many of these systems will disappoint the stratospheric expectations that have been laid upon them.

*Loser: The M777 155mm Artillery System*

From 1978 until the summer of 2000, the M198 155mm towed howitzer was stocked in large numbers by the United States Army and the United States Marine Corps. Among other missions, the M198 served as the one of the main field artillery support pieces for the both organisations and, as it weighed in at 7'300kg, was just light enough for airborne or air assault units to drop the units in from CH-53E Super Stallion or CH-47 Chinook helicopters.<sup>54</sup>



*Figure X: M198 155m Mobile Howitzer in Action*

The "Ultralight Field Howitzer" concept, originally a British project, was transformed into the "M777" and adopted as a replacement for the M198. Tipping the scales at only 4'200kg owing to the prevalent use of titanium in its construction, the M777 fit the high mobility and expeditionary force logistics profile the United States was looking to fill, making the unit even more practical for even light and highly-mobile airborne forces.<sup>55</sup> As is typical of the general tendency in the defence industries of the United States and her allies, one of the primary trade-offs was cost. Compared to a 2017 adjusted cost of about USD 500'000 for a M198 piece, the M777 price tag runs up to USD 4'000'000 per unit, even with orders in size. The second rather more unfortunate trade-off was durability.

In practice, the M777 has turned out to be exactly the warehouse queen one always worried it might be. The lightweight emphasis makes the unit easy to Chinook in, throw a couple hundred rounds onto targets, and then Chinook out, or to emplace at a long-term

<sup>54</sup> See Generally: Foss, Christopher F., "Jane's Pocket Book of Towed Artillery", Collier Books (1979).

<sup>55</sup> See Generally: "Jane's International Defense Review," Volume 22, Issue 11 (November, 1989).

base not subject to accurate counter-battery fire, where a dedicated maintenance team can service the weapon regularly. However, during even moderate use, the pieces tend to leak hydraulic fluid<sup>56</sup> and require regular fluid and lubricant replacement and servicing as they depend heavily on such construction to make up for the increased recoil characteristics of such a lightweight artillery piece.



Figure XI: An M777 Field Howitzer being airlifted by a CH-74 Chinook Helicopter

In the Ukraine, the units have quickly begun to show extended barrel wear, impacting accuracy and reducing the weapon's tolerance for the differences between 155mm shells produced by different NATO countries and the differing standards of their respective arms manufacturers. Frequent breakdowns require evacuation, an effort that becomes problematic quickly in the absence of protective air superiority to airlift the pieces, or rail infrastructure to ship them behind the lines and to Polish repair and maintenance sites. Matters are exacerbated when the M777 is operated and serviced by crews with limited maintenance training or rear echelon facilities.

Finally, perhaps owing to the potential for titanium construction to become brittle, the weapon has also proved remarkably fragile, and smaller warheads (e.g. the 3kg warheads on the first generation Lancet-3 drones) that would not destroy heavier arty pieces without direct hits on critical components can put a M777 tube out of action with less direct impacts.

Still touted as one of the U.S. "Wunderwaffen" destined to turn the tide in favour of Ukraine<sup>57</sup> in reality, the M777 has provided vulnerable and unreliable in an combat environment of extended duration and without the support of pervasive air superiority and defensible transport logistics to take advantage of its increase mobility and cater to its burdensome supply-logistics profile.

#### *Loser: Various MLRS / HIMARS Rocket Artillery Systems*

Following the pattern of supposed "Wunderwaffen" destined to deliver a quick victory, and with much fanfare, a number of self-propelled Multiple Launch Rocket Systems ("MLRS") were delivered to the Armed Forces of Ukraine by Western governments to supplement units the AFU had in stock before February of 2022. Analysts were quick to note that not any MLRS systems would do, but what was rather required were advanced High Mobility Artillery Rocket Systems ("HIMARS") platforms such as the M142 and

<sup>56</sup> From the M777 maintenance certification test: "True or False: Leaking fluids could contaminate the ground and cause environmental damage." (True)

<sup>57</sup> See e.g.: Miller, Michael E. and Galouchka, Anastacia, "Speeding up our victory: Howitzers aid Ukraine's push on southern front", The Washington Post (November 10, 2022).



M270 MLRS platforms and the German MARS II.<sup>58</sup>

The M270 was primarily designed for deployment to western Europe to provide mobile rocket artillery support for conventional forces tasked with repelling a Soviet conventional assault. In order to reduce the risk of counter-battery fire, the design mandate was intended to permit "shoot-and-scoot" tactics, i.e.: deploying, firing, and then displacing quickly to avoid counter-battery casualties. To meet these mobility requirements without budget-busting development expenses, the M270 was designed essentially as a converted Bradley Fighting Vehicle, expected to be pre-positioned or transported by rail to a theatre of operations along with main battle tanks, infantry fighting vehicles, and other heavy mechanised equipment.<sup>59</sup>



*Figure XII: A HIMARS 122mm Rocket Launch  
(Photo: Cpl Patrick King, USMC)*

The M142 was developed as a lightweight alternative to the M270 intended to permit more rapid deployment (they are small and light enough to be loaded into C-130 Hercules transports) to meet the increasingly expeditionary missions expected of the United States Armed Forces.<sup>60</sup>

Both systems fire a variety of 227mm rocket flavours.

Despite the "shoot and scoot" capability of the M142 and M270 MLRS systems, they have proved very susceptible to Russian counter-battery tactics in the war in Ukraine. Their very distinctive visual signature when firing (booster stage flares and a long exhaust trail pointing back to the launch point) exposes operational systems to airborne optical or thermal reconnaissance systems even at extended distances, limiting their survivability in environments where the deploying force does not enjoy pervasive air-superiority or is losing the reconnaissance battle in theatre.

Shoot-and-scoot tactics are primarily designed to frustrate stand-off counter-battery targeting systems, like counter-battery radar. Once artillery trajectories are calculated back to their origin, the counter-battery challenge is to put rounds on that target before the firing unit can evacuate. If executed quickly enough, a major emphasis in the training of HIMARS crews, the "scoot" portion of the exercise is effective in spoil the initial fix even if the HIMARS platform only displaces a few hundred metres. Unfortunately, this tactic becomes insufficient to protect firing pieces when a counter-battery radar fix can be quickly followed up with visual aerial surveys of the immediate area to locate the mobile launchers after

<sup>58</sup> See e.g.: Blank, Stephen, "Ukraine: Peace Through Victory", Center for European Policy Analysis (July 28, 2022) and Tiwari, Sakshi "Ukraine Gets MARS On Top Of HIMARS; Kyiv's Campaign Bolstered By German MLRS As Russia 'Breathes Heavy'", The Eurasian Times (January 4, 2023).

<sup>59</sup> On the M270 See Generally: Hunnicutt, R. P. "Bradley: A History of American Fighting and Support Vehicles", Echo Point Books and Media (2015).

<sup>60</sup> M270 systems proved difficult to transport effectively during the Gulf War. See: Dastrup, Boyd L. (2005). Operation Desert Storm and Beyond: Modernizing the Field Artillery in the 1990s. Fort Sill, Oklahoma: Command Historian's Office, United States Field Artillery Center and School.

they evacuate the firing datum. With the characteristically flat terrain and dirt roads in theatre, Russian drones deployed to positional fixes have had marked success following the tire and track trails left by evacuating launchers and tracking them to their hiding places where they can be attacked by artillery or kamikaze drones.

Further, and despite the constant, real-time SIGINT, COMINT, and IMINT support from the United Kingdom and the United States, the Armed Forces of Ukraine have had difficulty employing such MLRS systems as survive to hit logistics, supply, or troop concentration targets behind Russian lines (the purported purpose of MLRS systems). After some early Ukrainian successes, the Russian forces in theatre appear to have had more success with dispersal of key targets, and reducing their visibility.<sup>61</sup> Puzzlingly, in response the Armed Forces of Ukraine have increasingly focused their HIMARS attacks on hard targets (e.g. the reinforced concrete of the Antonovsky bridge) where even the warheads of 227mm rockets lack the explosive punch to do material damage, and civilian targets (i.e. Donetsk, perhaps explaining better the refusal of the United States thus far to provide the AFU with longer range missiles for their HIMARS systems).

In the interim, GMLRS rockets have proven particularly susceptible to Russian GPS jamming, and all rocket artillery (particularly the larger 227mm rockets) are surprisingly vulnerable to Russian anti-air / missile defence systems, which have amassed an impressive (but certainly not perfect) record of incoming MLRS shoot-downs.

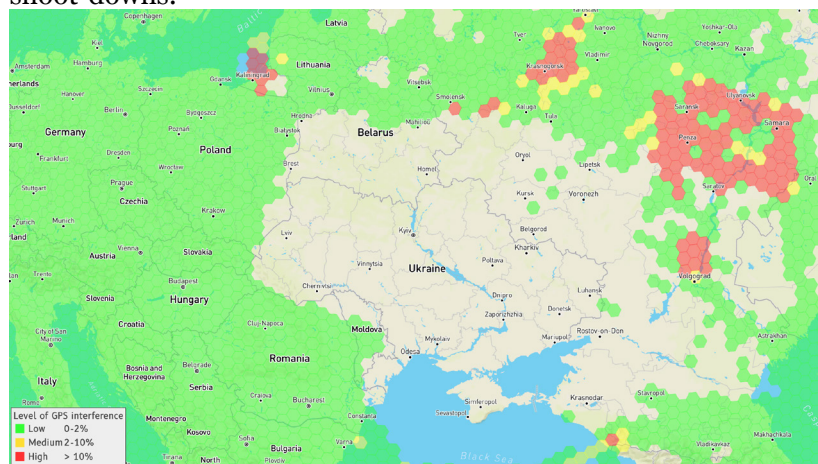


Figure XIII: Map of Russian GPS Jamming Activity (January 2023)

Finally, the 227mm rocket ammunition for the systems is in short supply. As of 2021 only 50'000 GMLRS rockets had been produced in total, and such stocks of the more conventional 227mm reloads the West is willing to expend for Ukraine appear to have been depleted almost entirely.

Contrary to their initial billings, the cold combat environment in the Ukraine theatre of battle has proved unforgiving to these systems and highlighted again the difficulties presented by fielding expensive Western systems designed and dependent on air superiority and logistics for their survivability, effectiveness, and durability.

#### *Loser: FMG-148 Javelin Man Portable Anti Tank Missile*

Like many weapons in the NATO arsenal that have found new proving grounds in the Ukraine theatre, the Javelin man-portable anti-tank missile was designed in the 1980s to be deployed in western Europe against Soviet mechanised forces and give small, light infantry teams a close-quarters force multiplier against even main battle tanks.

The much touted fire-and-forget missile that, with a literally religious fervor, was expected to toll the death knell of heavy armour formations and deliver victory to the Armed Forces of Ukraine<sup>62</sup>

<sup>61</sup> See our analysis of Western intelligence platforms *supra*.

<sup>62</sup> Walsh, David, "St. Javelin and the missile that has become a symbol of Ukrainian resistance", Euronews Next (March 1, 2022).

has, after some initial successes, proved a disappointment to proponents of its potential to transform conventional warfare away from the main battle tank.

The initial stock of 5'000 Javelins followed by an additional 2'000 were sent to the Armed Forces of the Ukraine without training or instruction pamphlets and, in the traditional American defence industry practice, the system is highly complex. Its thermal sighting system uses high-pressure argon gas as a coolant, making it sensitive to transport in combat conditions, and mandating that it be thermally calibrated before use. Batteries for the units last only four hours on standby with a full charge, less once the unit is activated and the targeting system used. A powerless Javelin is converted into a highly-effective door-stop until new batteries can be located, reportedly prompting some Ukrainians to rig car batteries to try and bridge the gap (resulting in a number of bricked systems).



*Figure XIV: Members of the 101st Airborne Division Train with the FMG-148 Javelin Anti-Tank Missile*

To deal with the complexity issues, an emergency contingent of 200 U.S. National Guard were rushed to Ukraine to address training deficiencies, but the hurried one-day course (compared to a five-day basic sequence for U.S. Army soldiers) appears to have been insufficient.<sup>63</sup>

At 22kg, the unit is also unwieldy and difficult to transport for the Ukrainian light-infantry units that it is deployed to. These were concerns that, when the system was originally designed, were less relevant to the units of airborne, air assault, and recon troops that were expected to enjoy robust supply logistics and carry the weapon into combat aboard helicopters or light vehicles.

The Javelin sports an 8.5kg tandem HEAT warhead designed to defeat reactive armour and which can execute a top-attack profile on vehicles. The Armed Forces of Ukraine seemed to use the weapons to good effect early in the conflict. At the time, the Russians had obviously forgotten the hazards of operating armour in the midst of dismounted enemy troops without a friendly, dismounted infantry screen (particularly in urban areas). In the meantime, they appear to have learned to exercise more caution in their mechanised tactics, and taken some of the edge away from attempts to snipe at Russian vehicles with Javelins.

Since February, the Javelin's performance against T-72 and T-80 main battle tanks has gotten mixed reviews. There have been some suggestions that Russian forces have developed counter-measures against the weapon, apparently related to confusing its thermal seeker in "fire and forget" mode, but these are difficult to confirm in practice.

With the benefit of hindsight and later analysis, it has emerged that, despite having evolved into a darling of the press, man-portable anti-tank systems contributed substantially less to Russian armour losses than is publicly claimed. To wit:

<sup>63</sup> Horton, Alex, "For Ukrainian troops, a need arises: Javelin customer service", The Washington Post (June 14, 2022).



The heavy emphasis in international commentary on anti-tank guided weapons (ATGWs) and especially those provided through military-technical assistance, means that it is vital to appreciate the volume of these capabilities and how they were distributed across the [Armed Forces of Ukraine] to properly contextualise their impact on the fighting. At the beginning of February 2022, the armed forces received about 150 Javelin ATGW launchers with 1,000–1,200 missiles, 2,000 NLAW, as well as a large number of rocket-propelled anti-tank grenade launchers. Since Ukraine's partners at that time were persuaded that, in the most optimistic scenarios, hostilities would be centred on street battles in the largest cities, the anti-tank weapons transferred were intended for close combat.

[...]

The tactical employment of ATGWs by the [AFU] prior to the conflict was largely aimed at fixing or blunting enemy armoured manoeuvre and for use in raiding by light forces because of the speed with which units with these systems could displace. There were too few missiles, however, for these to be the primary means of attriting enemy forces.

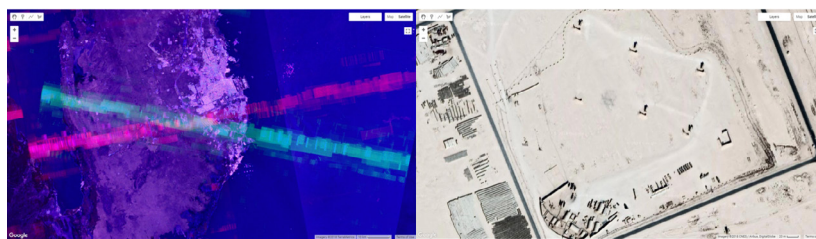
[...]

Despite the prominence of anti-tank guided weapons in the public narrative, Ukraine blunted Russia's attempt to seize Kyiv using massed fires from two artillery brigades.<sup>64</sup>

As with other complex, Western systems, supply is an extreme issue. In the spring of 2022, reports had the Armed Forces of Ukraine using as many as 500 of the units per day, though even for the highest Ukrainian estimates of Russian armour losses and assuming all of those could be attributed to Javelins alone, this would not bode well for the weapon's success ratio. Even so, this would represent a significant burn rate against an initial inventory of 7'000. The unit's manufacturer, Lockheed Martin, is struggling to increase production to 4'000 units per year. In the meantime, perhaps most telling, enthusiastic discussions of the Javelin's battlefield utility appear to have all but vanished, even as Russian main battle tanks continue to participate in active front-line combat.

*Loser: The MIM-104 Patriot SAM System*

Recently described as essential to the Ukrainian war effort, R claims that the U.S. air-defence system would turn the tide against Russian stand-off attack weapons have instead served only to refocus attention the platform's deep flaws, particularly in the anti-missile defence role.



Patriot battery located at Al-Udeid base in Qatar. (via Harel Dan)  
Left: X revealed by SAR noise. Right: Zoomed image of same location without SAR overlay.

Figure XV: Harel, Dan, X Marks The Spot: Identifying MIM-104 Patriot Batteries From Sentinel-1 SAR Multi-temporal Imagery (October 22, 2018)

The Patriot is generally remembered in the Western public eye as the system that defeated repeated SS-1 ("SCUD") ballistic missile attacks during the Gulf War. Later, soberer and more detailed investigation seemed to show that of the 47 scud attacks engaged by Patriot systems during the conflict, only two were "intercepted". It is perhaps telling that Israel, perhaps the primary beneficiary of

<sup>64</sup> Zabrodskyi, Mykhaylo, et. al., "Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022", The Royal United Services Institute for Defence and Security Studies (November 30, 2022).

the Patriot during the Gulf War period, went on to quietly develop its own, highly-effective Iron Dome system rather than continue relying on the Patriot. Likewise, after a slew of failed tests and successful strikes from Houthi rebels on oil facilities, Saudi Arabia turned to the Iron Dome and Russian S-400 systems to replace the Patriot.<sup>65</sup>

At a cost of USD 1 billion per battery, and USD 3-4 million per missile, the system is highly inefficient (in some cases one or two orders of magnitude more expensive on a munition v. munition basis) as a defence against Russian stand-off weapons. The system is also immobile once emplaced, and its phased array radar is so "splashy" in its operating bandwidth (5.250-5.850 GHz) that even commercial C-band satellites (e.g. the Sentinel-1 whose data is open to the general public) can pinpoint the system.

This makes a Patriot emplacement highly vulnerable to Russian SIGINT targeting, and attack by stand-off weaponry. Ironically, this suggests that, in certain environments, the "best-of-breed" U.S. air defence system relies on friendly air-superiority to survive in combat theatres.

Current plans call for the delivery of a single Patriot system to Ukraine from the United States, and perhaps a second from Germany, but a far more substantial group of the systems would be required to protect against even a small fraction of the stand-off weapons Russia has been using to great effect over the last two months. This raises the question: what would be the purpose of deploying a pair of systems, particularly a pair that would be located by Russian forces more or less immediately, and could almost certainly be destroyed by theatre ballistic missile or a wave attack of suicide drones? At over USD 1 billion plus the cost of a battery of missiles, each installation would be a very tempting target.

While debate continues regarding the complexity inherent in training operators of the system, certainly such a program would take months, not weeks. And, absent organic Ukrainian operators, how wise would it be to deploy U.S. personnel on the ground in Ukraine in the interim?

Finally, from our perspective it is difficult to find any material benefit not outweighed by the risks of deployment: the risk of loss of a rather expensive asset in exchange for almost no protective utility, and the risk of the Patriot system continuing its recent record of poor performance, only this time in a far more public venue than Saudi Arabia.

### *Loser: M982 155mm "Excalibur" Artillery Rounds*

Following the pattern of breathless Wunderwaffen pronouncements, much was made of the delivery to the Armed Forces of Ukraine a quantity of "devastating" M982 Excalibur 155mm precision guided artillery shells.<sup>66</sup>

As a general matter, the long-range, guided artillery shell is billed as a precision (Circular Error Probable "CEP" of down to four metres) stand-off weapon suitable for engaging targets behind enemy lines owing to its extended range (40-70 km), GPS guidance, and (in later versions) semi-active laser targeting.<sup>67</sup>

The M982 specifically was expected to fill the gap between conventional artillery, and more expensive guided munitions, particularly 227mm rockets with precision packages fired from MLRS platforms. The round's advanced features are available only when fired from an M777 or similar platform with integrated targeting computer interface.

In GPS mode, the system is limited to targets that remain stationary from the moment of target location by spotting or intelligence resources through the moment of firing and to impact. In la-

<sup>65</sup> On the failures of the Patriot generally, See: Lewis, Jeffrey, "Patriot Missiles Are Made in America and Fail Everywhere", *Foreign Policy* (March 28, 2018).

<sup>66</sup> Nicholls, Dominic, "Excalibur is no longer a myth as Pentagon confirms supplying Ukraine with 'most accurate' shell: devastating satellite-guided weapons have been sent into the war against Vladimir Putin's invaders, US defence documents reveal", *The Telegraph* (September 9, 2022).

<sup>67</sup> "Excalibur: Selected Acquisition Report", *Defense Acquisition Management Information Retrieval* (December 31, 2010).

ser-targeting mode, a nearby spotting team or airborne platform is required to remain in visual range long enough to lase the intended target during the final phase of the shell's trajectory. Particularly given the limitations of its 22kg warhead size, both attack profiles are of limited utility where targeting intelligence is weak, where targets are not stationary, or where spotting teams cannot easily be inserted within visual range of the intended target. As with other advanced weapons systems discussed supra, the environment facing the Armed Forces of Ukraine in its theatre of operations is not conducive to the effective deployment of the advanced shells, a circumstance exacerbated by Russia's anti-drone efforts, and increasingly competent deployment by Russia of GPS jamming in the Ukrainian theatre and on Russian territory.

As with the HIMARS systems, often the Armed Forces of Ukraine have been reduced to using the system to engage in targeted killings or attacks on stationary or soft targets (e.g., the shelling with an M982 presumably fired from an M777 or French Caesar artillery piece into a Donetsk hotel where ex-CEO of Roscosmos Dmitry Rogozin's birthday party was taking place in December 2022).<sup>68</sup>

Few M982 rounds were delivered to Ukraine, but of a greater concern is the dwindling inventory of advanced artillery platforms still operating in theatre which can support their advanced capabilities. Wear, combat loss, or maintenance rotation of these advanced artillery pieces might doom even the few M982 shells in Ukraine's possession to linger in supply depots for some time.

*Winner: The United States Defence Industry (Provider of Wunderwaffen to the West)*

Despite the poor showing of weapons and systems produced by the defence industries of the West, we do not expect even the most visible and overt flaws to have a material impact on the prospects of the industry at large. Even now, panic over depleted stocks of howitzers, Javelins, HIMARS systems, Excalibur precision guided artillery shells, and 155mm artillery ammunition in general have spurred renewed interest in executing long-term contracts for production of those potentially flawed systems across the board.

As of this writing, the share prices of many U.S. defence stocks are posting five year highs. And why shouldn't they? With the renewed threat of "Russian aggression" and member countries finding themselves shamed into somehow spiking their military spending to meet NATO's long-neglected "2.00% of GDP" standard, prospects for "locking-in" Western allies with extensive weapons, support, and maintenance contracts with durations measured in decades (as with, e.g., the F-35 Lightning II multi-role combat aircraft) are good indeed. Realistically, what options are available to NATO members? Certainly, they cannot resort to arms deals with China.

Excluding the United States, with the combined GDP of NATO members approaching USD 18 trillion, a 2.00% of GDP commitment suggests that USD 360 billion in annual military spending is in play. In such an environment, it is difficult to ignore the prospects for growth in the Western defence industries.

*Loser: The Bundeswehr*

Three decades of neglect have left in tatters the native force once expected via joint operations with the United States to take the brunt of a conventional Soviet mechanised invasion. Of primary importance, given it would be fighting on its homeland, was the ability of the Bundeswehr to blunt any armoured thrusts long enough for Western air power or (in exigent circumstances, and unfortunately for the Germans) tactical nuclear strikes to repel the invaders.

It is often assumed that the Bundeswehr was never truly permitted to recover from World War II, but the Cold War era saw a substantial military expansion in Germany. To wit:

In the 1980s, the Bundeswehr had 12 Army divisions with 36

<sup>68</sup> Cf.: Some sources cite this attack as having utilised 227mm rocket artillery.

brigades and far more than 7,000 battle tanks, armoured infantry fighting vehicles and other tanks; 15 flying combat units in the Air Force and the Navy with some 1,000 combat aircraft; 18 surface-to-air-missile battalions, and naval units with around 40 missile boats and 24 submarines, as well as several destroyers and frigates. Its material and personnel contribution even just to NATO's land forces and integrated air defence in Central Europe amounted to around 50 percent. This meant that, during the Cold War, by the 1970s, the Bundeswehr had already become the largest Western European armed forces after the United States armed forces in Europe – far ahead of the British and even the French armed forces. In peacetime, the Bundeswehr had 495,000 military personnel. In a war, it would have had access to 1.3 million military personnel by calling up reservists.<sup>69</sup>

The decline since has been precipitous, and has not gone unnoticed. A 2019 report sounded the alarm regarding readiness, even going so far as to suggest that the country was not in a position to fulfil its most basic commitments to NATO, prompting a flurry of headlines, but little action. More recently, the failure during a December 2022 training exercise of the entire participating contingent of Puma Infantry Fighting Vehicles, slated to be one of the new mainstays of Germany's mechanised forces, focused intense criticism on Christine Lambrecht, who was promoted from her prior position of Ministry of Family Affairs to Federal Minister of Defence in December 2021.<sup>70</sup>

Earlier, Lambrecht was forced to admit that Germany had essentially depleted its stocks of various ammunition and weapons systems by sending them to Ukraine. Stocks had reached a point where levels of anti-tank and artillery rounds would last only "days or weeks" during a high-intensity conventional conflict.<sup>71</sup>

As for manpower, the 184'000 active personnel of the Bundeswehr are bolstered by some 950'000 reservists but, given recent revelations, activating and equipping said personnel will be a multi-year project, in the best case. In the meantime, the German Armed Forces are in no position at all to directly contribute to any flavour of conflict.

While the problems facing the Bundeswehr had drawn some attention, the conflict in Ukraine has exposed them to such a degree during such a critical time that it seems hard to imagine a body that will suffer more political damage.

At the same time, pressure on Germany to provide increased material assistance to Ukraine, particularly in the form of heavy, mechanised equipment and, most particularly, Leopard 2 main battle tanks, has not loosened the Federal Republic's grip on heavy armour.<sup>72</sup> This aversion to sending the heaviest pieces of kit in NATO's mechanised inventory is curious reticence that extends to many NATO members, prompting Germany to try to relieve the pressure by committing to sending to the AFU 40 Schützenpanzer "Marder" 1 infantry fighting vehicles (designed in the 1950s and 1960s and out of production since 1975), around the same time that France pledged a quantity of AMX-10 RC armoured fighting vehicles (designed in 1970), and the United States promised 50 Bradley Fighting Vehicles. Comically or alarmingly, depending on the disposition of the analyst, these vehicles were uniformly described in the media as some species of "tank,"<sup>73</sup> including the head-shakingly absurd description of France's AMX-10 RC as a "wheeled tank."

<sup>69</sup> "The Bundeswehr in the Cold War", the Bundeswehr Press Office (2019).

<sup>70</sup> Knight, Ben, "Is Germany's Military Unfit for Action?", Deutsche Welle (December 19, 2022).

<sup>71</sup> "Bundeswehr arms deliveries to Ukraine 'reached a limit.'" Deutsche Welle (September 4, 2022).

<sup>72</sup> Kluth, Andreas, "Thanks for the Tanks, But Send the Abrams and Leopard Too: Western angst about deploying "offensive" weapons is misplaced. Ukraine's entire struggle is self-defense," Bloomberg (January 7, 2023).

<sup>73</sup> Hetzner, Christiaan, "Breaking ranks, Macron's gift of tanks to Ukraine puts Western alliance under pressure to give Zelensky what he needs to end the war," Fortune (January 5, 2023).

In the case of the Bundeswehr, whose equipment problems seem beyond dire, refusal to gift or lend main battle tanks to the AFU, despite the reservationless rhetoric offered in support of Ukraine, is perhaps understandable. But one is also forced to wonder why France and the United States have elected to hold back their Leclerc and Abrams main battle tanks as well. The suspicious analyst might wonder if the NATO powers are concerned that their primary mechanised deterrents might lose some of their lustre if they fail to perform well against Russian equipment in the field.

One can debate the relative merits and risks of German militarism, but what is clear is that its leadership did not take the occasion to materially dispute the military commitments to NATO that were, even in the wake of reunification, so clearly expected of the Federal Republic. That the Armed Forces of the Federal Republic have abjectly failed to meet even the most basic standards in this regard, and that, even with an immediate and wholesale policy reversal and the commitment of fiscal resources at scale (resources that are simply not in evidence) they clearly have no prospect of materially providing for the nation's defence against a Russia-like enemy for many years, is shameful.

Moreover, that Germany, knowing full well the precarious state of the Bundeswehr, permitted itself to be pulled into supporting a proxy war that, if anything, primarily benefits the United States, brands it as among the most significant losers among NATO members.

#### *Losers: L'armée de Terre*

France, still essentially in possession of what amount to colonial interests in Africa that it has endeavoured to protect, drew its forces down less slowly after 1989-1991, but it too has been reduced to a military that can only report about 115'000 active personnel (and perhaps half that number in effective combat troops). Even so, L'armée de Terre only manages to claim this figure by resorting to a census that includes the 9'000 members of the French Foreign Legion and the 8'500 personnel that comprise the Paris Fire Brigade (which is nominally regarded as a unit of the French Army). At the same time, at least 36'000 of its active personnel are deployed abroad, primarily in French Guiana, Réunion and Mayotte, New Caledonia, the French West Indies, French Polynesia, Djibouti, and the Ivory Coast.<sup>74</sup> One assumes that few, if any, of these forces would be available to join a "coalition of the willing" and engage in ground operations in the Ukrainian theatre.

Unlike Germany, which boasts of a significant reserve (on paper nearly a million personnel), French reserves constitute a mere 23'000.<sup>75</sup>

That France, increasingly beset with domestic conflicts related to her large and predominantly unintegrated immigrant population in urban areas, has no taste for a conventional conflict of any intensity on the continent is echoed by her increasing calls for Ukraine to seek a negotiated peace. With respect to the War in Ukraine, or the general NATO goal of securing Western Europe from aggression, it is difficult to expect any serious contribution from what is left of the French military. Such material as she continues to send to the Ukraine is from long mothballed stock.<sup>76</sup>

Among the major NATO players, France appears to have been the least eager to find itself on record vis-a-vis Ukraine in the Western press. Privately, Macron has expressed unease with the leadership of his would be ally in Ukraine. And perhaps with good cause.

In January of 2023, Dmitry Rogozin, who had apparently been injured by a 155mm precision guided artillery shell fired from a French Caesar howitzer, purportedly a targeted Ukrainian attack focused on his birthday party in a local hotel, sent to the French Ambassador to Russia a letter along with one of the fragments ex-

<sup>74</sup> "Les forces françaises prépositionnées", Association de Soutien à l'Armée Française (2021).

<sup>75</sup> Présentation de l'armée de Terre (January 2022).

<sup>76</sup> See our discussion of the most recent French contribution in our section on the Bundeswehr supra.



tracted from his spine during surgery.<sup>77</sup> It is just the sort of incident (French weapons used in attacks that might reasonably begin to touch the boundaries of "terrorism") that France, facing accusations of imperialist and militaristic conduct elsewhere in the world, has become acutely sensitive to.

It is no secret that France has always found itself somewhat uncomfortable with NATO, preferring since 1966 to withdraw from the integrated military command structure. But beyond this nuanced limitation of scope, she has endeavoured to be a loyal ally to the West. Despite this, even were her armed forces in any sort of shape to engage in military adventurism, which they most certainly are not, it hardly seems clear that the domestic political environment would permit the Fifth Republic to engage in anything resembling a direct conflict with Russia.

### *Loser: The European Union*

To the extent that the post-modern European project is an effort to unify the continent without resort to military force (and we think this at least a good starting point for understanding the fundamentals of the European Union) the progress over the last many decades has been commendable. That said, a certain taint of overbearing technocratic authoritarianism has crept into Brussels. One can hardly think otherwise when the powers that be seem content to leverage the market influence of the Union into an obsessive focus on minutiae. There may be some interpretation of "market protection" that envisages elaborate rule-sets which, dog show like, include physical specifications that restrict the definition of a particular kind of fruit, but we are disinclined to acknowledge their utility.

These technocratic tendencies, however, do illuminate a particular defect that we think goes quite some way to explain the series of foolish decisions (and repeated "doubling-down") the conflict in Ukraine seems to have prompted from officials of the European Union. In years past, members and partners have had the tendency to refrain from complaint even in the face of the most onerous regulations and diktat from e.g. the European Commission because the power to exclude market actors from the "single market" (and to fine members) has been compelling. Despite being an unelected technocrat, European Commission President Ursula von der Leyen wields substantial power and influence across the continent. Weekly, she provides stark reminders that the European Commission and other appendages of the European Union have been quite used to getting their way for quite some time. And, to the extent their policies have later proven ill-advised or even destructive, their tenures (immune to the plebeian perils of popular vote or census) and monopoly on market power have insulated such decision-makers from any of the material consequences that might have followed.

In this context, that the European Union has overstepped in its stance against Russia and, in overestimating its own powers and position in the geopolitical landscape, then doubled-down more than once on its overstep, is tragic, but in some sense unsurprising. Unfortunately, in doing so it has positioned itself to be one of the major losers in the Ukraine conflict.

### *Loser: Western Sanctions Regimes*

It is no surprise that economic and political sanctions have become a popular tool of Western diplomacy. After all, they require no troop commitments, little in the way of direct spending to implement (and much of which is shifted to the compliance departments of private firms), and such economic effects as negatively impact the sanction-issuer are often secondary and delayed, concealing them from the citizenry or subjects who might take umbrage at more visible costs stemming from the out-sized vanity of "global leaders." In this, sanctions satisfy the politician's need to be seen as "taking strong action" without any of the consequenc-

<sup>77</sup> Camut, Nicolas, "Russia's former space chief sends shell fragment to French Moscow envoy," *Politico* (January 4, 2023).

es risked by more dramatic (and potentially more effective) policy commitments.

But, sanctions also have a mixed record, at best, of accomplishing the often ambitious policy goals they are, at least publicly, expected to fulfil. In more recent memory, sanctions have bled into far more personal attacks, even to the extent of resembling English "bills of attainder," the extra-judicial sanctions on persons that so upset the American founders as to cause them to prohibit the practice in the founding document of their new nation.<sup>78</sup>

On March 17, 2014, the European Commission issued Council Regulation 269/2014 purporting to respond to "...actions undermining or threatening the territorial integrity, sovereignty and independence of Ukraine." Article 2 of that regulation provided that:

All funds and economic resources belonging to, owned, held or controlled by any natural or legal persons, entities or bodies, or natural or legal persons, entities or bodies associated with them, as listed in Annex I, shall be frozen.

No funds or economic resources shall be made available, directly or indirectly, to or for the benefit of natural or legal persons, entities or bodies, or natural or legal persons, entities or bodies associated with them, as listed in Annex I. (Emphasis added).

"Annex I" then followed, and has since been amended to grow into a list of over 1'200 natural persons subject to the sanctions, often with justifications such as:

Member of the State Duma who voted in favour of the resolution No. 58243-8 'On the appeal of the State Duma of the Federal Assembly of the Russian Federation To the President of the Russian Federation V.V. Putin on the need to recognize the Donetsk People's Republic and the Luhansk People's Republic' and therefore supported and implemented actions and policies which undermine the territorial integrity, sovereignty and independence of Ukraine, and further destabilised Ukraine.<sup>79</sup>

Given that the language of Article 2 of the regulation ("...or legal persons, entities or bodies associated with them....") has been widely interpreted to include family members and the like, Mr. Tkachev's university-aged daughter (should he have one) is likely to find her bank account frozen and virtually no western financial institution that will do business of any kind with her. Assessing the wisdom and ethical legitimacy of sanctioning an individual (and family) for a vote in a legislative body (legitimate or otherwise) and the "sins of the father" approach to this species of extra-judicial sanction is left as an exercise for the reader.

Whatever we may think of such exercises, they have seen wide use in the European response to the war in Ukraine. In the immediate wake of the February invasion of Ukraine by Russian forces, any number of Western media outlets proclaimed that the sanctions that were being implemented were savaging the Russian economy. To wit:

The ruble cratered, losing a quarter of its value, and the central bank shuttered stock trading in Moscow through Tuesday. The public rushed to withdraw cash from A.T.M.'s, and Aeroflot, the national airline, canceled all its flights to Europe after countries banned Russian planes from using their air space. Concern about travel was so great that some people rushed to book seats on the few international flights still operating.

[...]

But the financial jolt offered tangible evidence of the West's outrage, one that is now washing over Russia's economy with

<sup>78</sup> See: Article I, Section 9, Clause 3 of the United States Constitution: ("No Bill of Attainder or ex post facto Law shall be passed.")

<sup>79</sup> Council Regulation 269/2014, Annex I, #1231, "Anton Olegovich TKACHEV," (September 1, 2022).

unpredictable consequences.<sup>80</sup>

Led by the European Union and the United States, the efforts escalated to include removing various Russian banks from the Society for Worldwide Interbank Financial Telecommunications ("SWIFT") the primary financial transactions and payment network in the world, and freezing hundreds of billions of dollars in reserves of the Russian Central Bank held by Western institutions. The punitive measures were expected, not least, to "...to undercut the country's ability to support its currency in the face of new sanctions on its financial sector."<sup>81</sup>

By March the United States and the European Union were floating bans or restrictions on the purchase of Russian oil and natural gas, efforts that would eventually evolve, at least in the G7, into a price cap intended to limit the amount paid by any EU or G7 member for Russian oil. A total ban on the import of Russian crude in the EU is scheduled to take effect in February of 2023.

Whatever else might be said about the sanctions regime that emerged from February to March of 2022, and which has been repeatedly expanded in the months that followed, it did not lack for swiftness, boldness, or ambition. Certainly, the blacklisting from SWIFT of not one but several financial institutions is an unprecedented measure. And, while pervasive energy sanctions are nothing new, having been employed on a large scale most notably against Iraq, the scope of the restrictions levelled at Russia is unique, initially aspiring to effectively ban Russian hydrocarbons entirely from the global market.

Likewise, it would be difficult to find other examples of as aggressive a move as the seizure of the foreign reserves of the central bank of a sovereign nation since World War II.<sup>82</sup> In this context, it would be a fair assessment to regard the current set of sanctions in effect against Russia as the most pervasive and extensive deployed in modern history. In fact, so swift and coordinated were the various elements of the sanctions packages that have emerged since February, the observant analyst could be forgiven for wondering if some element of pre-planning had been at work.

And yet, in the face of what might arguably be seen as an "everything and the kitchen sink too" effort by the West, the real impacts to Russia in the short and medium term have been muted. More daunting for Western economic hegemony, there is the real possibility that in the long-term the present sanctions regime may have the effect of damaging the reserve currency status of the United States Dollar, cementing an alternative Eurasian trading bloc, and inflicting far more economic harm on the European Union than on Russia.

Intended to strangle off from Russia the flow of hydrocarbon revenues, as of the present writing, Western sanctions efforts against Russian energy appear to have had little effect. Likewise, other sanctions intended to batter the Ruble, seem to have fizzled. Signs were against the West's efforts even six months into the war, when it began to emerge that, driven by hydrocarbon exports, Russia's current account surplus tipped record highs, a spike that would eventually see a near doubling versus the prior year period to hit USD 220 billion. And that wasn't all. Despite the seizure and sanctions efforts, in January of 2023, the Bank of Russia announced that its international reserves had increased to USD 582 billion.<sup>83</sup>

In addition, the initial and alarming shift against the Ruble in the foreign exchange rate versus U.S. Dollar in the first weeks of March had not only receded by mid-April, but settled into a stronger position for the Ruble than before the invasion, a strength it has

80 Troianovski, Anton, Nечepurenko, Ivan, "As Sanctions Batter Economy, Russians Face Anxieties of a Costly War," *The New York Times*, (February 28, 2022).

81 Rappeport, Alan, "U.S. escalates sanctions with a freeze on Russian central bank assets," *The New York Times* (February 28, 2022).

82 Though, notably, the under an Executive Order dated February 11, 2022, the United States seized some USD 7 billion of assets held by the Central Bank of Afghanistan.

83 Bank of Russia statement (January 13, 2023).

maintained up to the present writing. This "unexpected" strength of the Ruble reduced the expense of imports, a critical advantage as Russia was forced to look away from the West for goods it could not supply organically.



Figure XVI: U.S. Dollar v. Russian Ruble Exchange Rate (2022-2023)

Part of the explanation for the disappointing performance of sanctions lies in the fact that large segments of the Russian economy started off independent of raw material imports, as Russia has sufficient domestic production to meet most of its needs, and that Russia is less tied to foreign trade with the West or connections to Western financial infrastructures than most other large economies. But there is also a strong argument that quick action by the Central Bank of the Russian Federation to shore up the Ruble has been an economic policy coup of such magnitude that Elvira Nabiullina, the personally sanctioned Chairwoman of the Bank of Russia, should be awarded the Order of St Andrew the Apostle in return.<sup>84</sup>

It cannot be ignored either that the lack of hyper-financialisation of the Russian economy in comparison to its Western counterparts was a property missed by the designers of the present sanctions regime. Certainly, had these efforts been targeted at a financial centre like the United Kingdom, the effects would have been existential, but the Russian economy is all together a different animal, and the failure to notice this fundamental variance is rather a strong indictment of Western planners and decision-makers across the board.

To be sure, a number of vulnerable spots in Russia's economy have and are likely to continue to suffer owing to punitive Western policy moves. Industries highly dependent on Western parts and other imports, like the automotive sector, face near disaster, and, perhaps more critically, it is an open question how long Russia can continue effective hydrocarbon extraction and production in the absence of Western oil and gas experts (BP, Shell, Equinor, Wintershall Dea, and ExxonMobil have all exited or are exiting Russian markets). But this potential crisis also presents an opportunity of necessity for Russia: to develop its own domestic skill base and pool of talent to increase her independence from the West. We assess that, in the medium to long-term, this represents a major risk to the West, and one ironically introduced by Western sanctions.

Far from inspiring a deep longing for now forbidden Western products and services brought to Russia by the forces of globalisation (Netflix, McDonalds, Disney, and a number of other premiere brands have fled Russia in solidarity with Western sanctions efforts), the change has instead prompted the Russian economy to pivot to local versions. That the hard-fought entry of McDonalds to the Russian market (granted by the Communist Party in 1988 and resulting in the opening of the first store in Moscow at dawn on January 31, 1990, an event swarmed by over 30'000 Moscovites on the first day), should find itself transmuted into "Vkusno & Tochka," a purely Russian re-branding of the restaurants, highlights two particular facts.

<sup>84</sup> On the question of Russian performance in the face of sanctions See Generally: "Why the Russian economy keeps beating expectations," *The Economist* (August 23, 2022) and "In 2022 Russia kept the economic show on the road," *The Economist* (December 29, 2022).

First, the power of Western brand boycotts is less impressive than might have been supposed. And, second, there is a growing sentiment in Russia that the country might well be better off without the likes of Netflix and Disney+.

More directly damaging to the West, efforts to wean Europe off of Russian energy have opened widening faults between EU and NATO members as some European nations bristle at the suggestion that their industries should be saddled with spikes in energy prices significant enough to, perhaps permanently, destroy their competitiveness. So severe is the crisis that countries like Germany are running out of tricks to shield business and consumer customers from 200%-1'000% spikes in energy prices.

Apparently rebuffed by its population when the government suggested that forgoing hot showers was a "blow to Putin," German officials pivoted to an effort to launch various bailout and subsidy schemes. The addictive properties of the printing press being what they are, Berlin has already racked up nearly half a trillion U.S. Dollars in such commitments.<sup>85</sup>

Ever desperate to perpetuate the illusion that forgoing Russian energy is a sustainable policy, Europe and the G7 embarked on a laughable scheme seeking to "cap" the price that could be paid for Russian oil and gas, predictably prompting much fractious conflict between members over the proper price and product list such caps would apply to, making a mockery of any hint that European or Western solidarity was in evidence. Predictably, Russia, which enjoyed significant energy demand from customers in the near and far east, simply announced it would entirely cut off any country seeking to impose a price cap. A flurry of loopholes and exceptions to the sanctions policy quickly emerged, followed by recriminations by some Western governments that, by resorting to such end-arounds, still other Western governments were diluting the impact of the policies.

On the far end of evidence of fractious relations between the various players, one school of thought holds that the September 2022 sabotage of the underwater, Gazprom-owned Nord Stream pipelines was an effort by the Western allies to prevent Germany from being tempted to soften its Russian stance to avoid having the gas flows through those lines turned off. In our estimation, the eerie silence that has descended over any discussion of uncovering the perpetrators of the sabotage (tantamount to no less than an act of war, even as Western allies of Ukraine accuse Russia of "war crimes" for attacks on Ukraine's energy infrastructure) speaks volumes.

As the ruptured pipelines had vented some 115'000 tons of methane representing some 9.5 million tons of CO<sub>2</sub> by October 2022 (the annual equivalent emissions of two million gasoline-powered automobiles) observers might be reluctant to take seriously the very grave and earnest pronouncements of climate concern expressed by the would be government perpetrators of the sabotage. The suspicious analyst will also train narrowed eyes at the sudden domination by the United States of the Liquid Natural Gas ("LNG") market as American suppliers replace Russian natural gas (once a 60%+ share of Germany's imported energy, now 0%) with far more expensive LNG.

Taken overall, one could be forgiven for quipping: "With allies like these...."

Still worse for the West, by breaching the firewall and freezing U.S. Dollar assets of the central bank of another sovereign as well as those of businesses and individuals who happen to be Russian citizens, and, as seems to be in the works as of this writing, preparing to appropriate those assets and distribute them as largess to Ukraine and other Western clients under the guise of "reparations" or "relief," the rest of the world is forced to ask itself how wise it might be to hold U.S. Dollar denominated assets. This sort of un-

<sup>85</sup> Steitz, Christoph, "Germany's half-a-trillion dollar energy bazooka may not be enough," Reuters (December 15, 2022).

certainty strikes directly at the primary selling feature of a reserve currency: its neutrality and safe-haven status as a store of value. Combine this uncertainty with a certainty: that the United States has been trapped in a debt and spending cycle that will require many new trillions of U.S. to be printed in the coming years, and the unassailable reserve currency status of the U.S. Dollar begins to look frighteningly precarious.

With all these side-effects in play, it is difficult not to conclude that the regime of Western sanctions is doomed. Surely, in the coming decades, the bloated cadre of Western politicians and regulators will happily continue to attempt to establish themselves as "serious men and women of action" by loudly imposing sanctions on various individuals and entities branded as malefactors by an ill-defined "rules-based world order." But, given the apparent failure of the most pervasive and punitive sanctions ever designed, efforts that include the wholesale seizure of Central Bank Reserves, a supposed boycott on products that constitute a third to a half of all Russia's exports, and disconnection from the global financial and payments systems, what deterrent teeth is left in these regimes?

We assess that the West will emerge from the other side of the Ukrainian conflict faced with the reality that Western Sanctions Regimes have suffered an existential loss.

*Loser: "Energiewende" and the German Greens*

Much as Europe has enjoyed the gift of a prophylactic American security blanket, effectively largess from the taxpayers of the United States that permitted the continent to embark on a multi-decade period of progressive decadence defined primarily by a broad spending spree on a slew of productivity-killing social programs, the availability of cheap Russian hydrocarbons has allowed the Europe to entertain sometimes wildly utopian fantasies of transforming the entire European energy sector to "clean energy" and "net-zero carbon emissions" sources.

While Germany has emerged as the most "clean energy" obsessed member of the European Union, the entire economic bloc has found itself inclined to expend massive sums on green energy projects and subsidies. Be this as it may, no set of programs or policies is more in the thrall of green energy dreams than Germany's decades-old "Energiewende" ("energy turnaround"). The term appears to originate from a 1980 report by the Freiburg-based *Oko* ("Applied Ecology") Institute which called for a complete ban on nuclear and hydrocarbon energy.

Though rooted in simple, progressive urges stemming from the European social awareness movements of the late 1970s and early 1980s, understanding the deeper fundaments of Germany's utopian-transformative dreamscape requires a closer examination of the origins of the various political movements that have since come to dominate German domestic politics.

The current German Green party ("Alliance 90/The Greens") is the result of the 1993 merger of "The Greens," the West German party formed in 1980 and which merged in 1990 with the newly formed East German Green Party. That amalgam then merged with "Alliance 90," another East German green party formed in 1990. Perhaps unsurprisingly, all of these entities, including the West German Green Party, were to varying degrees infiltrated or entirely controlled by the East German Ministry for State Security ("Stasi").<sup>86</sup>

In fact, the Soviets and thereafter the Russians, have long been suspected, and in many cases with good cause, of supporting, or even creating from whole cloth, any number of Western movements or organisations dedicated to impeding Western capitalism and security, often under the guise of pro-environmentalist, an-

<sup>86</sup> See: Gieseke, Jens and Bahr, Andrea, "The State Security Ministry and the Greens," (October 13, 2016).

ti-war, or anti-nuclear causes.<sup>87</sup> Whatever the reality of involvement of Russian influences, certainly the European anti-nuclear movement has been a boon for Russian energy sales to Europe in the last 20 years. Meanwhile, the rabid prosecution of the hydrocarbon energy industry has racked up significant costs. In an irony that had been lost on the Germans until most recently, this prosecution was only made possible by a cheap carbon economy, in particular, inexpensive natural gas from Russia. While this parallel and more reliable energy source was in place to, in effect, subsidise (potentially futile) efforts to supplant it, the enormous sums spent on green energy efforts, often supported by tariffs on inexpensive energy sources, could be concealed or at least tolerated.

The extent of the concealing subsidies and programs deployed in prior decades is staggering to consider. In fact, costs have been substantial enough that putting a figure on the sums spent on German green energy policy over the last 20 years is a neigh impossible task.

In 2013, Peter Altmaier, then German Minister for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (a ministry formed in 1986 largely in response to the Chernobyl accident) turned heads when he let slip that legal commitments to support green energy for the coming decade would tally up to EUR 680 billion, and that further commitments through 2030 would constitute over EUR 1 trillion.<sup>88</sup> Against a 2013 federal budget of around EUR 300 billion, the alarm that followed in public discourse was perhaps understandable, and yet, German spending in the interim has vastly exceeded even those eye-watering projections. A 2016 report, one of the first full cost analyses offered on the issue, slated the electricity component of the policies alone at EUR 520 billion.<sup>89</sup> A 2019 article in the German *Der Spiegel* warned that costs to meet Germany's ambitious 2050 "net-zero" goals could reach EUR 2.0-3.4 trillion, a substantial fraction of even the most optimistic GDP projections.<sup>90</sup> Along the way, there has been almost no serious discussion among energy "experts" of an unfortunate physical reality: that intermittent green power sources like wind and solar must either be supported with a vast energy storage system which current and reasonably foreseeable technological advances simply cannot provide, or be augmented with conventional backups for nearly 100% of the renewable capacity to avoid power crises such as that experienced by the United Kingdom in December of 2022:

Wind and solar power provide the opposite of energy security. Back in the real world... on December 11 the UK got a taste of the kind of "energy security" provided by wind and solar power, when a cold snap at the darkest part of the year came along with a prolonged period of calm in the winds — a typical winter occurrence. From the *Guardian*, December 11:

"Live data from the National Grid's Electricity System Operator showed that wind power was providing just 3% of Great Britain's electricity generation on Sunday [December 11]. Gas-fired power stations provided 59%, while nuclear power and electricity imports both accounted for about 15%."

And what was the inevitable consequence of the wind conking out just when it was needed most?

"UK power prices have hit record levels as an icy cold snap and a fall in supplies of electricity generated by wind power have combined to push up wholesale costs. The day-ahead price for

<sup>87</sup> Russian defector Stanislav Lunev went so far as to claim that "...the GRU and the KGB helped to fund just about every antiwar movement and organization in America and abroad...." Lunev, Stanislav, "Through the Eyes of the Enemy: The Autobiography of Stanislav Lunev," Regnery Publishing, Inc. (1998).

<sup>88</sup> "Energiewende könnte bis zu einer Billion Euro kosten," *Frankfurter Allgemeine* (February 19, 2013).

<sup>89</sup> "Germany's Energiewende To Cost Staggering EUR 520 Billion By 2025," *Düsseldorf Institute for Competition Economics ("DICE")* (October 10, 2016).

<sup>90</sup> Dohmen, Frank, et. al., "German Failure on the Road to a Renewable Future," *Der Spiegel* (May 13, 2019).

power for delivery on Monday reached a record £675 a megawatt-hour on the Epex Spot SE exchange. The price for power at 5-6pm, typically around the time of peak power demand each day, passed an all-time high of £2,586 a megawatt-hour.<sup>91</sup> 2,586 pounds/MWh would be equivalent to about \$3 per kWh (wholesale), compared to a typical U.S. price for electricity of around 12-15 cents per kWh retail.<sup>92</sup>

With the sanctions-prompted self-boycotting of Russian oil and gas, the energy situation Europe finds itself in is dire, perhaps even borders on existential. To wit:

In its righteous battle to drive down carbon emissions, Europe has closed most of its coal plants, banned fracking for oil and gas, and otherwise suppressed almost all fossil fuel infrastructure except some pipelines from Russia. Trading Economics gives the most recent price for wholesale natural gas on the European market as 82.97 EUR/MWH. By the way, that's down from prices over 100 EUR/MWH, and as high as 350 EUR/MWH (briefly) over the last six months. The most recent U.S. price is \$5.12 per MMBTU. I come up with a factor of about 3.4 to convert from MMBTU to MWH, and the dollar and euro at close to par, so the comparison is about \$17/MWH for the U.S. to \$83/MWH for Europe. Europe's fossil fuel suppression has resulted in a price about 5 times as high as the U.S. price. And thus there is a consumer energy cost crisis currently raging in Europe — something that you read almost nothing about over here. The solution that the Europeans have come up with is to provide massive subsidies to enable consumers (and also businesses) to pay for their energy bills.<sup>93</sup>

In other words, fear not, for no greater force than the printing press is at hand, and Europeans have not been shy about using it to shield their political class from the rage from energy consumers that might otherwise ensue:



Figure XVII: Governments earmarked and allocated funding (Sep 2021 - Nov 2022) to shield households and businesses from the energy crisis. Last update: 29.11.2022<sup>93</sup>

German voters may be slow, but it is increasingly difficult to conceal the fact that the key policies that underpin the current ruling "traffic light" (red, yellow, green) coalition of the German Social Democratic Party ("SPD"), the Free Democratic Party ("FDP") and Alliance 90/The Greens, are leading the country into fiscal

<sup>91</sup> Menton, Francis, "Policy Implications Of The Energy Storage Conundrum", The Manhattan Contrarian (December 13, 2022).

<sup>92</sup> Menton, Francis, "Bring on the Electricity Cost Crisis!", The Manhattan Contrarian (December 24, 2022).

<sup>93</sup> Sgaravatti, Giovanni, et. al. "National fiscal policy responses to the energy crisis", Brugel (November 29, 2022).



collapse. That union, resulting from the 2021 federal elections in Germany which saw the highest showing for The Greens in the party's history, has resulted in the combination of a complete ban on nuclear power, trillions of Euro in costs slated to excise carbon from the German energy economy, a military spending policy that has left the Bundeswehr unable to defend the country against any sort of foreign military aggression, and a boomeranging sanctions regime mandated by a somewhat slavish subservience to NATO and the United States that has begun to hit the pocketbooks of the average consumer.

Particularly as other, less wealthy countries on the continent begin to abandon the green economy dreams they no longer seem able to afford, the decadent luxury of a major national energy transformation (and the political party most associated with it) is likely to be a highly-visible German casualty of the conflict in Ukraine.

*Loser: The Armed Forces of the Russian Federation*

From a tactical perspective, the Russian invasion of February 24, 2022 was not a particular surprise. In the months leading up to the commencement of the "special military operation," and all along the border with Ukraine, the Russians were not shy about their troop build-ups and these massings were easily seen by Western air- and space-borne surveillance platforms. So dire was the picture, it prompted the United States to warn Ukrainian President Volodymyr Zelenskyy that an invasion was imminent three times in a thirty day span, culminating in the most immediate alarm on February 23, 2022:

President Joe Biden's administration has informed Ukrainian President Volodymyr Zelenskyy of intelligence assessing that Russia is preparing to conduct a full-scale invasion of the neighboring country within the next 48 hours, U.S. intelligence officials have revealed to Newsweek.<sup>94</sup>

Leading up to the invasion, the most senior U.S. military officials were not optimistic with respect to Ukraine's chances:

[Chairman of the Joint Chiefs of Staff, General Mark] Milley told lawmakers during closed-door briefings on Feb. 2 and 3 [2022] that a full-scale Russian invasion of Ukraine could result in the fall of Kyiv within 72-hours, and could come at a cost of 15,000 Ukrainian troop deaths and 4,000 Russian troop deaths.<sup>95</sup>

Even a few days before the invasion, Western observers were poised to expect the worst:

Russia has positioned more than 150,000 troops on Ukraine's border—a figure that does not include Russian-led forces in the occupied territories of the Donbas (which may number 15,000), Russia's national guard, or other auxiliary forces. Counting those, Russia could have more than 190,000 troops near the Ukrainian border. These numbers imply that Moscow is not planning a limited incursion and that it may attempt to hold on to substantial tracts of Ukrainian territory, including the capital.

The Russian military would likely open its campaign with air-strikes targeting command-and-control systems, logistical centers, airports, air defenses, and other critical infrastructure. To carry them out, Moscow could use hundreds of bombers as well as ground-launched cruise and ballistic missiles. The Russian military has also deployed near Ukraine high-powered artillery and long-range rocket systems to support its ground

<sup>94</sup> Jamali, Naveed, et. al., "Exclusive: U.S. Warns Ukraine of Full-Scale Russian Invasion Within 48 Hours," Newsweek (February 23, 2022).

<sup>95</sup> Heinrich, Jacqui and Sabes, Adam, "Gen. Milley says Kyiv could fall within 72 hours if Russia decides to invade Ukraine: sources," Fox News (February 5, 2022).

forces with overwhelming firepower.<sup>96</sup>

The trend continued once operations began in earnest and, in stark contrast to public views that have since become fashionable, Western "experts" and U.S. officials were not reticent to express their continued certainty that Russian forces would roll over Ukrainian resistance, rapidly take Kiev, make short work of the Zelenskyy government, and reduce the armed forces of Ukraine to resistance fighters consigned to ineffectually harass Russian occupiers over months and years that followed.

As the first threads of combat were joined, these perspectives were also easy to find in the Western press:

Three U.S. officials have told Newsweek they expect Ukraine's capital Kyiv to fall to incoming Russian forces within days, and the country's resistance to be effectively neutralized soon thereafter.

The officials, speaking on the condition of anonymity, said that Moscow's focus, as revealed in Russian President Vladimir Putin's references to a "special military operation" to "demilitarize" the neighboring country, would be to encircle Ukrainian forces and force them to surrender or be destroyed. They expect Kyiv to be taken within 96 hours, and then the leadership of Ukraine to follow in about a week's time.

[...]

"After the air and artillery end and the ground war really starts, I think Kyiv falls in just a few days," [a] former senior U.S. intelligence officer told Newsweek on the condition of anonymity.... The military may last slightly longer, but this isn't going to last long."

Afterward, the senior U.S. intelligence officer said the next stages may be determined by U.S. President Joe Biden's capability and willingness to risk further provoking Moscow by supporting partisan efforts on behalf of a potential Ukrainian resistance. "Then it either becomes a robust insurgency or it doesn't, depending largely on Biden," the former senior U.S. intelligence officer said.<sup>97</sup> (Emphasis added).

Except something was missing.

Contrary to predictions common to many of the most vocal experts, there was no major "air and artillery" phase of the war before Russian troops crossed into Ukraine. Moscow did not "...use hundreds of bombers as well as ground-launched cruise and ballistic missiles..." to deploy stand-off and airstrikes to soften up Ukrainian targets before putting "boots on the ground." Such stand-off and artillery strikes as were conducted were limited to one segment of the theatre, border crossings between Ukraine and Belarus and Russia, and air defence installations along a corridor to Kiev, part of an effort to carve a route for air assault operations that were already in the works.

This reticence was a strange and unexpected development, even from an actor on the global stage, Vladimir Putin, who has, for decades, made a habit of confounding Western experts. Nevertheless, the failure of the Armed Forces of the Russian Federation to "take off the gloves" in the early stages of her "special military operation" has badly damaged her reputation, and given Ukrainian forces an overly dismissive view of Russian capabilities, coupled with an overly optimistic assessment of their chances against their Russian adversaries.

The consequences of these Russian missteps may end up being the root cause of an aggregate of some hundreds of thousands of surplus military dead and wounded. To the extent its missteps have wasted Russian and, primarily, Ukrainian lives, it is a decisive

<sup>96</sup> Kofman, Michael and Edmonds, Jeffrey, "Russia's Shock and Awe: Moscow's Use of Overwhelming Force Against Ukraine," *Foreign Affairs* (February 22, 2022).

<sup>97</sup> Jamali, Naveed et. al., "Exclusive: U.S. Expects Kyiv to Fall in Days as Ukraine Source Warns of Encirclement," *Newsweek* (February 24, 2022).

*Loser: Russian Airborne Forces*

loss for the Armed Forces of the Russian Federation.

On the morning of February 24, 2022, a contingent the approximate size of a reinforced company (300 or so) of paratroopers from the Russian 31st Guards Air Assault Brigade, and potentially the 11th Guard Air Assault Brigade took off in Mi-8 helicopters from their base in Belarus expecting to be on a training mission. Once in the air, however, they were told that they were at war with Ukraine, and were tasked with a key mission and one of the critical opening strokes of the "special military operation" being launched: to capture Antonov Airport, just 10km outside of Kiev.

Composed of some 45,000 troops divided into two Guards Air Assault divisions, two Guards Airborne divisions, and four separate brigades of Air Assault and Airborne troops, the Russian Airborne Forces have long been one of the crown jewels of the larger corpus of Russian ground forces, called by one observer its "Light Imperial Infantry."<sup>98</sup>

Even from this lofty station, in the last 10 years or so, their role has prompted Russia to make them a major focus, part of larger efforts to expand and modernise the Russian Military in the area of:

...rapidly deployable forces, or elite ground units that are employed in conflicts short of conventional war, including the Airborne Troops (VDV), GRU Spetsnaz, and the small Special Operations Command (KSO). These rapidly deployable forces are among the highest readiness units in the Russian military and are available on short notice to respond to regional conflicts or perform an expeditionary role.<sup>99</sup>

The 11th Guards and 31st Guards Air Assault brigades are separate (i.e.: not attached to a particular division) units underneath the larger umbrella of the Russian Airborne Forces (Vozdushno-desantnye voyska Rossii, "VDV"). The "Guards" designations are awarded to units that distinguish themselves in combat or war-time, a distinction that originated with the Russian Imperial Guard, was carried over in World War II as a nod to the Soviet "Red Guards," and in present usage denotes an elite formation of the Russian Military. As "Air Assault" units, they are tasked with lightning-paced vertical envelopment missions accomplished by helicopter insertion.



*Figure XVIII: Russian Mi-8 Helicopters Follow in Behind their Ka-52 attack escort (Antonov Airport, February 24, 2022).*

In all, approximately 30 helicopters, the Mi-8 transports with the VDV troops, and Ka-52 "Alligator" attack helicopters as escort, flew over the Dnieper River, turned west, and conducted the initial assault on Antonov Airport, arriving at around 08:00 on the morning of the 24th. The Ka-52s used missile strikes to attack air defence

<sup>98</sup> Radin, Andrew; et. al., "The Future of the Russian Military," Rand Corporation (2019).

<sup>99</sup> Radin, Andrew; et. al., "The Future of the Russian Military," Rand Corporation (2019).

emplacements in and around the airport with an accuracy that was later explained as the result of treachery: an airport employee's son had supposedly given the Russians targeting information.

Following the initial strikes, the Mi-8s landed their troops in two waves, troops that proceeded to fan out and take control of the airport.

Later accounts in the Western press would insist that Ukraine had been given the key elements of the Russian plan, including the assault on Antonov Airport, by U.S. Intelligence, and that this information had permitted the Ukrainian forces to spoil the Russian air assault mission. Purportedly, no less a figure than CIA Director William J. Burns had, during his January 12, 2022 visit to the capital, personally told Zelenskyy and senior officers of the Armed Forces of Ukraine that the airport and Kiev would be a target.<sup>100</sup>

But, on closer examination, either because that intelligence was ignored or, contrary to press reports, never properly conveyed, as Russian troops closed in, Kiev had not acted remotely like a defender with hundreds of thousands of mobilised soldiers and nearly twenty mechanised brigades; a defender which had been also apprised six whole weeks earlier of precise details of the Russian plans to assault Kiev and Antonov airport.



*Figure XIX: A Russian Ka-52 Attack Helicopter (File Photo)*



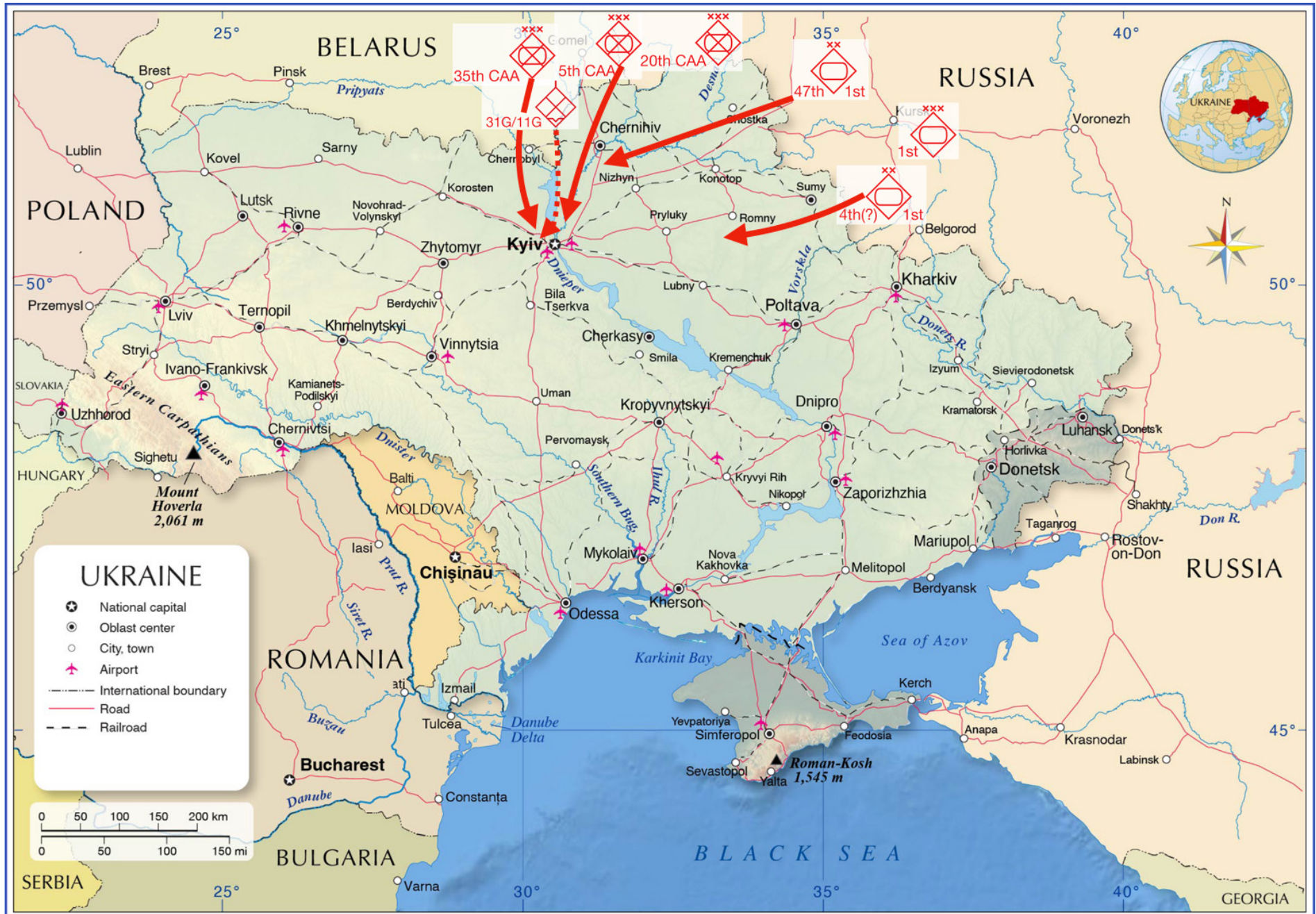
*Figure XX: A Russian Mi-8 transport helicopter lifts off after inserting Russian paratroopers (likely from the 31st Guards Air Assault Battalion) at Antonov Airport (February 24, 2022)*

In the case of the airport:

The most combat-ready personnel on the base had deployed weeks earlier to Ukraine's eastern Luhansk region, along with

<sup>100</sup> See: Ignatius, David, "The secret planning that kept the White House a step ahead of Russia," *The Washington Post* (May 26, 2022) and Sonne, Paul, et. al., "Battle for Kyiv: Ukrainian valor, Russian blunders combined to save the capital," *The Washington Post* (August 24, 2022).





*Russian Plan of Operations (Kiev Axes Only): Air Assault by a Company-sized Contingent of the 31st Guards and Possibly 11th Guards Airborne Brigades, Ground Assaults Bracketing Kiev by Elements of the 35th, and 5th Combined Arms Armies, and Assault/Flank Protection by the 47th Guards and Likely 4th Guards Tank Divisions*

their equipment, leaving the airport and base with about 300 soldiers, including draftees who were serving out Ukraine's mandatory military service. Many had never seen combat.<sup>101</sup>



*Figure XXI: Russian paratroopers, Probably from the 31st Guards Air Assault Brigade, at Antonov Airport after Disembarking from their Mi-8 Transport Helicopters (February 24, 2022)*

As a result, the defenders found themselves facing a much more experienced and able force. Their plight was compounded by the fact that no one had thought to supply the reduced unit left to defend the airport with supplies of ammunition sufficient for even a small security contingent. Over-matched and running out of ammo after only a few hours, the defenders retreated. The Russian Air Assault troops had secured their initial objective though, later, things would begin to slip.

Ukrainian preparedness was not much better in Kiev itself, particularly for a force that had been forewarned far ahead of time and with what turned out to be a reasonably accurate time-frame for the assault:

The notion that Kyiv — where urban warfare would vex even the most sophisticated military — could be Putin's primary initial target defied belief for most of the Ukrainian elite, even within the armed forces.

"To think the leadership of Russia would unleash such brazen, large-scale aggression, honestly speaking, I could not even imagine it." recalled [Commander of Ukrainian Ground Forces and the defence of Kiev, Colonel General Oleksandr Stanislavovych] Syrsky.... It seemed to me that if active hostilities were to start, they would most likely start in the east, around or within the borders of the Donetsk and Luhansk regions.<sup>102</sup>

In fact, though, on paper, the Armed Forces of Ukraine had 19 mechanised brigades at their disposal: "...only one mechanized brigade, the 72nd, was available to defend the capital — clearly insufficient for such a large city."<sup>103</sup>

It quickly emerged that the Russian attempt to establish an airhead at Antonov Airport was part of a much larger plan to advance in Ukraine on three different axes (four if Crimea is included):

Officials watched wide-eyed as border surveillance cameras captured hundreds of Russian tanks and other armored vehicles flowing into Ukraine in columns reminiscent of a World War II advance. From Belarus in the north. From Russia in the east. From Crimea in the south.<sup>104</sup>

<sup>101</sup> Sonne, Paul, et. al., "Battle for Kyiv: Ukrainian valor, Russian blunders combined to save the capital," *The Washington Post* (August 24, 2022).

<sup>102</sup> Ibid.

<sup>103</sup> Ibid.

<sup>104</sup> Ibid.



The Russian 35th Combined Arms Army had rolled into Ukraine from south-central Belarus, the 5th and 36th Combined Arms Armies made their thrust from the Belarusian city of Gomel, and the 41st Combined Arms Army and the 90th Guards Tank Division started their assault from Russian soil, and in the east of Ukraine the Russian 6th Combined Arms Army with the 1st Guards Tank Army moved from staging areas near Belgorod with the 20th Combined Arms Army joining from further southeast.

Back at the airfield, by 16:00 local time, Russian airborne forces were secure enough in their positions to push out into the surrounding areas, including the town of Hostomel, set up checkpoints, and literally invite a CNN crew to film them while they shored up their perimeter around the airport and distributed ammunition to positions they were preparing.

Even so, several complications began to emerge. Firstly, on the initial assault, the Ka-52 piloted by the squadron commander was either shot down or forced to land by MANPAD or anti-aircraft artillery fire. Two more helicopters would be lost to anti-aircraft fire, one resulting in a dramatic crash video as it landed in the Dnieper, and at least one downed in the early phases of the fight over the Antonov Airport by a young conscript wielding 9K38 Igla (SA-18 "Grouse") man-portable anti-air missile.



Figure XXII: Russian paratroopers filmed by a CNN camera crew at Antonov Airport (February 24, 2022, 16:00 local time)

It was at this point clear to the airborne forces that their airhead, which appears to have been intended to receive as many as 18 Ilyushin Il-76 troop transport aircraft, likely elements of the 18th Guards Military Transport Aviation Division, which, by some accounts, were already airborne at the time. The Il-76 and its variants are equipped to airlift 140 paratroopers and, in a distinction that separates Russian airborne forces from any other in the world, transport with the VDV forces organic airborne armour in the form of BMD variants and other infantry fighting vehicles.

Had this Russian plan been permitted to unfold, the airborne contingent at Antonov Airport may have swelled to 1'000 men or more and two or more companies of infantry fighting vehicles, giving the elite troops a light mechanised force on the ground just 10km away from Kiev.

The Armed Forces of Ukraine eventually claimed to have shot down two of the troop transport craft, though the lack of wreckage or photographic evidence later suggested this claim to be fictional, but the threat must have seemed quite real to the Russians at the time. After all, Russian backed separatists from the Luhansk People's Republic had in 2014 shot down a Ukrainian Il-76 with military equipment and 40 troops just short of Luhansk International Airport, killing all aboard. The Ukrainians were surely eager to even the score.



*Figure XXIII: A Ka-52 forced down by anti-aircraft fire near Hostomel. Probably the squadron lead and one of the first casualties of Ukrainian anti-air defences (visible damage suggests a MANPAD strike)*



*Figure XXIV: Ukrainian Il-76 transport aircraft with infantry fighting vehicle payload*



*Figure XXV: A Russian Il-76 air-dropping an infantry fighting vehicle (probably a BND-4)*

Worse, as the Ukrainians regrouped, they began to shell the airport, including, reportedly, with 203mm 2S7 Pion self-propelled cannons. Later on, Ukrainian Su-24 bombers got into the fight, attacking the airport which, according to the Ukrainians, rendered the runways unusable.

Usable or not, the Russians certainly knew that they could not bring in transports unless enemy aircraft, anti-air, and artillery coverage was completely reduced, and, despite the close air support of two Russian Su-25s early in the battle, the appearance of Ukrainian Su-24 bombers proved that the Russians did not enjoy anything like air superiority over the immediate area. This was a daunting issue: slow, lumbering transports like the Il-76 would be easy prey even for fixed wing aircraft configured for ground attack missions.

Eventually, that first evening, the Russian forces on the ground at the airport were pushed off the airport proper and into the surrounding forests, only to be relieved by Russian mechanised forces, elements of the 36th Combined Arms Army from Belarus that had, after a long slog through effective Ukrainian artillery gauntlets, pushed south along an axis west of the Dniپر to the airport by the 25th of February. Fighting would continue in the area until April 2, 2022, when, following a March 29, 2022 order, Russian ground forces completed their *en masse* withdrawal from the Kiev theatre.



Figure XXVI: Ukrainian 2S7 "Pion" 203mm self-propelled artillery pieces fire during an exercise

The Western press and analysis corps was quick to cite the "Battle of Antonov Airport" as a "Russian Airborne Disaster,"<sup>105</sup> that "... broke the back of the Russian assault on Kyiv...."<sup>106</sup> In a pattern that would repeat over and over again in the months that followed, orderly (or even not-so-orderly) Russian withdrawals were touted as heroic Ukrainian victories, routs of inferior units annihilated by better fighting (and better informed) defenders. Many of these claims had some kernel of truth to them, but their universal application to every Russian manoeuvre would later serve to dilute the credibility of Ukrainian claims for those analysts not dazzled by romantic notions of Ukrainian resistance.

In the wake of somewhat fawning coverage of the AFU, suggestions that the various operations around Kiev might have been, or at least included, Russian feints designed to delay or divert Ukrainian forces from the eastern and southern fronts where Russian forces moved to take the Donbas, were received incredulously. And why not? Admitting the Russian actions for deception would deny the Ukraine its major victory story during the opening phases

105 McGregor, Andrew, "Russian Airborne Disaster at Hostomel Airport," (March 8, 2022).

106 Mitzer, Stijn and Oliemans, Joost, "Destination Disaster: Russia's Failure At Hostomel Airport," (April 13, 2022).



of the war. Instead, the upshot, that the much lauded Russian airborne forces which even Western intelligence officials and analysts expected would form the point of the spear in a successful decapitating attack against Kiev, were a paper tiger, became conventional wisdom. To this day, this analysis continues to form the backbone of a larger thesis: the Russian military at large is a hollow shell, and all that is required not only to prevent further advances into Ukrainian territory but also to eject the invaders from the east and south, is the will to victory.

Still, the careful analyst might regard these self-sure pronouncements with some scepticism. Certainly, there are mixed signals with respect to the actual intentions that lay behind the planning of the airborne mission against Antonov Airport. On its face, the Russian plan followed the classic role of vertical envelopment solidified by both Axis and, more decisively so, Allied airborne experiences in World War II: using airborne forces to surprise defenders and capture key points well behind the lines, and hold such points until either relieved by advancing ground forces, or (far more difficult) graced with mass airhead reinforcement by airlift, or both.

At the same time, airborne assaults, or the threat thereof, are ideal mechanisms for deception. They are terrifying by their very nature: the introduction of elite troops in the defender's soft underbelly, behind the lines where they can roam unpredictably in the enemy's rear, threatening thinly protected supply lines, logistics facilities, command and control facilities, and headquarters units.

On September 14, 1944, Generalfeldmarschall Otto Moritz Walter Model, then commander of Army Group B and Oberbefehlshaber West (commander of all German forces on the Western Front), titles which put him command of several hundred thousand men in Europe, moved his headquarters to the Hotel Hartenstein in the Dutch town of Oosterbeek, near Arnhem and more than 100km from the Belgian border with the Netherlands, the front behind which the Allies had consolidated their forces after their landings at Normandy.

Only three days later, under the command of Major General Robert E. Urquhart, the British 1st Airborne Division dropped paratroopers on zones just west of Oosterbeek, supported by the Polish 1st Independent Parachute Brigade which, led by Major General Stanisław Franciszek Sosabowski, later dropped just south of the town. These forces would soon be reinforced by the British 52nd (Lowland) Infantry Division led by Major General Edmund Hakewill-Smith, whose troops would be flown in on gliders north of Oosterbeek and Arnhem once the paratroops had secured the landing zones. Combined with the 82nd and 101st Airborne Divisions, who were dropping further south, a total of more than 34,000 parachute and glider troops were deployed in Operation Market Garden that day.

The first paratroopers of the British 1st Airborne landed around 13:30 on Sunday the 17th, coincidentally, barely 3km from Model's headquarters. Not ten minutes later, word reached Model, interrupting his lunch and, possessing him with the fear that he was the target of the operation, prompted him to stuff handfuls of clothing into a suitcase (which purportedly fell open as he rushed to his staff car), order his headquarters packed up, and take flight.<sup>107</sup>

Later, as the scope of the operation became clear, even Model's ego would not permit him to imagine that he had been the primary target, but his initial flight was a wise bit of panic regardless as, not long after, one Captain John Killick of the British 1st Airborne Division, who had commandeered an abandoned German BWM motorcycle and forged out alone, causally wandered into the hotel to find the headquarters abandoned. Ironically, it was eventually usurped by Major General Urquhart as his field headquarters, a choice which would eventually see the structure ravaged during the decisive German counter-attack.

<sup>107</sup> For a detailed exploration of Generalfeldmarschall Model, See: Newton, Steven H., "Hitler's Commander: Field Marshal Walther Model – Hitler's Favorite General", Cambridge, MA: Da Capo (2006).



*Figure XXVII: Generalalfeldmarschall Otto Moritz Walter Model in August 1944, shortly after being awarded the “diamonds” device for his Knight’s Cross with Oakleaves and Swords*

Model’s fight during Market Garden was not isolated. More than once during the Second World War, even the mention of potential airborne landings had been enough to prompt senior officers to hurriedly pack up their headquarters and flee. A number of airborne forces have been more than happy to leverage the psychological impact of vertical envelopment to sew even more confusion by, for example, dropping faux airborne troops behind enemy lines in the dead of night.



*Figure XXVIII: An Allied “Rupert” Paradummy (c. 1944)*

But, Model would recover from his initial shock and pique of vanity and, beginning to understand what was at stake and what the Allied objectives were, deploy a reconnaissance company of the 9th SS Panzer Division before generally organising a defence that blunted the northernmost elements of the Allied operation and surrounded much of the British 1st Airborne. It is a pillar of 1st Airborne’s unit lore that the last radio transmission from Arnhem

bridge was "Out of ammunition, God save the King," (a painful detail normally omitted hold that because 1st Airborne's radio crystals were improperly fitted before the operation, the only unit to hear that transmission was a German signals intercept company).

After the war, rumours circulated that the Allies had been betrayed, and that a story that the plans for the operation had fallen into Model's hands on the 18th when they were found on the body of a dead American Captain (often portrayed as killed in the crash of a glider with a field headquarters unit on board) was cover to protect the human assets that delivered the German intelligence coup.<sup>108</sup>

History repeats itself, and the observant analyst should not be surprised that many elements of the "after action reports" of the Battle of Antonov Airport (prior intelligence ignored, betrayal of positions by fifth columnists, deceptions and feints, panicked defenders who, nevertheless, rally to repel an airborne assault) are echoes of classic, paradigm-defining airborne operations like Market Garden.<sup>109</sup> And yet, it is the analyst's curse to fall into such rabbit holes. Thus, we speculate on a matter key to any assessment regarding the current capabilities of the Russian Airborne forces (and, by extension, the Russian military at large): was the Antonov Airport operation folly, or a clever deception?



*Figure XXIX: Hotel Hartenstein, Model's headquarters, eventually converted to the headquarters of Major General Urquhart of the British 1st Airborne Divisions before being recaptured in the German counter-attack*

To be sure, there are any number of signs that the Russian operation to take Antonov Airport and extend that airhead to conduct a decapitation strike against Kiev was intended to be deadly serious. Perhaps among the more convincing rumours, the suggestion that Major General Andrei Aleksandrovich Sukhovetsky had led the airborne operation and was killed while landing at Antonov Airport (though alternative theories have him as a casualty in operations near the Black Sea, perhaps Kherson, or even Mariupol, and his most recent command of the 41st Combined Arms Army casts doubts that he would be deployed with a company-sized air assault element). If indeed, the Major General were part of the initial operation, it seems unlikely that Russian planners would permit such a military personality to hazard himself so flagrantly for a mission that was, at its heart, a feint.

Likewise, the apparent commitment of 18 Il-76 aircraft is a major bit of logistical kit. However, the existence of such a relief

<sup>108</sup> For a overview of Operation Market Garden, See Generally: Badsey, Stephen, "Arnhem 1944: Operation Market Garden", London: Osprey Publishing (1993).

<sup>109</sup> For a comparison of the two operations See: Kofsky, Jeremy, "An Airfield too Far: Failures at Market Garden and Antonov Airfield," The Modern War Institute at West Point (May 5, 2022).



and reinforcement mission has not been authoritatively confirmed and, being exceptionally effective bits of potential disinformation, Russian-propagated rumours of such a sortee could as well support the "feint theory" as not.

But there are hints which support the "Kiev feint" theory as well. In particular, that operations within the "northern" Kiev axis (and the southern axis) were conducted much differently than Russia's efforts in the east:

Russian operations in the north and south of Ukraine made very little use of field artillery. This was partially a matter of logistics. (Whether raiding in the north or rapidly occupying in the south, the Russian columns lacked the means to bring up large numbers of shells and rockets.) The absence of cannonades in those campaigns, however, had more to do with ends than means. In the north, Russian reluctance to conduct bombardments stemmed from a desire to avoid antagonizing the local people, nearly all of whom, for reasons of language and ethnicity, tended to support the Ukrainian state. In the south, the Russian policy of avoiding the use of field artillery served a similarly political purpose of preserving the lives and property of communities in which many people identified as "Russian" and many more spoke Russian as their native language.

In the east, however, the Russians conducted bombardments that, in terms of both duration and intensity, rivalled those of the great artillery contests of the world wars of the twentieth century. Made possible by short, secure, and extraordinarily redundant supply lines, these bombardments served three purposes. First, they confined Ukrainian troops into their fortifications, depriving them of the ability to do anything other than remain in place. Second, they inflicted a large number of casualties, whether physical or caused by the psychological effects of imprisonment, impotence, and proximity to large numbers of earth-shaking explosions. Third, when conducted for a sufficient period of time, which was often measured in weeks, the bombardment of a given fortification invariably resulted in either the withdrawal of its defenders or their surrender.

[...]

In the Russian campaigns in Ukraine, however, a set of operations made mostly of movement complemented one composed chiefly of cannonades.

One way to resolve this apparent paradox is to characterize the raids of the first five weeks of the war as a grand deception that, while working little in the way of direct destruction, made possible the subsequent attrition of the Ukrainian armed forces. In particular, the threat posed by the raids delayed the movement of Ukrainian forces in the main theater of the war until the Russians had deployed the artillery units, secured the transporting network, and accumulated the stocks of ammunition needed to conduct a long series of big bombardments. This delay also ensured that, when the Ukrainians did deploy additional formations to the Donbass region, the movement of such forces, and the supplies needed to sustain them, had been rendered much more difficult by the ruin wrought upon the Ukrainian rail network by long-range guided missiles. In other words, the Russians conducted a brief campaign of maneuver in the north in order to set the stage for a longer, and, ultimately, more important campaign of attrition in the east.

The stark contrast between the types of warfare waged by Russian forces in different parts of Ukraine reinforced the message at the heart of Russian information operations. From the start, Russian propaganda insisted that the "special military operation" in Ukraine served three purposes: the protection of the two pro-Russian proto-states, "demilitarization," and "denazification." All three of these goals required the infliction of heavy losses upon Ukrainian formations fighting in the Don-

bass. None, however, depended upon the occupation of parts of Ukraine where the vast majority of people spoke the Ukrainian language, embraced a Ukrainian ethnic identity, and supported the Ukrainian state. Indeed, the sustained occupation of such places by Russian forces would have supported the proposition that Russia was trying to conquer all of Ukraine.<sup>110</sup>

One might also wonder after Russia's execution of the airborne operation. Why limit the initial air assault contingent to a mere 300 troops? Security concerns aside, why was the mission not practiced, and why were those troops only told of the nature of their mission once already airborne?

To resolve the apparent conflict between the "feint:no-feint" question, we take a hybrid approach. The analysis of the three (plus one) major Russian axes of attack as three distinct campaigns with three distinct strategic objectives raises for us a third possibility: an airborne "option play."

As with many military ironies, the very advantage of airborne operations (their ability to cause the most highly-trained light infantry to appear, as if by magic, where they are least expected and where you are most vulnerable; infantry that travels light and can move with devastating speed before you can react) is also their greatest vulnerability. Because their only supply is what they can carry, from the moment they land, their key advantage, surprise, begins to leak away even as their limited endurance (in the form of food and ammunition) is expended.

Unless limited to small commando raids (like Hauptsturmführer Otto Skorzeny's airborne "Gran Sasso raid" to free Benito Mussolini from Italian captivity in 1943) even surgical airborne operations must include some plan for relief by larger forces before the advantage of initiative and surprise wears off. Even an operation as focused and isolated as the "Battle of Fort Eben-Emael," where, in May of 1940, 500 German paratroopers neutralised the Belgian Fort Eben-Emael to permit the Wehrmacht's 18th Army to roll under its guns unopposed, is no exception to the general rule. It too eventually relied on larger, better supplied forces to relieve the initial commando group.

The implication is that, at their heart, airborne missions are high-risk, high-reward endeavours that are best deployed not as operations unto themselves, but as adjuncts to larger tactical and strategic movements. In the same vein, effective military planners will not hinge the fate of larger operations on the success of a high-risk airborne mission. They will view airborne operations as a roll of the dice which, on a risk-adjusted basis, may or may not provide positive returns in the context of a broader set of operational goals.

To our way of thinking, the initial Russian strokes against Kiev in February 2022 are best measured against this context. To the extent Russian strategic objectives did not include the long-term occupation of all of Ukraine (the interpretation we credit as most likely and one that has the virtue of aligning with repeated public statements of Vladimir Putin and senior officers of the Russian Armed Forces), a high-risk, high-reward "roll of the dice" to sever the leadership in Kiev from the rest of the country offered an attractive cost-benefit opportunity.

Certainly, the Russians had cause to believe that Ukrainian resistance would be limited and that the political will and force of the Zelenskyy government, which Russia certainly viewed with contempt, was thin enough that a credible threat to the capital would crush it. It bears repeating that the Russians were not remotely alone in this opinion, and that senior U.S. officials and military officers shared rather unfavourable views of Kiev's ability and will to resist. To the extent Russian intelligence was a factor in decision-making, and it is hard to think that it was not, the picture on the eve of February 23, 2022 likely aligned well with these assess-

<sup>110</sup> Schmitt, John F., Gudmundsson, Lt. Gen. (ret) Bruce I., Van Riper, Col. Paul K., Van Riper, James K., and Walters, Col. Eric M., "The Russian Invasion of Ukraine, Maneuverist Paper No. 22," *The Marine Corps Gazette* (August 2022).

ments of Ukrainian weakness. After all, other than National Guard (in particular, the 4th Rapid Reaction Brigade) or scattered Territorial Defence units, the only major, mechanised contingent of the Armed Forces of Ukraine in a position to defend Kiev was the 72nd Mechanised Brigade, a unit whose commander, Colonel Oleksandr Vdovychenko, was convinced that, when ordered to counter-attack even the small contingent of Russian forces at Antonov Airport, he had no chance of unseating them.<sup>111</sup>

In our estimation, the airborne operation against Antonov Airport, and by extension Kiev, and expected relief by units of the 36th Combined Arms Army, was a calculated risk by the Armed Forces of the Russian Federation designed along the lines of a classic airborne assault. We also assess that, more likely than not that, while its primary objective must have been the capture of Kiev or at least the ejection of the Zelenskyy government, the operation helped secure a secondary objective of sewing confusion and panic, and tying down Ukrainian forces that might otherwise have shifted further east and south to oppose Russian thrusts along other axes.

Frustrating the operation even further than the problems on the ground at the airport, elements of the 36th Combine Arms Army ordered to stream south to relieve the Russian airborne forces were apparently ordered to do so in an administrative column and bypass rather than engage any Ukrainian units along the way. At least one analysis suggests the motivation for these orders was some combination of speed, and an unwillingness to engage in major conventional combat that would likely result in collateral damage close to Kiev. As a result, Russian columns were particular susceptible to Ukrainian artillery and air strikes as they made their way to the airport.

Whatever the reality, and unfortunately for Russian aspirations, the net effect of the failure to secure the very public and apparent primary objective, had the effect of emboldening the Ukrainian defenders and seriously damaging assessments of the competence and capability of the most elite of Russian units, effects which, in turn, have since served to materially degrade Western appraisals of the whole of the Armed Forces of Russia. The proximate consequence of this loss by the Russian Airborne Forces has been to extend the conflict in Ukraine at the expense of many tens of thousands of lives.

### *Loser: Russian Battalion Tactical Groups*

Much fuss was raised in the weeks and months before the opening strokes of the February 2022 invasion of Ukraine by the Armed Forces of the Russian Federation over the prospect of a "Western" army facing Russia's Battalion Tactical Group ("BTG") formations. As conflict approached, and much to the alarm of Western analysts, Russia was eventually thought to have deployed as many as 100 of the ~700-800 man groupings on the borders with Ukraine. And yet, as the conflict developed, BTGs began to vanish from analytic discussion, until, as of this winter, it seemed that Russia was no longer using BTG orderings in its deployments at all. Digging deeper, it emerges that, though once a central part of Russian land warfare doctrine, the concept has been more or less abandoned in the present conflict. Understanding the failure of the concept in the current circumstances is an important step towards assessing Russia's intentions and likely tactics in the next phases of the "Special Military Operation."

Traditional groupings of modern mechanised forces draw their organisational DNA from Napoleon's novel corps and battalion structure, whereby formations of infantry, cavalry, artillery, etc. were stood up under commanders (Napoleon's Marshals and Generals) who were given a larger strategic goal but a great deal of autonomy with respect to how they accomplished it. By splitting his army into these units and marching them in a loose battalion square (*bataillon carré*) formation with a cavalry screen out front,

<sup>111</sup> Sonne, Paul, et. al., "Battle for Kyiv: Ukrainian valor, Russian blunders combined to save the capital," *The Washington Post* (August 24, 2022).

left and right flank pickets, and a reserve unit behind, the group’s component parts could travel faster along parallel routes (rather than crowding one road), could more easily locate and fix the enemy owing to a wider front of scout units, and then, using fast riders to maintain communication between the separate formations, call upon the other French battalions to join the battle and quickly turn flanks or threaten the enemy’s rear. Napoleon’s opponents often had the unenviable experience of encountering what seemed to be a smaller French force and committing to a particular course of battle, only to have more French battalions suddenly arrive from unpredictable directions, forcing them as a consequence to attempt to defend everywhere, and be strong nowhere.<sup>112</sup>

Infantry Brigade Combat Team (IBCT)  
Table of Organization  
U.S. Army 2013

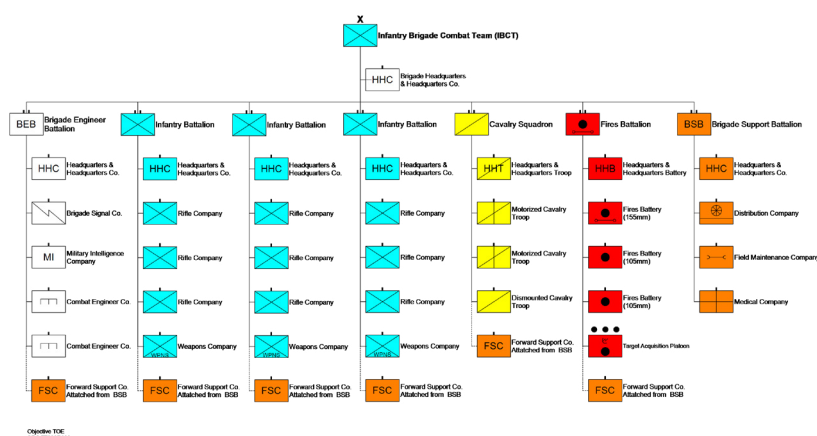


Figure XXX: Order of Battle: Infantry Brigade Combat Team (“IBCT”) c. 2013<sup>113</sup>

Almost all modern armies have adopted some version of the system, breaking their unit formations from, for example, army, down to corps, division, regiment/brigade, battalion, platoon, company, squads, and teams. Typically, the battalion level is where basic unit types are defined and then grouped into brigades. In the case of the American Army’s archetype Infantry Brigade Combat Team (“IBCT”) formations, the larger brigade, typically commanded by a Colonel, is composed of three infantry battalions commanded by Lieutenant Colonels and of about 1’000 men each (the core of the formation), one engineer, artillery (“fires”), and support battalion, and a cavalry squadron, for a total of around 4’000-4’500 personnel.

The novel element of the Russian BTG concept is essentially to move the basic combined-arms manoeuvre unit (i.e. units of infantry, armour, engineers, air-defence, logistics, and, notably, artillery) down the chain of command to the battalion level, typically with a Major in command. It is not a new concept, at least in Russia, where the practice dates in some form back to the Russian Civil War. In modern incarnations, the formation is intended to give a much smaller grouping (800 personnel to the battalion, of whom 200 or so are pure infantry, versus 3’000-5’000 at the brigade level) a great deal of autonomy to conduct combined-arms manoeuvre operations. Current BTGs have been known to add chemical, biological, and nuclear defence elements, organic maintenance resources, mortar sections, etc.

The modern BTG concept appears to have been the result of Russian experiences in Afghanistan from 1980-1989, and Chechnya from 1994-2006. In those conflicts, the Russian military faced an enemy more prone to conduct raids or hit-and-run attacks

<sup>112</sup> For an exceptional review of Napoleon’s innovations and art of Manoeuvre warfare, See Generally: “Napoleon’s Art of Warfare: The History of Battle, Manoeuvre Part 5”, Big Serge Thoughts (December 6, 2022).

<sup>113</sup> Gladius, Michael, “Heavy Infantry in the Order of Battle”, Small Wars Journal (June 2, 2019).

against Russian outposts or convoys, and, particularly in Chechnya, engage in urban warfare. The demands of these environments required a combination of fire-power (armour and heavy weapons to deal with fortified buildings in urban areas, or fight through prepared ambushes, for example) and smaller, highly-maneuvrable units or detachments to flank and assault into the structures and the ruins of concrete constructions common to modern urban combat.

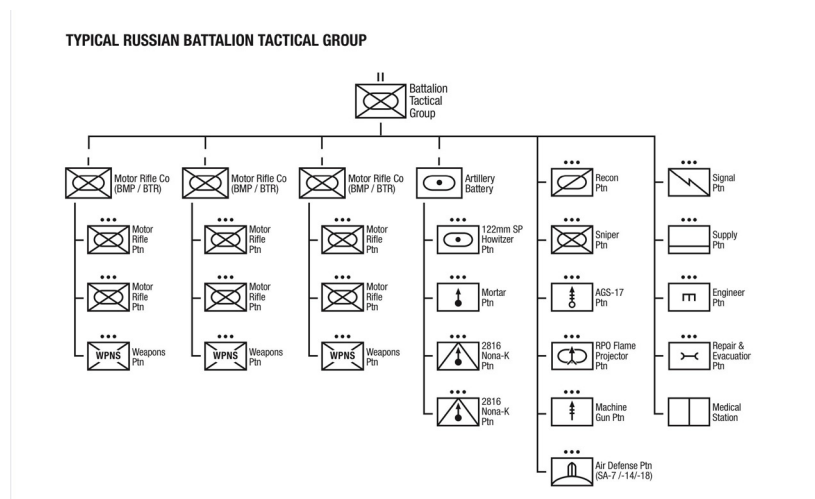


Figure XXXI: Order of battle for a typical Russian Battalion Tactical Group<sup>114</sup>

The use of a number of temporary detachments separated from larger units and combined for a particular purpose could be effective, but these formations were ad hoc, and their personnel would not have trained together. Coordination, so critical in the midst of combat, suffered. To begin with smaller, pre-formed, combined-arms units with pre-defined lines of communication and coordination, units that had trained and barracked together, was seen as a far more effective approach to fielding more agile combined-arms formations. Additionally, to solidify the cohesiveness and professionalism within BTGs, it has long been settled practice in the Russian military that they not be staffed with conscripts, but rather career military personnel only.<sup>115</sup>

Seen as a major advantage to the structure, the addition of an organic artillery resource at the battalion level assured that what amounted to a small infantry contingent (no more than 200 personnel) could call on dedicated fire support without needing to navigate comms channels to battalion headquarters, up to brigade headquarters, and then down to the brigade's artillery battalion, where the fires unit may or may not have other fire missions with priority. In the current Russian BTG concept, six 152mm self-propelled howitzers (likely 2S19 "Msta" units), two MT-LB armoured fighting vehicles carrying 82mm mortar tubes, and six BM-21 "Grad" MLRS platforms with 122mm rocket artillery, give a BTG substantial indirect fire-power. With an armoured contingent that is normally composed of ten T72 main battle tanks, a modern BTG is well-equipped to deliver heavy direct and indirect fire against any pocket of resistance it happens to encounter.

And yet, the BTG structure seems to have so struggled in the Ukrainian theatre that current Russian doctrine has abandoned the concept. The curious analyst is compelled to ask: why?

The early weeks of the invasion saw Russian ground forces pressing deep into Ukrainian territory along several axes. In many cases, forces were ordered to proceed in administrative columns to

<sup>114</sup> On the Russian Battalion Tactical Group, See Generally: Grau, Lester W. and Bartles, Charles K., "Getting to Know the Russian Battalion Tactical Group", The Royal United Services Institute for Defence and Security Studies (April 14, 2022).

<sup>115</sup> On the evolution of the Russian Battalion Tactical Group, See Generally: Grau, Lester W., "Restructuring the Tactical Russian Army for Unconventional Warfare", Red Diamond, Fort Leavenworth (February 2014).

optimise their speed of advance, and to bypass units of the Armed Forces of Ukraine encountered short of Russian objectives, both to reduce collateral damage and to avoid getting bogged down en route. Unexpectedly, rather than engage Russian mechanised units directly, many Ukrainian units withdrew into cities to mount urban defences, relying in many cases on dismounted infantry with man-portable anti-armour missiles to snipe at Russian mechanised forces. After recovering from the initial shock, the AFU used well-coordinated artillery operations from what was then a very substantial number of indirect fire units, to savage vulnerable Russian columns.

The Ukrainian response had a three-fold effect on BTGs. First, as they relied on their own organic supply contingent in order to increase their independence and speed, they carried lighter loads of ammunition and fuel and were far more susceptible to supply disruptions, which Ukrainian artillery was all too happy to provide. Second, tasked with deep advances often over open ground, rather than the short and quick manoeuvre missions or urban combat that BTGs were designed to mount (but in this case, ordered to avoid), the small size of BTGs meant it was difficult for them to protect their flanks and avoid infiltration behind their axis of advance. Third, with only around 200 infantry mounted on perhaps 40 infantry fighting vehicles, BTGs were understrength for deep-penetration missions opposed by much larger units and therefore unable to muster larger concentrations of artillery barrages, and uniquely vulnerable to casualties. So far from larger brigade supply resources, the loss of even a small portion of their mechanised equipment could mean paralysis and render a wounded formation nearly combat ineffective. As Ukrainian close air support began to reorganise, missions against advancing BTG columns, particularly targeting their artillery and supply elements, could quickly reduce the unit to little more than an under-force and supply-challenged infantry formation.

Ironically, senior leadership in the Armed Forces of the Russian Federation seem to have made the same mistake as their counterparts in the United States Armed Forces. Namely, a focus on adapting their militaries for asymmetric conflicts, which have characterised the primary experience of both militaries since World War II, has tuned doctrines away from the structures and tactics demanded by wide-scale conventional conflict, like the present mission in Ukraine. The result has been the bitter pill of experience. In the case of Russia, one which has rendered the Battalion Tactical Group concept one of the obvious losers in the present conflict. It remains to be seen what will be deployed to replace it.

*Winner: The Armed Forces of the Russian Federation*

Several serious miscalculations characterise the initial Russian planning and execution of their special military operation, and no doubt a large share of the blame falls to Russia's civilian and military intelligence appendages (the "FSB" and "GRU" respectively). A wholesale underestimation of the resolve of Zelenskyy and his government, and perhaps a wholesale overestimation of the prospects for a small air assault unit to secure Antonov Airport and extend control into Kiev, caused the Russian military to launch an understrength operation which has required it to reset into an economy of force posture. The result has been to shift the conflict into a months-long attrition phase, and grant Ukraine the opportunity to solicit and secure significant support from her patron states, a set of missteps that have cost both Russia and Ukraine many lives and much treasure.

As discussed elsewhere supra, the result has been the widespread and oft repeated Western view that Russia's military is the hollow, rotting force of a third world power; lacking in supplies, ammunition, leadership, competence, and men. This is a dangerous misconception, and one that threatens to prompt Western leaders to their own highly-dangerous miscalculations. One need only note the prevalence of the view that the Armed Forces of



Ukraine will, any month now, eject Russian forces entirely from Ukraine, and even invade and eventually partition Russia itself, to grow concerned with the prospect for dangerous escalation.

Meanwhile, in the interim and contrary to the pervasive and unquestionable narrative relentlessly pushed by the West, the Russians have steadfastly and effectively executed towards what must ever be the most critical and primary objective of any military conflict: the destruction of the enemy's ability to conduct combat operations.

On paper, in early 2022 the Armed Forces of Ukraine fielded some 2'500 tanks, 12'000 armoured vehicles, 1'000 pieces of self-propelled artillery, 2'000 pieces of towed artillery, nearly 500 mobile rocket launchers, and depending on the source, between 200'000 and 700'000 military personnel, far and away the largest and most mechanised force in Europe.<sup>116</sup>

As of this writing, the principal political debate with respect to the conflict appears to be the question of various NATO members pooling together to provide Ukraine with a dozen to a hundred main battle tanks, a material grant that, in Ukraine's own words, is existential to its continued existence. This presents a strange paradox: that a country which not 11 months ago counted its tank inventory in the thousands, should be dependent for its survival on another hundred and an equal amount of infantry fighting vehicles.

Of course, this occasions a difficult question, so difficult, in fact, that no one in the Western media or analyst corps dares to ask it: where did Ukraine's army go?

Beginning with the siege of Mariupol though May of 2022, while much of Western attention was focused on Kiev, Russian forces eventually so reduced the 20'000 man grouping in Mariupol, and then some 60'000 of Ukraine's best and most experienced military personnel, along with the "Azov Battalion," and hundreds if not thousands of mercenaries and Western advisors that had flooded into defend the larger Donbass area, that most of the units involved in the fighting would never recover.

Then, in May 2022, there was the much-celebrated Ukrainian counter-offensive victory in Kharkov, a surprise attack and advance that purportedly caught the Russians by surprise and spurred Western press and analysts alike to proclaim the imminent and impending doom of the Russian operation, and the necessity for Russia to cut its losses and withdraw entirely from Ukraine before it was too late. Certain details, however, received far less public attention.

At the time, the Russians enjoyed good intelligence in the immediate area and certainly could not have missed the build-up of fresh personnel and equipment (much of which was shipped in by NATO that spring) in staging areas and poised to thrust at Kharkov. As the offensive approached, it emerged that the effort was under the overall command of NATO officers, rather than just Ukrainian leadership. In response, and in alignment with the "economy of force" stance that the Russian military had taken since their withdrawal from Kiev, the bulk of Russian units were pulled back, leaving only a screening/delaying force of a few thousand, troops with orders to fade back in front of any Ukrainian advance.

Also possessed of good intelligence, no doubt NATO commanders could see how thinly-defended the front was, and so launched their counter-attack, a movement that launched a thousand glowing headlines as Russian forces "retreated so fast we could not keep up." The buried lede being, of course, that there were very few incidents of direct contact between Ukrainian and Russian troops. Another detail receiving little or no attention was the magnitude of casualties taken by the AFU during their advance. The Russians had carefully prepared and registered standard and rocket artillery zeros all along the AFU's expected lines of advance. Depending on the source, estimates for AFU casualties range from

<sup>116</sup> See e.g.: The Global Firepower Database (2022), "The Military Balance", The International Institute for Strategic Studies (2022).

20%-40% and, despite launching another offensive in September to take Izyum and nearby settlements, once the Ukrainian force hit the Oskol river, their advance stalled. Ukrainian casualties and capabilities had always been a sensitive topic, but hints at the poor state of the AFU leaked out. To wit:

Gen. Mark A. Milley, the chairman of the Joint Chiefs of Staff, has made the case in internal meetings that the Ukrainians have achieved about as much as they could reasonably expect on the battlefield before winter sets in and so they should try to cement their gains at the bargaining table, according to officials informed about the discussions.<sup>117</sup>

The reality was that, by July, the Russians' defensive posture and reliance on their, by then, much-superior artillery corps to saturate Ukrainian positions and rear-formations, had essentially gutted Ukraine's original NATO trained, equipped, and supplied army. NATO then rushed in and poured in more material. Specifically, and only to outline a partial list of the equipment that has been publicly acknowledged:

- 400 main battle tanks of Soviet manufacture (primarily by Poland and the Czech Republic)
- 300 infantry fighting vehicles, of which 250 were of Soviet vintage
- 1'100 armoured personnel carriers (300 M113s and 250 M117s)
- More than 900 "armour up" vehicles (e.g.: the Australian Bushmaster)
- Some 1'500 other military vehicles (e.g.: American HM-MWVs)
- More than 300 towed howitzers (primarily American M777s)
- More than 220 self-propelled howitzers (e.g.: the French Caesar)
- Approximately 100 MRLS rocket artillery platforms
- 37 German Gepard self-propelled anti-aircraft artillery pieces
- Eight NASAMS anti-aircraft missile batteries
- 18 Su-25 attack aircraft
- 20 Mil Mi-7 transport helicopters
- A slew of other assorted radar, sensor, drone, anti-ship systems, and various other pieces military equipment and hardware<sup>118</sup>

All in all some USD 51.5 billion in military equipment and hardware, excluding other aid and cash transfers (as of October 2022, the United States has essentially been funding the entire government of Ukraine), have been sent to Ukraine from February to November of 2022. This sum constitutes more than three-quarters of the entire Russian military budget for 2021.<sup>119</sup>

Ukraine launched aggressive mobilisation campaigns to recruit foreign mercenaries and conscript personnel, some destined to be given accelerated training regimens by NATO personnel on NATO bases. Thus, Ukraine was effectively provided with its second NATO army. Unfortunately, the Federal Reserve of the United States cannot print experienced soldiers, much less seasoned commissioned and non-commissioned officers. Replacing these stocks is a project measured in years, not weeks or months.

This "second mechanised army" put Ukraine in a more difficult position than is typically acknowledged. After the core of its organic military expertise and hardware was irretrievably damaged, the Armed Forces of Ukraine became entirely dependent on its patron states. Accepting Western 155mm artillery pieces, as an example,

<sup>117</sup> Baker, Peter, "Top U.S. General Urges Diplomacy in Ukraine While Biden Advisers Resist," *The New York Times* (November 10, 2022).

<sup>118</sup> Winfrey, Michael, "Ukraine Seeks Weapons to Beat Back Russia: Here's What It's Got," *Bloomberg* (January 15, 2023).

<sup>119</sup> *Ibid.* and World Bank.

means begging Western patrons for 155mm shells. Because, however, NATO has allowed its conventional war-fighting capabilities to deteriorate to a shameful degree, Ukraine's military sugar-daddies are beginning to prove unequal to the task. More unfortunately for Ukraine, these patrons are not unified in their commitment to support their client, nor do they share a common vision for the form any support should take. Worse, as a group they are becoming more and more fractious and unwilling to sacrifice their own political capital for the sake of their client.

Despite the waning ability of NATO to deliver military support, one disastrous consequence of this patron-dependence is that the military objectives the AFU must adopt to maximise the probability of any form of continuing support from its patrons are increasingly optical and political in nature. The most obvious of these is "territory controlled," a metric that is easy to show to politicians and the general public via coloured shadings on a map, and, as the area shaded in blue grows, easy to convey as military "success." The effect of this mandate can be seen in the way the AFU has, rather desperately, mounted attack after attack, often without the support of armour and sometimes only in company-sized formations, often against Russian positions that seem to have no particular strategic or even tactical value. That these attacks have progressively devolved into smaller and smaller units does not suggest that the manpower or material resources of the AFU are in a healthy state.

Even more extreme, the desperate and increasingly hopeless defence of Soledar and Bakhmut, apparently at the cost of tens of thousands of lives, seems motivated more by the fear of losing areas of coloured shading on a map than any realistic military objectives.

For its part, Russia has been more than happy to take advantage of the AFU's need to hold and take ground for the sake of holding and taking ground and, by some measures, this has meant a 5:1, 7:1, or even 10:1 casualty ratio in Russia's favour since September. If these figures are remotely accurate, and there is ample reason to think they are, as the pleading for heavy material and armour in the form of main battle tanks and infantry fighting vehicles has reached a deafening volume, Ukraine is going to need yet a third mechanised army. To say it is not immediately obvious where such an army might come from is a dramatic understatement.

Russia, by contrast, is not dependent on other states or the good graces of bickering alliances for its material or manpower. In terms of supply, since the spring it has consistently frustrated repeated Western predictions of imminent ammunition exhaustion in conventional and rocket artillery and precision stand-off weapons. Had said analysts made a careful review of Russia's demonstrated focus on industrialising its conventional war-fighting supply chains since 2014, they might have been more careful about predicting a lack of combat stamina that has certainly not been in evidence.<sup>120</sup>

Certainly, Russia enjoyed the "peace dividend" afforded by the end of the Cold War but, unlike the West, did not leverage the opportunity to abandon military spending wholesale. On the contrary, and in particular since 2013-2014, Russia has spent quite some effort shoring up its ability to wage extended conventional campaigns, as evidenced by the continued high-pace with which it expends artillery and stand-off weapon inventories, not to mention the more recent appearance of more than a thousand main battle tanks (including the newest T-90s) and thousands of infantry fighting vehicles immediately adjacent to the Ukrainian theatre of operations. This is in stark contrast to the West, which would appear to have exhausted its war-fighting capabilities by providing Ukraine with two mechanised armies in the course of 7 years.

It now seems clear that at the very point where the Armed Forces of Ukraine are reaching the limits of their ability to field combat capable units, Russia is reaching the peak of its own capabilities.

<sup>120</sup> For a detailed examination of current Russian military-industrial capabilities, See Generally: Radin, Andrew, et. al., "The Future of the Russian Military", Rand Corporation (2019).

As analysts, we cannot construct a plausible scenario wherein the AFU fields forces sufficient to hold back Russian aspirations in southern and eastern Ukraine. Nor can we design examples where NATO is in a position to provide assistance of a magnitude likely to make a difference. Thus, after a difficult start, we expect the Armed Forces of the Russian Federation to emerge from the present conflict as a winner.

It is the plight of the analyst who writes for publication that missed projections and failed predictions become part of the permanent record. Accordingly, in our own humble efforts, we also seek to add value by reference to history, curious vignettes which attract our notice, and the occasional obscure fact that may serve to give one pause. In doing so, and particularly given the often grim nature of the subject matter we treat, we hope that our efforts will also occasionally educate and entertain, gains that should endure the annoying habit that events seem to have of scuttling carefully crafted theses

It would be our pleasure if, in this particular case, we succeeded.

Respectfully Submitted,

~finnem research