Simultaneous Transformation and Rapid Growth of the US Army in World War II

A Monograph

by

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14. ABSTRACT

No one knew it at the time, but the Victory Plan of 1941 was to become the operational concept used by the United States and her Allies to wage World War II. The study was led by a US Army Major Albert C. Wedemeyer. The plan was incredibly accurate at predicting an operational concept to a strategy that was as yet unstated and far from clear. The methodology MAJ Wedemeyer used to develop the plan allowed for the rapid growth and simultaneous transformation of the US Army. Could this methodology be used again today in a similar manner?

The research for this paper found that the US Army could only numerically support defensive operations in the Baltics and could not support offensive operations. The less than 1:2 ratio of armored brigades potentially available was the most striking finding. The aggregate combat power of sixty-nine NATO BDEs to seventy-six Russian BDEs still came out to less than 1:1 for the US/NATO. Similar to the dilemma that MAJ Albert Wedemeyer faced, the US Army would have to rapidly grow and simultaneously transform to conduct offensive operations under an acceptable force ratio against a peer or near-peer threat.

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Abstract

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No one knew it at the time, but the Victory Plan of 1941 became the operational concept used by the United States and her Allies to wage World War II. MAJ Albert C. Wedemeyer, a US Army Major who had arrived at the War Plans Division at the War Department just a few months prior, led the study. Written in the months prior to the events at Pearl Harbor on December 7, 1941, the plan was incredibly accurate at predicting an operational concept to a strategy that was as yet unstated and far from clear. The methodology MAJ Wedemeyer used to develop the plan allowed for the rapid growth and simultaneous transformation of the US Army. Could the US Army use this methodology again today in a similar manner?

The research for this paper found that the US Army could only numerically support defensive operations in the Baltics and could not support offensive operations. The less than 1:2 ratio of armored brigades potentially available was the most striking finding. The aggregate combat power of sixty-nine NATO BDEs to seventy-six Russian BDEs, to include ABCTs, ACRs, IBCTs, SBCTs, MEBs, and CABs, still comes out to less than 1:1 for the US/NATO. Similar to the dilemma that MAJ Albert Wedemeyer faced, the US Army would have to rapidly grow and simultaneously transform to conduct offensive operations under an acceptable force ratio against a peer or near-peer threat.

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Acronyms

A2AD	Anti-access/area-denial
AASLT	Air Assault
ABC	American-British Conversations
ABCT	Armored Brigade Combat Team
ABN	Airborne
ACR	Armored Cavalry Regiment
ADA	Air Defense Artillery
AUSA	Association of the United States Army
BCT	Brigade Combat Team
BDE	Brigade
BN	Battalion
BTC	Baku-Tbilisi Ceyhan pipeline
CAB	Combat Aviation Brigade
CBRN	Chemical, Biological, Radiological, Nuclear
CENTCOM	Central Command
COFMS	Correlation of Forces and Means
COIN	Counterinsurgency
CONUS	Continental United States
CVR(T)	Combat Vehicles Reconnaissance (Tracked)
DIV	Division
EUCOM	European Command
FM	Field Manual
FORSCOM	Forces Command
GAAT	Georgia, Armenia, Azerbaijan, Turkey

GCC	Geographic Combatant Command
HQs	Headquarters
IBCT	Infantry Brigade Combat Team
IFV	Infantry Fighting Vehicles
IMP	Industrial Mobilization Plan
MAJ	Major
MCO	Major Combat Operations
MEB	Marine Expeditionary Brigade
MECH IN	Mechanized Infantry
MR	Motorized Rifle
NATO	North Atlantic Treaty Organization
NDAA	National Defense Authorization Act
OPT	Operational Planning Team
PACOM	Pacific Command
PMP	Protective Mobilization Plan
RECCE	Reconnaissance
RGT	Regiment
RW	Rotary Wing
SBCT	Stryker Brigade Combat Team
USSR	Union of Soviet Socialist Republics (Soviet Union)
VJTF	Very High Readiness Joint Task Force
WMD	(Russian) Western Military District
WPD	War Plans Division (within the War Department)
WWI	World War One
WWII	World War Two

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Introduction

No one knew it at the time, but the Victory Plan of 1941 was to become the operational concept used by the United States and its Allies to wage World War II. The study was led by US Army Major (MAJ) Albert C. Wedemeyer who had arrived at the War Plans Division of the War Department just a few months prior. The plan was incredibly accurate at predicting an operational concept to a strategy that was as yet unstated and far from clear. Seemingly overnight the United States raised the end-strength of its Army from just over 200,000 officers and men to over eight million. Simultaneous to this growth, the US Army transformed from a force structured around light infantry tasked with the defense of American possessions to a combined-arms force capable of projecting force across the globe. Wedemeyer and his small team developed this plan in just over ninety days prior to the entry of the United States into the war. With limited strategic guidance, MAJ Wedemeyer accurately developed what was to become the operational concept that efficiently employed the industrial might of the United States into battle.

The Victory Plan of 1941 was officially titled "Ultimate Requirements Study" and was intended to determine war production requirements for American industry while anticipating the needs of America's allies under the Lend-Lease program. MAJ Wedemeyer quickly realized that to answer this relatively straightforward logistical question he would first need to determine the size and organization of a US Army. The methodology he developed successfully linked the strategic aims of the United States and its allies to the tactical employment of forces across the globe.[1]

The methodology MAJ Wedemeyer used to develop the plan allowed for the rapid growth and simultaneous transformation of the Army. Could the US Army use this methodology again today in a similar manner? The US Army as currently manned and structured is not prepared to conduct major combat operations (MCO) against a near-peer threat and would need to rapidly grow and transform structurally simultaneously. This study conducted research to prove or disprove this thesis. Additionally,

[1] Charles E. Kirkpatrick, *An Unknown Future and A Doubtful Present: Writing the Victory Plan of 1941* (Washington, DC: US Army Center of Military History, 1992), 1-3.

this study also conducted research to highlight the proposed capability gap between the US Army and a peer/near-peer threat and to provide an estimate on the means necessary to close the capability gap.

Methodology

This paper studies the development of the Victory Plan of 1941 as a historical precedent for a large and rapid build-up of the US Army to conduct MCO. The research focused on the methodology used to build the Victory Plan. This plan, developed in three months, took the US Army from a force of under 200,000 Soldiers to a force of over 8.5 million. It simultaneously focused on reorganizing an army optimized to garrison American territories and defend the western hemisphere to an offensively-minded expeditionary force capable of liberating a continent. Additionally, what are the requirements to project this force into theater and is there a capability gap?

The final sections of this project give practical application to the Wedemeyer methodology using a potential NATO counter-attack to retake the Baltic states following a rapid seizure by Russia. Section three compares ground force capabilities between Russian and the United States, along with those of their likely allies. Section four fuses the lessons learned from the historical case study of the 1941 Victory Plan with the capability delta identified in section three. This section focuses on what this proposed offensively-minded expeditionary US Army should look like to be capable of operational success against a near-peer threat. This study uses considerations discovered in the historical case study as a filter to illuminate the way ahead.

Criteria

This section outlines the criteria used to determine the threat against which the US Army's capability would be measured. To compare the Russian Army and US Army capabilities, the author conducted quantitative and qualitative research to determine the size, composition, and structure of the Russian Army. The author conducted similar research on current US Army size, composition, and structure as well as the size, composition, and structure of the armies of her NATO allies. Below are the criteria of how this study compared two forces using a historical case study.

Selecting a historical case study

This study analyzes the development of the Victory Plan of 1941 as a historical case study because of the similarities that exist between the overall goal of the plan and the guidance put forward by the Chief of Staff of the Army, General Mark A. Milley. General Milley's vision for the US Army is a force capable of waging major MCO against a near-peer threat.[2] The research in this paper shows that to meet GEN Milley's vision, the US Army would have to rapidly grow and transform simultaneously. Although GEN Milley did not envision growth comparable to that of the US Army from 1941 to 1945, he did say that the force needs to shift from one optimized to conduct counterinsurgency (COIN) operations to large-scale offensively-minded operations. Similarly, the Victory Plan of 1941 envisioned transforming a force optimized to garrison American territories and defending the western hemisphere to one organized for large-scale offensively minded operations capable of liberating a continent.

Selecting a threat

While there are many near-peer threats globally, the scope of this project is intentionally limited to focus the attention on the US Army's capability gap. Capability gaps in naval forces and to a lesser extent air forces are beyond the scope of this project. A land war in Asia against either China or North Korea would involve a large naval variable and would subsequently drive this project beyond its scope. A land war against Iran would involve a large occupation force post-conflict. Also, while larger in scale than Iraq or Afghanistan, it also appeared to offer too many similarities to these two recent wars. For these reasons, a land and war in Europe against the Russian Army is most appropriate as the threat capability against which to measure the US Army's readiness to fight an MCO.

Measuring the threat

The Russian and Belarusian armies are organized differently than the US Army and the armies of its NATO allies. Section three of this study looks at the unique commitments, characteristics, and

[2] General Mark A. Milley, "Transcript: 2016 AUSA Eisenhower Luncheon" *West Point Society of Washington and Puget Sound (wpswps.org)*, October 04, 2016, accessed August 31, 2017, http://wpswps.org/wp-content/uploads/2016/11/20161004_CSA_AUSA_Eisenhower_Transcripts.pdf.

structures of these armies. It looks at the total strength of each army and then converts to a standard unit of measure – the brigade – to use for comparison of overall capacity on both sides. To remain within the operational level scope of this project, it uses a scenario of a US Army and NATO combined counterattack to liberate the Baltic States from a combined Russian and Belarusian invasion. This compares the capabilities of two operational level commands, the Russian Western Military District against US Army Europe (Seventh Army). It makes allocations for likely ground force capacity from other commands on both sides. The effects of unified action partners and other strategic enablers on the ground forces are outside the scope of this project and are left for follow-on research. This study only used unclassified sources.

Historical case study – The Victory Plan of 1941

Beginning in the spring of 1941 MAJ Albert C. Wedemeyer was what today would be called an Operational Planning Team (OPT) leader in the War Plans Division (WPD) of the War Department General Staff. He arrived at the WPD on 29 April 1941. He started to work on the US Army's contribution to the "Ultimate Requirements Study" on 9 July 1941. This project would soon come to be known more colloquially as "the Victory Plan of 1941." MAJ Wedemeyer and his OPT wrote the Victory Plan in under 90-days.[3] His effort serves as the historical case study this research project uses to gain insights into a similar transformation of the US Army today in support of GEN Mark A. Milley's call to prepare for Major Combat Operations (MCO).[4]

The relevance of the Victory Plan of 1941

This research project focused on the Victory Plan of 1941 as a historical case study of the United States transforming from a small force focused on the strategic defense of the western hemisphere to projecting a large offensively-minded expeditionary force to Europe and Japan. This case study encompassed more than just a simple mobilization in 1941; plans for this already existed. It represented a transformation of the US Army both structurally and conceptually. This required re-framing. This thesis argues that to conduct MCO in Europe against a near-peer threat, the US Army will have to do more than mobilize. It will need to simultaneously transform its structure while projecting that force into a theater contested on multiple domains.

The need for a new plan

This case study encompassed more than just a simple mobilization in 1941. Indeed, multiple plans for this already existed to include the multiple Rainbow plans, the Protective Mobilization Plan

[3] Charles E. Kirkpatrick, *An Unknown Future and A Doubtful Present: Writing the Victory Plan of 1941* (Washington, DC: US Army Center of Military History, 1992), 55.

[4] Milley, "AUSA Eisenhower Luncheon Transcript" (2016).

(PMP), and the Industrial Mobilization Plan (IMP) of 1939. MAJ Wedemeyer quickly realized that these plans were generally obsolete and incomplete. The exception may have been the 1938 version of War Plan Orange for war against Japan, at least at the operational level.[5] Even the Orange plan, in addition to "Rainbow 5" that replaced it, the other Rainbow plans, the PMP, and the IMP were all seriously short-sighted owing to their oversight of the US Army needing to be organized around armored divisions instead of squared or triangular infantry divisions.[6]

All of the existing plans tended to focus too much on enforcement of the Monroe Doctrine. They were heavily weighted in defending the western hemisphere. This defensively-minded planning called for a US Army significantly smaller than that which they would need to fight in Europe. The IMP was only designed to support an Army with an overall end-strength of 1,150,000 men. The IMP also failed to consider the requirements of supporting US allies through the Lend-Lease program.[7] Wedemeyer recognized that the demands of Lend-Lease combined with a US Army substantially larger than previously envisioned would require an entirely new plan. The Allies' demands from Lend-Lease ranged from problematic to impossible to predict. The needs of the US Army were also challenging but Wedemeyer and his team could anticipate them if they were able to accurately identify the composition of these forces.

MAJ Wedemeyer recognized that he would have to reframe the assumptions on which they had based the previous plans. He realized that this required transformation of the US Army both structurally and conceptually. Based on the strategic estimates at the time, he made the assumption that the Soviet Union (USSR) would be defeated by the time the United States entered the war and that it would take

[5] Mark S. Watson, *Chief of Staff: Prewar Plans and Preparations* (Washington, DC: Department of the Army Historical Division, 1950), 92 and 476.

[6] Kirkpatrick, *An Unknown Future*, 46.

[7] Ibid., 46-50.

Germany a full year after defeating the USSR to reorganize before attempting to invade Great Britain. He estimated this to be no later than the Spring of 1943, with a worst-case estimate of the Spring of 1942.[8]

Wedemeyer also estimated the total number of men under arms that the United States could commit to war without significantly disrupting America's domestic life nor the ability to produce the tools of war at about ten percent of the total male population. This was twelve to fourteen million men. Recognizing the need to maintain sea lines of communication, he subtracted four million men from that number based on what the US Navy said it needed.[9] They would split the remaining eight to ten million men between the Army ground forces and Army Air Corps.[10] How would he determine to divide of this limited man-power resource within the US Army's ground component?

Knowing the raw number of Soldiers would not adequately answer the question of type and priority of materiel production that the Victory Plan was tasked to answer. Wedemeyer recognized that the distribution was equally critical. More aviators meant the production of more aircraft as well as more aircraft ordinance, and so on for tank, artillery, and anti-aircraft crews.[11] Just like the Navy, the Army Air Corps was working its own requirements study to be combined with the Army ground forces to form the Ultimate Requirements Study, the actual name of the 1941 Victory Plan. MAJ Wedemeyer would only concern himself with the division of ground forces, although he kept in close coordination with the US Navy and Army Air Corps efforts throughout the process.[12] In order to determine the way to best organize the Army, Wedemeyer would need to estimate the size of the German Army and the strategy the United States and its remaining allies would employ to defeat Germany.

[8] Kirkpatrick, *An Unknown Future*, 63-73.

[9] Ibid., 74-79.

[10] Ibid., 77-79.

[11] Ibid., 91.

[12] Ibid., 73-74.

Wedemeyer's methodology

This section examines the process used by MAJ Wedemeyer to develop the 1941 Victory Plan in an effort to identify similar considerations in a national mobilization today. How did MAJ Wedemeyer identify his problem? What methodology did he use to arrive at his conclusions? What were the successes of the 1941 Victory Plan? What were the shortfalls of the plan? What considerations from his efforts are still applicable today?

How did MAJ Wedemeyer identify his problem? Army Chief of Staff, General George C. Marshall, tasked MAJ Wedemeyer to answer a more mundane sustainment-related question regarding "the ultimate production requirements for the United States to defeat all of its potential enemies, if it should go to war."[13] President Roosevelt later stipulated that this plan had to factor in the large and nearly insatiable requirements of Lend Lease as well.[14] Determining the ultimate production requirements of the Allies might be a problem without an apparent solution. Determining the raw quantity of war materiel needed to defeat America's "potential enemies" would not suffice. He would need to determine the type of each item and then prioritize them as well. He could not identify these until he knew what the expeditionary American Army would look like.[15]

He developed a methodology to answer what appeared to be a straight forward question by asking four very broad strategic level questions. This allowed him to organize and then verify his strategic assumptions in order to answer his underlying production requirements question. His questions were:

1. "What is the national objective of the United States?"[16]

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[13] Watson, *Chief of Staff*, 338-339, 348-349. These four pages contain copies of the letters from President Roosevelt to the Secretary of War [and Navy] requesting the ultimate production requirements of American industry.

[14] Kirkpatrick, *An Unknown Future*, 52-53.

[15] Ibid., 56-57.

[16] Ibid., 60.

2. "What military strategy will be devised to accomplish the national objective?"

3. "What military forces must be raised in order to execute that military strategy?"

4. "How will those military forces be constituted, equipped, and trained?"[17]

MAJ Wedemeyer's methodology was to use the first three questions to give him the insight required to answer the fourth. Once he answered the fourth question, completing his actual task of producing the Ultimate Requirements Study would be a simple math problem.[18] His methodology produced very accurate results.[19]

What is the national objective of the United States?

Identifying the national objective of the United States was not immediately evident to the planners in the WPD. Prior to the Japanese attack on Pearl Harbor there was still a very strong isolationist sentiment in the United States. There was a public uproar when word leaked out to the American public that President Roosevelt had ordered the military to start making concrete preparations for war. The leak became public when the Chicago Tribune, the New York Daily News, and the Washington Times Herald published details of the plan on 4 December 1941.[20] The Pearl Harbor attack three days later muted the growing political schism. Prior to this event, much of the guidance the Army and Navy had received was indirect at best owing to the politically fractious nature of America's potential entry into the war.[21]

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[17] Kirkpatrick, *An Unknown Future*, 60-61.

[18] Ibid.

[19] Ibid., 61.

[20] General Albert C. Wedemeyer, *Wedemeyer Reports!* (New York: Henry Holt and Company, 1958), 15-21.

[21] Kirkpatrick, *An Unknown Future*, 116-117.

The only universally accepted national objective in existence at this time was the Monroe Doctrine.[22] MAJ Wedemeyer eventually wrote his own national objective that was more in line with the coming conflict as he understood it. ". . .to eliminate totalitarianism from Europe and, in the process, to be an ally of Great Britain; further, to deny the Japanese undisputed control of the western Pacific."[23] Secretary of War Henry L. Stimson approved Wedemeyer's simple objectives since they were in line with both Rainbow 5 and the American-British conversations (ABC) of January-February 1941. This now verified planning assumption became the cornerstone of the remainder of Wedemeyer's continued efforts. If the United States went to war, the main effort would be a large offensive force in Germany while fighting a defensive economy of force in the western hemisphere and the western Pacific.[24]

What military strategy will the US Army devise to accomplish the national objective?

With the Germany first planning assumption now solidified, MAJ Wedemeyer began outlining what he thought the American military strategy would be. Rainbow 5 provided a frame of reference for this scenario but as stated above, was neither complete nor comprehensive enough to answer the production requirements of American industry in terms of type, quantity and priority. As a pre-war contingency planning tool, Rainbow 5 had American forces defending the western hemisphere while sending a small task force across the Atlantic to fight in Europe and Africa to assist Great Britain in defeating Nazi Germany and fascist Italy.[25] Besides the lack of depth and scope in Rainbow 5, Wedemeyer was also concerned that the plan specifically lacked a mechanism to defeat Germany in

[22] Ibid., 62.

[23] Kirkpatrick, *An Unknown Future*, 63

[24] Ibid., 62-63.

[25] LTC Marvin A. Kreidberg and 1LT Merton G. Henry, *History of Military Mobilization in the United States Army: 1775-1945* (Washington, DC: The Office of the Chief of Military History of the Department of the Army, 1955), 557-560.

ground combat. Additionally, since the United States was not yet at war with Germany, he also needed to determine when the US Army could effectively implement a ground campaign against Germany.[26]

In an effort to retain a focus on defeating Germany and its allies in ground combat, MAJ Wedemeyer needed to not only look at the size of the forces currently arrayed but also to anticipate what they would look like in a time that intersected with American preparedness. To this end, he turned to Colonel Truman Smith and Colonel Hamilton Maguire within the US Army G-2's German section. They provided a very accurate and detailed picture of German dispositions, intentions, and capability over time. COL Smith had been the military attaché in Berlin previously and had a good understanding of the German Army. He also maintained a close relationship with the German military attaché in Washington, General Friederich von Boetticher. Until 18 August 1941, General von Boetticher had been sharing Luftwaffe telegrams with Smith.[27] Boetticher may have done this to aid in Germany's effort to delay the US entry into the war or perhaps it was because Smith was perceived as pro-German. Regardless, it provided a wealth of data. The Army G-2 section used this data to begin produce periodic strategic assessments to aid in planning across the WPD.[28]

In the US Army G-2's fall 1941 WPD Strategic Assessment, the office anticipated that by the time the United States got in the war they would be facing the combined strength of Germany, Italy, Vichy France, and Japan.[29] Since Germany was the strongest, they focused primarily on them. They anticipated that Germany would attack Great Britain either directly or in various indirect means to bring it to a negotiated peace. A direct attack on Great Britain would be in the form of sea-borne invasion of the British Isles. There were numerous options to indirectly attack Great Britain. They anticipated a likely option was a German effort through the Mediterranean to seize the Suez Canal. Another option was a

[26] Kirkpatrick, *An Unknown Future*, 61-63.

[27] Kirkpatrick, *An Unknown Future*, 64.

[28] Ibid., 64-65.

[29] Ibid., 65

drive through Turkey into the Caucuses and deeper into British holdings in the Middle East.[30] Eventually, they resolved that Germany would opt for a short and lively attack on the Soviet Union. This would not only secure the oil and mineral resources in the Caucuses, but then either bring Great Britain to the negotiating table or allow the Germans to re-direct their victorious forces in the east toward an invasion of England. [31]

After the German invasion of the Soviet Union, the G-2 updated the WPD Strategic estimate that factored in potential German losses in the Soviet campaign. Even with a short and lively campaign, German losses combined with a lack of an invasion fleet made the likelihood of German ground action in the British Isles, let alone in the western Atlantic, highly unlikely for at least a year after the conclusion of the Soviet campaign.[32] While this bought the Allies some time, the same updated estimate also assumed that the Soviet Union would be out of the war and no longer able to provide man-power to the effort. This now helped MAJ Wedemeyer determine when the United States would need to be prepared to take the offense. He set his planning estimate that within a year of the fall of the Soviet Union, the United States would need to have sufficient forces generated and in Europe before the Germans would be able to threaten the British Isles or the western Atlantic.[33]

The WPD Strategic Estimate also looked at the other Axis countries. They concluded that Italy would not be able to project power beyond the Mediterranean and even then would probably become a greater drain on German resources.[34] Vichy France was also not considered an offensive threat, but they were factored in since they could free-up German units from some stability and defense commitments in

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[30] War Department Strategic Estimate prepared by War Plans Division, General Staff, October 1941, pp. 4-6. Strategic Estimate Vol. 1, O.P.D. Exec. #4, Item #9, NARA RG 165.

[31] Kirkpatrick, *An Unknown Future*, 65. The US Army G-2 started working on their WPD Strategic Estimate in the Summer of 1941, before Germany invaded the USSR on 22 June 1941.

[32] Ibid., 66.

[33] Ibid.

[34] War Department Strategic Estimate, 9.

France.[35]

Japan was of greater concern however. The G-2 estimated that Japan would capitalize on German success in Europe with proportionate aggression in the western Pacific. They thought it unlikely that Japan would attack the Soviet Union in concert with Germany. They did expect Japanese offensive operations in the Dutch East Indies, the Philippines and Hong Kong. They anticipated Japan to take a more defensive role in China to allow them the freedom of maneuver. In the eastern Pacific, they only expected Japanese raids against Hawaii, Alaska, Panama, and the American west coast.[36]

With all of this, MAJ Wedemeyer had an improving understanding of the potential enemies of the Unites States both in terms of capability and the timing needed to employ that capability. MAJ Wedemeyer also looked at the probable American allies in time and space as well in an effort to determine combat power ratios. Great Britain's hopes for victory lay first with the Soviet Union and then with the eventual involvement of the United States. Wedemeyer realized then that keeping the Soviet Union in the war as long as possible was in their best interest. This seemed unlikely in the fall of 1941.[37]

According to the WPD Strategic Estimate, Great Britain would remain on the strategic defensive for the foreseeable future. The Battle of the Atlantic was their decisive operation at the time. The Battle of Britain and retaining as much of its Empire as possible were both also key to its ability to continue the war. The G-2 assessment was that a precipitous fall of the Soviet Union would allow the Germans to overwhelm the British.[38] They had three key factors affecting Great Britain regarding Germany and the Soviet Union:

1. Could Germany win quickly in the Soviet Union without suffering excessive losses?

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[35] War Department Strategic Estimate, 10.

[36] Kirkpatrick, *An Unknown Future*, 66 and 71.

[37] Ibid., 72.

[38] War Department Strategic Estimate, 10.

2. Could Germany reconstitute forces quickly after that victory?[39]
3. Could Germany control the conquered territory and exploit their resources with an economy of force?[40]

The WPD Strategic estimate concluded that "from a long-range viewpoint, the situation is not hopeless for Great Britain, assuming the continuation of Russian resistance and/or full US participation in the war."[41]

The Allies' best hopes lay in keeping the Soviet Union in the war as long as possible. Operationally, a decisive defeat of the Soviet Union would allow Germany to redirect large portions of its army toward the defeat of Great Britain. Strategically, Germany would now possess the economic, industrial, mineral, and manpower resources of central Eurasia. This would leave them virtually unaffected by any blockade from the sea and they would only grow stronger over time. This situation might also force Great Britain out of the war, leaving the United States without its support or territory from which to launch offensive operations.[42]

As mentioned previously, Wedemeyer set his timetable for the US Army conducting offensive operations in Europe relative to the defeat of the Soviet Union. The G-2 estimated that they may be defeated by the end of 1941. They anticipated an invasion of England to be no earlier than the spring of 1942, with the spring of 1943 as a more realistic date. They based this on the assumption that Germany would need a year to reorganize their ground troops (1942), but an additional year to economically and materially benefit from the conquered territories (1943).[43]

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[39] Kirkpatrick, *An Unknown Future,* 71.

[40] Kirkpatrick, *An Unknown Future,* 71.

[41] War Department Strategic Estimate, 17-19.

[42] Kirkpatrick, *An Unknown Future,* 71-72.

[43] War Department Strategic Estimate, 22, 29-31, 34.

MAJ Wedemeyer recognized that the United States would need to transform not only its Army, but convert its economy to produce the products of war and ships to carry both men and materiel to Europe as well. All would take time. The consensus at the WPD was that the US Army would not be able to employ the forces necessary under Rainbow 5 until July 1943.[44] They had to recruit and train the force, but they would first need to build the facilities required to induct and train Soldiers on this scale. The skilled tradesmen necessary to build these facilities would have to be temporarily deferred from the draft until after they had completed building these facilities. Similarly, with shipbuilding, the men necessary to build the required sea-lift would be of better use to the effort working in shipyards, at least initially.[45]

Wedemeyer estimated that to deploy the Army and Air Corps he envisioned, it would take seven million tons, or about 1,000 ships. It would take an additional 1,500 ships, or ten million tons to sustain them. He estimated that it would take two years to build the ships needed for transport.[46] This was the same time that the bulk of the US Army would be in training and beginning movement to Europe. This was also at the same time that England would be in the greatest risk of invasion.[47] His estimate of the number of ships required did not take into account losses to shipping during the Battle of the Atlantic. Fortunately, he also underestimated American industry's true production capacity.

As MAJ Wedemeyer continued his methodology he recognized early the need to begin shaping the situation to the benefit of the Allies. He first acknowledged that his efforts to build a ground force capable of defeating Germany could not come at the expense of the US Navy.[48] In keeping with the theory of Corbett, he recognized the need to control the sea lines of communications in order to deploy

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[44] Kirkpatrick, *An Unknown Future,* 72-74.

[45] Ibid., 72-73.

[46] Ibid., 73.

[47] Wedemeyer, *Wedemeyer Reports!*, 67.

[48] Kirkpatrick, *An Unknown Future,* 74.

and provision his ground force. Similarly, he recognized the need for a powerful air arm.[49] With the Germans' use of tactical air support, he saw aviation as a combat multiplier the outnumbered American forces would need. Wedemeyer also saw the need for basing to encircle Germany and extend the Allies' operational reach. Finally, he saw the need to overextend Germany's operations by forcing them to fight in multiple directions at the end of long supply lines. He continued to coordinate with the US Navy and Army Air Corps planners to balance all of these considerations as he began to look at the force structure necessary to accomplish this strategy.[50]

What forces must the United States raise to execute the military strategy?

MAJ Wedemeyer estimated that the United States could put twelve to fourteen million men under arms without jeopardizing social order and the war production effort. He based this on an American population of about 140 million and the assumption that women would enter the work force. The US Navy and US Army Air Corps were simultaneously working on their portions of the Ultimate Requirements Study and had working manpower requirements of 4.1 million and 2.1 million Sailors and Airmen respectively. This left Wedemeyer with about 6.7 million Soldiers with which to fill the US Army's ground force. When compared to what the Axis powers could field, Wedemeyer recognized that the United Sates would need to find a way to defeat them in a way that didn't involve matching them man-for-man.[51]

The US Army G-2 estimated Germany had about 350 divisions fielded in the Summer of 1941. They concluded a worst-case scenario of Germany fielding about 500 divisions by the Summer of 1943 consisting of nearly 12 million Soldiers. To match enemy capability man-for-man and achieve a minimum force ratio of 2:1 as required for the offensive operations, MAJ Wedemeyer concluded that the

[49] Ibid.

[50] Ultimate Requirements Study. Estimate of Army Ground Forces, prepared by WPD, GS, Sept. 1941, pp. 1-3. Folder WPD 494-14/4494-19, NARA RG 165.

[51] Kirkpatrick, *An Unknown Future,* 76-79, 81-84, 92, 101.

Allies would then to field a ground force of between 700 to 900 divisions, consisting of twenty-five million Soldiers. Wedemeyer estimated that Great Britain could only field one million, to include the use of its Empire troops. He also assumed that the Soviet Union would be out of the war, leaving the United States to fill the balance. This was three-times the number of troops the United States could devote to the ground force. MAJ Wedemeyer reframed his problem to generate feasible options.[52]

In the Summer of 1941, the US Army was structured to defend the western hemisphere and was primarily organized around the infantry division of World War I (WWI). Of the US Army's thirty-three divisions at the time, eighteen divisions were WWI-era square divisions, eight were triangular, one was motorized, four were armored, and two were cavalry.[53] The square infantry division consisted of four infantry regiments and was characterized by firepower and shock effect. The triangular infantry division had only three infantry regiments but had increased mobility. Both types were suited well enough to enforce the Monroe Doctrine but Wedemeyer recognized that an expeditionary offensive force would require a new formation that was simultaneously capable of mobility, firepower, and shock effect.[54]

How will these military forces be constituted, equipped, and trained?

MAJ Wedemeyer sought to reorganize the standard unit within the US Army to not only economize manpower but to be simultaneously capable of mobility, firepower, and shock effect in order to deal with the very mobile German army. Wedemeyer studied the victories and defeats of both sides since 1939 and saw multiple concepts emerge which could all positively contribute to his new force structure.[55] He saw that air superiority in and of itself was not as effective as structuring a force to be an integrated air-ground team. Wedemeyer recognized the worth of specialized mountain, airborne, and

[52] Kirkpatrick, *An Unknown Future,* 82-84.

[53] Ibid., 84.

[54] Ibid.

[55] Ibid., 86-91.

cavalry divisions but did not see them as decisive against the Germans.[56] Survivability and mobility would need to be inherent in the design of the new force. This oriented itself towards a track-mounted armored force with robust artillery, anti-air, engineer, and logistics systems that were equally mobile.[57] In an effort to blunt the German tactics of penetrating, encircling, and defeating a force from behind, Wedemeyer saw the need for additional rear area anti-air, anti-armor, and mounted signal forces that could both defend themselves and keep pace with the front-line formations.[58] He also recognized how unwieldy such a formation might become so he recommended keeping each division relatively small, and task-organizing each division around modular regiments of the various kinds of forces mentioned above.[59]

MAJ Wedemeyer recognized three basic military objectives around which to array forces. The first two were to protect the western hemisphere from attack and to protect American possession's in the Pacific. These were both strategically defensive in nature and the triangular infantry division would suffice in these roles. To these forces he assessed the need to assign 346,217 Soldiers to triangular infantry divisions augmented with robust anti-air and anti-tank forces. He requested an additional 123,885 Soldiers similarly configured under a corps headquarters to defend South America from ground invasion, although he considered this option unlikely.[60]

The third objective was the offensive expeditionary force to defeat the Germans in Africa and Europe. This force would be constituted initially by 2,199,441 Soldiers organized into 215 maneuver divisions.[61] These divisions were divided up into five field armies. Initially they formed the First Army,

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[56] Kirkpatrick, *An Unknown Future,* 87.

[57] Ibid., 88.

[58] Ibid., 89

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[59] Ibid., 91.

[60] Ultimate Requirements Study. Estimate of Army Ground Forces, Tab A.

[61] Kirkpatrick, *An Unknown Future,* 97-98.

Third Army, and Fourth Army. Later, they would form Second Army and Fifth Army, held in strategic reserve.[62] They built each army around nine triangular infantry divisions. These provided security for each army as it advanced. Each army's armored and mechanized divisions provided the offense.[63] The number of armored and mechanized infantry divisions varied between the field armies, but the structure revolved around one mechanized division per each armored division. The intent was to have an armored spearhead followed closely by mechanized infantry which could secure initial gains. They could then hand these off to slower triangular infantry divisions. Each army would also control its own tactical air support as well as a strong reserve of tank destroyer, anti-tank, anti-air, and artillery formations.[64]

MAJ Wedemeyer's initial task was to determine the type, quantity, and priority of war materiel the US Army would need to defeat the potential enemies of the United States, if it should go to war. He began this project on 9 July 1941. By 23 August 1941 he had worked his way through his assumptions on strategic ends to the ways and means necessary to accomplish them. He handed off this new force structure to the Army G-4. By 5 September 1941, the G4 section had quickly tabulated the materiel needs to accommodate this force structure and returned it to Wedemeyer. On 11 September 1941, the US Army, US Navy, and US Army Air Corps combined their estimates and submitted them to the Joint Board as the Ultimate Requirements Study. The Joint Board presented it to President Roosevelt on 14 October 1941.[65]

Relevant considerations from this case study

This historical case study represented more than just a mobilization of forces in support of an existing contingency plan. The Victory Plan was remarkable in how much it got right, but there were

[62] Ibid., 98.

[63] Kirkpatrick, *An Unknown Future*, 96.

[64] Ibid., 96-100.

[65] Ibid., 100-102.

some shortcomings of the plan. There are also many considerations that MAJ Wedemeyer discovered in planning for mobilization and transformation 1941 that are still relevant today.

Assessing the Victory Plan of 1941 against itself

The Victory Plan undervalued the tooth-to-tail ratio used as a planning estimate. They underestimated the effects of Lend-Lease on American manufacturing. The greatest oversight was the lack of provision for battlefield replacements. In spite of these deficiencies however, the Victory Plan was robust enough to build a US Army that was just large enough to win.

The tooth-to-tail estimate in use prior to the war did not foresee the needs of a large offensive force operating on another continent. As stated previously, MAJ Wedemeyer planned for a US Army ground force of 215 divisions consisting of 6.7 million men. He got the number of Soldiers correct, but this same number of men could only field a total of ninety divisions by 1945. The error was due to the division slice. The US Army G-3 used a staff estimate shortcut called the division slice to account for the number of support personnel to combat personnel. The ratio then in use as a planning factor was 1:1, or fifty percent of the force anticipated to be in a non-combat role.[66] In theater this number was closer to 3:1, or seventy-five percent of a division in a non-combat role. Even this number fails to account for Soldiers outside of a combat division hierarchy. The growth of support personnel numbers within the division owed to the increase in the number of technicians inherent in a mechanized force. The growth outside of the division structure included Soldiers in transit, in hospital, in rest camps, and those who provided other services that were deemed necessary for morale.[67]

This plan also underestimated the effects of Lend-Lease on American manufacturing. MAJ Wedemeyer's 1941 estimate called for sixty-one armored divisions, sixty-one mechanized divisions, and fifty-four triangular infantry divisions. By 1945, the US Army only had sixteen of the sixty-one proposed

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[66] James S. Nanney and Terrence J. Gough, *U.S. Manpower Mobilization for World War II* (Washington, DC: US Army Center of Military History, 1982), 57.

[67] Carl T. Schmit, "The Division Slice in Two World Wars," in *Military Review*, no. 30:7 (October 1951), 51-62.

armored divisions. It had formed none of the proposed mechanized divisions but had formed sixty-six of fifty-four triangular infantry divisions. Manpower was not the primary cause for the shortage in armored and mechanized divisions. The largest factor for this shortfall was in the diversion of tanks, artillery, and combat aircraft to US allies. Lend-Lease equipped approximately an additional 101 US Army divisions worth of materiel to the Soviet Union, France, Italy, China, Brazil, the Netherlands, Norway, and Great Britain. American industry was simply unable to produce materiel needed for both the US Army and the requirements of Lend-Lease.[68]

The greatest oversight in the Victory Plan of 1941 was in the lack of planning for replacements. Nowhere in the Victory Plan is there mention of replacements. It took about three months for a typical infantry regiment to suffer 100% casualties. To maintain combat efficiency General Lesley J. McNair wanted to rotate out division after thirty to forty days of heavy combat.[69] The inability to field newly manned, equipped, and trained divisions coupled with a shipping shortage forced the US Army to an individual replacement system. By February 1945 however, this was a moot point. The last division had shipped to Europe, there were no more units training in the United States, and there were no strategic reserves remaining for the US Army.[70]

Considerations for today from the Victory Plan of 1941.

The shortcomings of the plan notwithstanding, the Victory Plan was extremely successful in accomplishing its primary purpose of organizing strategic materiel production for American industry. MAJ Wedemeyer quickly reframed the problem when he recognized that the assumptions upon which existing prewar plans were built were no longer valid. Wedemeyer also recognized that the needs of the US Army were just a piece and not the total of the overall American contribution to the war. Finally,

[68] Kreidberg and Henry, *History of Military Mobilization,* 624.

[69] Nanney and Gough, *U.S. Manpower Mobilization,* 49-50.

[70] Kirkpatrick, *An Unknown Future,* 111-114.

MAJ Wedemeyer's military strategy for defeating the German Army focused American strengths against German weaknesses.

MAJ Wedemeyer quickly reframed the problem when he recognized that the US Army did not just need to mobilize, it would need to simultaneously transform both in operating concept and in structure.[71] The US Army of 1941 was built around defending the western hemisphere and American possessions in the Pacific.[72] The doctrine, organization, training, equipping, and basing of the US Army were all focused on providing for a small infantry-based defense force.[73] Today's US Army still has the doctrine and organization to fight MCO against a near peer threat, but over fourteen years of fighting counterinsurgency and conducting stability operations have seen the force optimize in favor of those missions. Basing, equipping, and training have been most effected as the US Army has shifted emphasis and resources toward winning today's fight. Just as Wedemeyer recognized that it would take time to train, equip, and then base an offensive force, so too will it take time to close the tank, artillery, and cyber gaps with a resurgent Russia.

MAJ Wedemeyer also recognized that the needs of the US Army were just a piece and not the total of the overall American contribution to the war. As an OPT leader, MAJ Wedemeyer produced a wholistic solution to a complicated problem with minimal strategic direction. Politicians and statesmen alike will always need to maintain as many options as possible. This will often limit them from giving explicit guidance. As MAJ Wedemeyer strove to connect ways and means to military ends, he also kept the strategic ends, ways, and means in mind. Wedemeyer understood the strategic importance of the US Navy's ability to maintain the sea lines of communication.[74] Similarly, he knew that for the US Army to

[71] Kirkpatrick, *An Unknown Future,* 59-61.

[72] Ibid., 84.

[73] Ibid., 44-45.

[74] Ibid., 74.

have the benefits of tactical air support, the US Army Air Corps would need the resources to fight for air superiority first.[75] Most importantly, he understood the strategic importance of American industry to the overall war effort amongst all of the allies.[76] While he never lost sight that the US Army would be the combat arm of decision, he always planned for the ground forces to do this as economically as possible in an effort to mass these national effects on the enemy.

MAJ Wedemeyer's military strategy for defeating the German army focused American strengths against German weaknesses. Rather than trying to match the German Army and the US Army man-for-man, Wedemeyer sought to capitalize on American strengths.[77] He designed his new armored divisions to provide mobility, firepower, and shock effect simultaneously.[78] He designed mechanized infantry divisions to keep pace with the armored divisions to have the ability to quickly consolidate gains.[79] He gave each field army control over its own tactical air support.[80] He mitigated manpower with robust firepower and protection enablers like artillery, anti-tank, and anti-air units.[81] He also built-in safeguards against span of control issues. By maintaining unit homogeneity up to the regimental level, he could build task-organized divisions without adding confusion to an already complex environment.[82]

He designed all of these considerations around not just destroying the German Army but defeating the German military strategy. MAJ Wedemeyer sought to leverage the full weight of the United States against the Axis Powers; the US Army was just one piece of that effort. He also recognized that liberating a continent would require such an extreme effort that the US Army would require a structural

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[75] Ibid, 75.

[76] Kirkpatrick, *An Unknown Future*, 76.

[77] Ibid., 82-91.

[78] Ibid., 86.

[79] Ibid., 90-91.

[80] Ibid., 86.

[81] Ibid., 88-89.

[82] Ibid.

change as well. He did not flinch from this, but instead he made bold proposals about what this future force should look like. As today's US Army looks to reinvest in its own ability to conduct MCO, many lessons are evident from the last time the US Army both mobilized and transformed simultaneously.

Measuring Today's Threat

The Fiscal Year 2018 National Defense Authorization Act (NDAA) acknowledged the increased actions of a resurgent Russian Federation on multiple fronts since 2008. The Russians under President Vladimir Putin have conducted numerous information campaigns against democracies around the world. The Russian Federation continues its aggression against the nations on its periphery. The Russian Federation has shifted its military doctrine to lower the threshold for use of nuclear weapons. As General Curtis M. Scaparrotti, Commander of the United States European Command, testified before the House Armed Services Committee on 25 March 27, 2017, that "Today we face the most dynamic European security environment in history . . . Russia's malign actions are supported by its diplomatic, information, economic, and military initiatives."[83]

General Mark A. Milley, the Chief of Staff of the US Army recognizes the vital role the United States' ground forces will play in countering this threat. He also recognizes that the US Army may not pose as credible a deterrence as it did prior to its extensive COIN and stability campaigns over the last fourteen years. In his 2016 address at the AUSA Eisenhower Luncheon he articulated his vision of a US Army capable of waging MCO against a near-peer threat. The requirements of the ground force he called for were far different from the experiences for many during the last fourteen years.[84]

The US Army is still organized in divisions and brigades that should allow it to conduct MCO. As might be expected however, the US Army has optimized itself to winning the last fourteen years of COIN and stability operations. In an effort to marshal resources and focus training for the current fight, the US Army has assumed risk in force size, equipping and modernization of combat platforms, basing, force projection and training. Just as the Soldiers of a US Army capable of waging MCO may need to

[83] "House Resolution (H.R.) 2810, Fiscal Year 18 National Defense Authorization Act" Congress.gov, July 14, 2017, accessed October 20, 2017, https://www.congress.gov/bill/115th-congress/house-bill/2810/actions.

[84] General Mark A. Milley, "Transcript: 2016 AUSA Eisenhower Luncheon" *West Point Society of Washington and Puget Sound (wpswps.org),* October 04, 2016, accessed August 31, 2017, http://wpswps.org/wp-content/uploads/2016/11/20161004_CSA_AUSA_Eisenhower_Transcripts.pdf.

refocus their training away from stability and COIN, so too the US Army may need to re-optimize its force structure to fight and win against a near-peer threat in a major combat operation. The new Field Manual (FM) 3-0 *Operations,* published in October 2017 addresses the US Army's doctrinal re-optimization toward waging MCO.[85] But how does the structure of the US Army and its likely North Atlantic Treaty Organization (NATO) allies compare to that of the Russian Federation? This essay argues that the US Army is not only too small to conduct MCO against the Russian Army, but also lacks the optimal force structure necessary. If American ground forces are going to conduct MCO against Russia or another near-peer threat, then the US Army will have to simultaneously grow and transform, quickly.

Does a capability gap exist between the Russian Army and the US Army combined with the armies of NATO? To answer this question, this section looks at the unique commitments, characteristics, and structures of these armies. It looks at the total strength of each army and then converts them to a standard unit of measure – the brigade – to use for comparison.

The Russian Army

Even in the face of economic sanctions from the Western nations, Russian Federation President Vladimir Putin continues a robust support of his nation's conventional forces. Beginning in 2008, then-defense minister Anatoly Serdyukov sought to address some of the deficiencies that became evident in Russia's 2008 war with Georgia. He called this program *Novy Oblik* or "New Look." The Russian New Look program included structural, basing, and equipment modernization changes to the Russian Army. The program has evolved and continued under the current defense minister, Sergei Shoigu, appointed in 2011. In 2016, President Putin authorized a new program to continue these reforms through 2020. The Russian involvement in the Syrian civil war and later in the Crimean region of Ukraine reflect evidence of a revamped Russian Army. The Russian involvement in these campaigns continues to provide valuable

[85] Field Manual 3-0, *Operations* (Washington, DC; Government Printing Office, 6 October 2017), 1-6 – 1-6, 5-1 – 5-5, and 5-20 – 5-22.

operational experience while testing their systems in an expeditionary setting and providing them feedback on capability gaps.[86]

The Russian Army is still based largely on a conscription system with a twice annual call-up that has brought in between 297,000 to 352,000 conscripts to the army annually since 2015. The range of conscripts varies annually based on the number of males entering military service age that year and remains low due to the Russian demographic trough of the 1990s.[87] As part of President Putin's 2016-2020 reform program, he has also authorized the Russian Army to maintain a recruited "*contract"* army at 425,000 annually to serve as a professionalized standing cadre to the conscript army. By 2020 the cohort of military aged males in Russia is expected to exit the demographic trough and the Russian combined conscript-contract army is expected to reach one million men on active duty annually.[88]

The Russian military is divided into four military districts. The Russian Army provides one or more army headquarters subordinate to each of these districts. All military, to include naval, air, and special forces fall under the military district command. The headquarter for the Western Military District (WMD) is in St. Petersburgh. The Central Military District headquarters is in Yekaterinburg. The Southern Military District is headquartered at Rostov-on-Don. The Eastern Military District headquarters is at Khabarovsk.[89]

The table in Appendix 1 is as accurate as possible using unclassified sources. It converts the Russian divisions (DIV), brigades (BDE), regiments (RGT), and battalions (BN) to US Army and NATO standards. To further aid in comparison to US and NATO force structure, it uses a standard unit of measure of "BDE" or "BCT." The enablers that are inherent to the US Army, NATO, and Russian

[86] James Hackett (ed.), "Chapter Five: Russia and Eurasia," pp. 183-236 in *The Military Balance,* 117:1 (2017), 183-184, 210.

[87] Russia is still recovering from "a 'demographic trough' stemming from the collapse of the birth rate in the 1990s. By 2020, the number of young people reaching conscription age will start to grow, which is expected to ease Russia's personnel challenge." Hackett, "Russia and Eurasia" in *The Military Balance,* 186.

[88] Hackett, "Russia and Eurasia" in *The Military Balance,* 186.

[89] Ibid., 211.

BDEs/BCTs remain with them respectively.[90] Each Russian Army DIV equates to 2x BDEs of the US Army/NATO equivalent. The Russian Armor BDEs and MECH IN BDEs equate to US Army ABCTs (Armored Brigade Combat Teams). Each Russian Motorized Rifle (MR) DIV equates to 2x US Army SBCTs (Stryker Brigade Combat Team). The Russian RECCE (Reconnaissance) BDEs each equate to a US Army Armored Cavalry Regiment (ACR). Each Russian Naval Infantry BDE compares to US Marine Corps MEB (Marine Expeditionary Brigade). Each Russian Spetsnaz BDE is compared to a US Army Special Forces Group.[91]

The table in Appendix 1 shows total Russian Army forces across all four districts. The table makes the initial comparison of US Army & NATO forces to Russian forces in this chapter.[92] The table in Appendix 2 shows the breakdown of Russian ground forces in just the Western and Southern Military Districts.[93] The table in Appendix 3 shows the contribution of Belorussia.[94]

With the above in mind the Russian military currently fields: eleven Special Forces Groups (three in the Naval Infantry & one in the Airborne Infantry), forty-four ABCTs, six SBCTs, twelve IBCTs (nine ABN & three AASLT), nine MEBs, and two ACRs.[95] The purpose of this reductionist methodology is to allow for direct comparison between the US Army/NATO and the Russian Army. As stated previously, these numbers will be run side by side against their US Army/NATO equivalents before they are arrayed geographically. The Russian Army is large to be sure, but they have a large territory to defend. How do the US Army and her NATO allies compare?

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[90] Hackett, "Russia and Eurasia" in *The Military Balance*, 210.

[91] Ibid., 211-213.

[92] Ibid.

[93] Ibid., 218-219, 220-221.

[94] Ibid., 203-204.

[95] Ibid., 211-213.

The US Army and NATO

At the height of the Cold War NATO had eight Corps along West Germany's borders with East Germany and Czechoslovakia. The Allies had twenty divisions defending in place along that stretch of border.[96] The Baltic states of Estonia, Latvia, and Lithuania are members of NATO today and share a border with Russia about the same length as that old West German border (see Figure 1). Each of these Baltic countries currently has the US Army equivalent of one IBCT each of their own indigenous forces to defend against a possible Russian invasion.[97] Additional NATO light infantry units already in Europe or the continental United States (CONUS) could reinforce these three IBCTs in a week. These indigenous forces and their NATO counterparts could feasibly be prepared to defend with a total of seventeen battalions of mostly light infantry (see Table 1).[98] A series of wargames conducted by the RAND Corporation between 2014 and 2015 tested these estimates. Three more battalions to include an additional Stryker battalion and a combined arms battalion might arrive before the Russians reached Riga or Tallinn. The wargame ended before they could get there enough times that these three battalions were reported separately as represented in Table 1.[99]

[96] Shlapak, David A. and Michael Johnson, "Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics." RAND Corporation, RR-1253-A, (2016): 3, accessed September 7, 2017, https://www.rand.org/pubs/research_reports/RR1253.html.

[97] Ibid., 4.

[98] Ibid.

[99] Ibid., 1-4.

Figure 1 – The old borders of the Cold War compared to the borders of the Baltic States. Source: Rand Corporation, RR-1253-A, (2016), accessed September 7, 2017, https://www.rand.org/pubs/research_reports/RR1253.html.

With the exception of one combined arms battalion, neither American nor NATO armored forces were able to arrive in time to aid the defense of the Baltic states, even with overwhelming NATO air support. This provided a cheap victory for the Russian Army. There simply was not enough time to attrit the Russian forces from the air. This left the NATO allies with a range of poor choices from which to choose. One option was to simply cede the territory. Another was to threaten the use of nuclear weapons unless the Russians withdrew. The third option was a NATO counteroffensive.[100] This paper asks the question, if the US Army and its NATO allies were to conduct a counteroffensive what forces would be available and how long would it take to get them in position with our current force projection capability?

[100] Shlapak and Johnson, "NATO's Eastern Flank" RAND, RR-1253-A, (2016), 4-7.

Table 1 – NATO Ground Forces in the Baltics and Poland. Numbers after the slash (/) arrived too late in most iterations of the wargame and were therefore unable to aid in the defense.

Country	Unit Type (battalion)	Location	Qty
Estonia	Infantry	Estonia	2
	Light infantry	Estonia	3
Latvia	Light infantry	Latvia	2
Lithuania	Mechanized infantry	Lithuania	2
	Motor infantry	Lithuania	2
United States	Airborne infantry	Baltics	2/1
	Attack helicopter	Baltics	2
	Stryker	Baltics	1/1
	Combined arms	Poland	0/1
United Kingdom	Air assault	Baltics	1
Total			17/3

Source: RAND Corporation, RR-1253-A (2016), https://www.rand.org/pubs/research_reports/RR1253.html.

A separate Rand Corporation study conducted by Michael Shurkin in 2017 credited Britain, France, and Germany with mustering and sustaining one ABCT each to a NATO mission (see Table 2). In their current state of readiness, this would be a serious undertaking for all three countries.[101] All three countries are amid long-term processes of not only reducing the size of their armed forces but of restructuring away from costly high-end formations capable of waging MCO against a near-peer threat in favor of lighter forces more suited to conducting long-term stability operations. In light of the Russian Federation's annexation of the Crimean Peninsula, all three nations are re-thinking their current continental security commitments.[102] Appendix 6 of this study details both the constraints and contributions of Britain, France, and Germany. To remain consistent with the findings of Rand study RR-

[101] Michael Shurkin, "The Abilities of the British, French, and German Armies to Generate and Sustain Armored Brigades in the Baltics." RAND Corporation, RR-1629, (2017): 1-10, accessed September 7, 2017. https://www.rand.org/t/rr1629.

[102] Ibid., 1.

1629, this project credited each of these NATO members with providing one ABCT and one IBCT each in the relative combat power analysis.

Table 2 – Estimated NATO Rapid Armored Force Generation Capabilities.

Country	Within a Week	Within a Month	More Than a Month
Britain		1 task force	1 brigade
France	1 battalion	1 brigade	
Germany		1 brigade	

Source: Rand Corporation, RR-1629 (2017), https://www.rand.org/t/rr1629.

The United States

Under the Total Force concept, the US Army relies heavily on the Army National Guard and Army Reserve components. For FY 2017 the US Army has a Total Force end-strength of 999,000 Soldiers (458,615 Active Duty / 195,000 Army Reserve / 335,000 National Guard / 100,800 Individual Ready Reserve). In FY2017 this puts the active duty end strength for the US Army and the Russian Army at nearly equal – 469k:425k Soldiers respectively. The Russian Army is pursuing an active duty end-strength of one-million Soldiers by 2020. The US Army is outmanned more than 3-to-1 in available reserves – 631k:2-million Soldiers (see table in Appendix 1). These are raw numbers using open source information and use no metric to calculate the qualitative difference between the US Army's all volunteer professional force and the Russian Army's blended conscript/contracted force.[103]

The US Active Duty Army is divided into two overall forces, the generating force and the operating force. The operating force is further divided between multiple commands in support of Geographic Combatant Commands (GCCs). The generating force feeds some forces directly to the theater armies supporting the GCCs. The bulk of the US Army's maneuver forces however are based in

[103] "US Army Force Structure," *Military Periscope.com*, September 01, 2016, accessed October 30, 2017, http://www.militaryperiscope.com.lumen.cgsccarl.com/nations/usa/usa/army/index.html.

the continental United States and fall under Forces Command (FORSCOM). FORSCOM maintains them at various states of readiness. FORSCOM further prepares and then feeds these units to support the theater armies as needed in a contingency. The tables in Appendix 5 detail total US Army active duty, US Army Reserve, and US Army National Guard units potentially available.[104]

The table in Appendix 4 provides an overview of US Army forces potentially available to support an MCO like the one described in counterattacking to retake the Baltic states. In summary, the US Army under the Total Force concept could potentially field two to three Corps HQs, sixteen to eighteen DIV HQs, seventeen to nineteen ABCTs, four to eight SBCTs, twenty-nine to thirty-one IBCTs, sixteen to seventeen CABs, and six Maneuver Enhancement BDE in addition to other supporting arms and units already in theater. The disparity in numbers shown above reflect units that are assumed initially unavailable since they are already supporting PACOM or CENTCOM. These units could possibly support US Army Europe as well but would force the other GCCs to assume a high degree of risk.[105]

This paper found that the US Army and NATO are at numerical disadvantage in a head-to-head meeting against the Russian Western Military District. Specifically, in ABCTs the Russians enjoy a greater that 2:1 advantage in potential employment of armored brigades. Table 4 (in Appendix 7) shows a combat power comparison summarized from the data in all of the appendices of this project. Planners would somewhat mitigate the Russian armor advantage by the US Army's 3:2 advantage in rotary wing (RW) aviation. However, the Russian 2:1 advantage in air defense artillery (ADA) and the extensive anti-access/area denial (A2AD) assets in the Russian exclave of Kaliningrad could blunt this.

[104] "US Army Force Structure," *Military Periscope.com* (2017).

[105] Ibid.

MCO in the Baltics

After the Cold War, NATO systematically subsumed several former Warsaw Pact countries in the late 1990s, with another round of enlargement in 2004. The last round of enlargement added the Baltic States which now constitute NATO's northeastern flank. Estonia, Latvia, and Lithuania remain isolated from the other NATO member states by the Baltic Sea, Belarus, and the Russian exclave of Kaliningrad. Geographic isolation makes the Baltic States particularly susceptible to Russia's conventional military capabilities. Further challenges confront NATO and the US in the EUCOM Area of Responsibility, with continuing conflict in Syria and ongoing security dilemmas surrounding Iran and North Korea. Either regime will likely take advantage of the US commitment in Europe to advance their nuclear programs and interests in their near abroad. Georgia, Armenia, Azerbaijan, and Turkey (GAAT) remain vulnerable and present a major opportunity for Iran and Russia. Russian enclaves in Abkhazia and South Ossetia already penetrate the natural barrier of the Caucasus Mountains making the Baku Tbilisi Ceyhan (BTC) Pipeline exceptionally vulnerable. Potential Russian or Iranian effort in this area could consolidate their interests in a contiguous front.[106]

US Army Europe (Seventh Army) is permanently deployed to Europe to counter a Russian threat and provide assurance to America's European allies. Among various support elements, US Army Europe has a single SBCT, IBCT (ABN), and Combat Aviation Brigade (CAB) assigned in addition to a single ABCT rotationally deployed by FORSCOM (see Table 3). Unlike US Army Pacific, US Army Europe has no permanently assigned Corps or Divisional headquarters. These headquarters provide the ability to conduct planning and preparation for large follow-on forces from FORSCOM.[107]

[106] Shlapak and Johnson, "NATO's Eastern Flank" RAND, RR-1253-A, (2016), 1.

[107] "US Army Force Structure," *Military Periscope.com* (2017).

Table 3 – US Army Europe Force Structure

US Army Europe (Seventh Army):
• 2nd Cavalry Regiment (SBCT)
• 173rd IBCT (ABN)
• 12th CAB
• 1x ABCT (Rotational from FORSCOM, will be counted against FORSCOM)
• 1x Multi-National Battle Group – East (Poland)
• 21st Theater Sustainment Command
• 5th Signal Command
• 10th Army Air and Missile Defense Command
• 66th Military Intelligence Group
• 19th Battlefield Coordination Detachment
• Regional Health Command Europe

Source: Table created by the author from "US Army Force Structure," *Military Periscope.com.* September 01, 2016, accessed October 30, 2017, http://www.militaryperiscope.com.lumen.cgsccarl.com/nations/usa/ usa/army/index.html.

A series of wargames conducted by the RAND Corporation from 2014-2015 found that the Russian Western Military District could gain a quick and cheap victory over the Baltic states in under sixty hours.[108] In response, NATO began the Enhanced Forward Presence initiative to reassure America's European allies. As of 28 August 2017, each of the Baltic countries as well as Poland have a fully operational NATO battlegroup (battalion) operating in them. The United States, Canada, Great Britain, and Germany provide the structural framework for the battlegroup within each country with other NATO members rounding out each multi-national battlegroup (see Figure 2). The forces assigned to the battlegroups are the leading units of the NATO brigades listed in Table 2 above. Enhanced Forward Presence allows NATO to jump-start the time-consuming deployment process. Additionally, these forces combined with the indigenous forces listed in above Table 1 provide further deterrence to potential Russian aggression. These forces show NATO's resolve, but the RAND study estimates that a total force of up to ten brigades (including three armored brigades) are necessary to adequately defend the Baltics at

[108] Shlapak and Johnson, *Reinforcing Deterrence on NATO's Eastern Flank,* 1-4.

an annual cost of $2.7 billion. A NATO counter-attack to liberate the Baltic states would require eighteen months to organize sufficient combat power in Europe.[109]

Figure 2. NATO Enhanced Forward Presence. Source: NATO (2016), https://www.nato.int/cps/en/natohq/news_146557.htm.

One of the key considerations found in RAND Corporation study RR-1253-A was the issue of force projection. The significant A2AD threat emanating from the Kaliningrad exclave (see Figure 3) would create extended supply lines for the NATO forces. The study found that any forces not prepositioned in the Baltic states would have difficulty transiting the narrow corridor between Kaliningrad and Belarus.[110] From Kaliningrad, the Russians could target ground staging nodes as far away as Warsaw and Berlin and affect shipping in the Baltic Sea from Copenhagen to Stockholm.[111] Studying the logistics needs of supporting a NATO force capable of conducting major combat operations in Europe is beyond the scope of this project. As such, additional research is required in a follow-on study to determine the full impacts on force projection.

[109] Shlapak and Johnson, *Reinforcing Deterrence on NATO's Eastern Flank*, 1-4.

[110] Ibid., 6.

[111] Hackett, "Russia and Eurasia" in *The Military Balance*, 185.

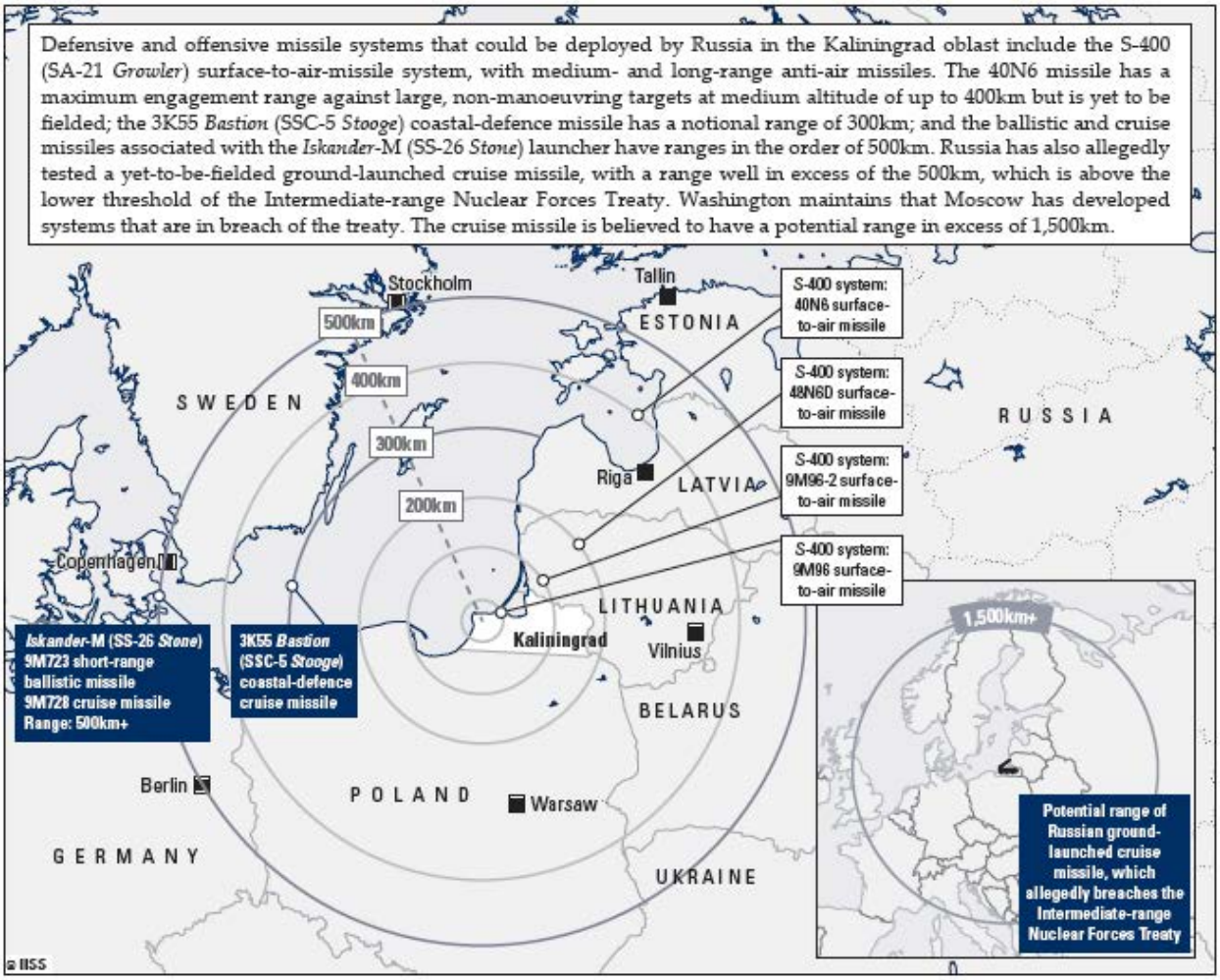

Figure 3. Kaliningrad: Russia's Potential A2AD capability. Source: James Hackett (ed.), "Chapter Five: Russia and Eurasia," pp. 183-236 in *The Military Balance*, 117:1 (2017), 185.

Conclusion

This paper asked the question, if the US Army and its NATO allies were to conduct a counteroffensive in the Baltics what forces would it require and how long would it take to get them in position and, similar to the dilemma that MAJ Albert Wedemeyer faced, how could the US Army rapidly grow and simultaneously transform to meet that need?

Forces and time needed

A series of wargames the RAND Corporation conducted from 2014-2015 found that the Russian Western Military District (WMD) without reinforcement could overrun the three Baltic states of Latvia, Estonia, and Lithuania in as little as sixty hours. The minimum forces needed to minimally defend against their twenty-two maneuver battalions would be slightly over seven US Army/NATO combined arms battalions, slightly more than two US Army ABCTs. To fully defend these states would require ten US Army/NATO BCTs (with a minimum of three ABCTs) based in the three Baltic states at a cost of $2.7 billion annually. A US Army/NATO counterattack to retake the Baltics would require sixty-six maneuver battalions (twenty-two BCTs) and eighteen-months to assemble. The financial cost of this was left to future research.[112]

This paper has shown that the US Army could only numerically support defensive operations in the Baltics and could not support offensive operations. The less than 1:2 ratio of armored brigades potentially available is the most striking finding. The aggregate combat power of sixty-nine NATO BDEs to seventy-six Russian BDEs, to include ABCTs, ACRs, IBCTs, SBCTs, MEBs, and CABs, still comes out to less than 1:1 for the US/NATO. This uses aggregate numbers to show capability. To assume the Russian Army would or would not reinforce the WMD from other military districts would attempt to measure intent. Defensive operations with an acceptable force ratio require a total of ten BCTs (to include three ABCTs) to be in place at a cost of $2.7 billion annually.[113] To conduct offensive

[112] Shlapak and Johnson, *Reinforcing Deterrence on NATO's Eastern Flank,* 3-11.

[113] Ibid., 11.

operations under an acceptable force ratio, the US Army would have to rapidly grow and simultaneously transform.

In the summer of 1941 MAJ Albert Wedemeyer faced a similar dilemma. The US Army G-2 estimated Germany had about 350 divisions fielded in the Summer of 1941. They concluded a worst-case scenario of Germany fielding about 500 divisions by the Summer of 1943 consisting of nearly twelve million Soldiers. To match enemy capability man-for-man and achieve a minimum force ratio of 2:1 as required for the offensive operations, MAJ Wedemeyer concluded that the Allies would have to field a ground force of between 700 to 900 divisions, consisting of twenty-five million Soldiers. Wedemeyer estimated that Great Britain could only field 1 million, to include the use of its Empire troops. He also assumed that the Soviet Union would be out of the war, leaving the United States to fill the balance. This was three-times the number of troops the United States could devote to the ground force.[114]

The Victory Plan of 2020

MAJ Wedemeyer reframed his problem to generate feasible options. Rather than trying to match the German Army and the US Army man-for-man, Wedemeyer sought to capitalize on American strengths.[115] He designed his new armored divisions to provide mobility, firepower, and shock effect simultaneously.[116] He designed mechanized infantry divisions to keep pace with the armored divisions to have the ability to quickly consolidate gains.[117] He gave each field army control over its own tactical air support.[118] He mitigated manpower with robust firepower and protection enablers like artillery, anti-tank, and anti-air units.[119] He also built-in safeguards against span of control issues. By maintaining unit

[114] Kirkpatrick, *An Unknown Future*, 82-84.

[115] Ibid., 82-91.

[116] Ibid., 86.

[117] Ibid., 90-91.

[118] Ibid., 86.

[119] Ibid., 88-89.

homogeneity up to the regimental level, he could build task-organized divisions without adding confusion to an already complex environment.[120]

The minimum growth the US Army needs to conduct an adequate defense, without pulling back from current global commitments is three new ABCTs. The cost to stand these up from is roughly $13 billion. The US Army could mitigate this slightly by converting existing units or transferring capability from the Reserve component.[121] Additionally, this requires both a corps and a division headquarters permanently assigned to US Army Europe not only to manage the tactical span of control, but to provide the level of planning needed in an initial defense and conduct planning for and receipt of follow-on forces.[122]

Just as MAJ Wedemeyer discovered, restructuring units could also provide economy of limited manpower. Getting air defense and aviation units down to brigade levels and separate artillery for divisional and brigade units would achieve the firepower, shock effect, and protection gains that Wedemeyer realized. FM 3-0 calls for units to perform functions in the division and corps consolidation areas and deep areas.[123] How can a division or corps shape the deep fight without their own reconnaissance or fires capability? How can they control the consolidation? These forces do not exist without bleeding off combat power from subordinate units and further degrading our already insufficient correlation of forces and means (COFMS).

The methodology MAJ Wedemeyer used to develop the Victory Plan of 1941 produced stunningly accurate results. He predicted the number of troops the US Army could employ before negatively impacting American civil society and the war effort. He created a new force structure to defeat a numerically superior enemy. He intuitively understood the need to balance the efforts of the US Army,

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[120] Kirkpatrick, *An Unknown Future, 88-89.*

[121] Shlapak and Johnson, *Reinforcing Deterrence on NATO's Eastern Flank,* 11.

[122] Ibid., 10.

[123] FM 3-0, *Operations,* (2017), 1-30 – 1-35.

the other services, the Allies, and American industry to overwhelm the Germany. Perhaps what was most striking however, was his accurate prediction of the time necessary to for the transformation of the US Army to a force capable of waging offensive large-scale combat on another continent.

The methodology MAJ Wedemeyer used started by first determining the strategic aims of the United States and then linking them to the next logical question. This postured the US Army to build the right force as resources began to pour in after US entry into the war. He properly identified the primary threat as Germany, not Japan, and designed a force structure optimized to defeat that threat. GEN Milley has similarly called for a US Army capable of defeating a near-peer and the force structure requirements are emergent in the FM 3-0. It is now time to take the next logical step, building that force.

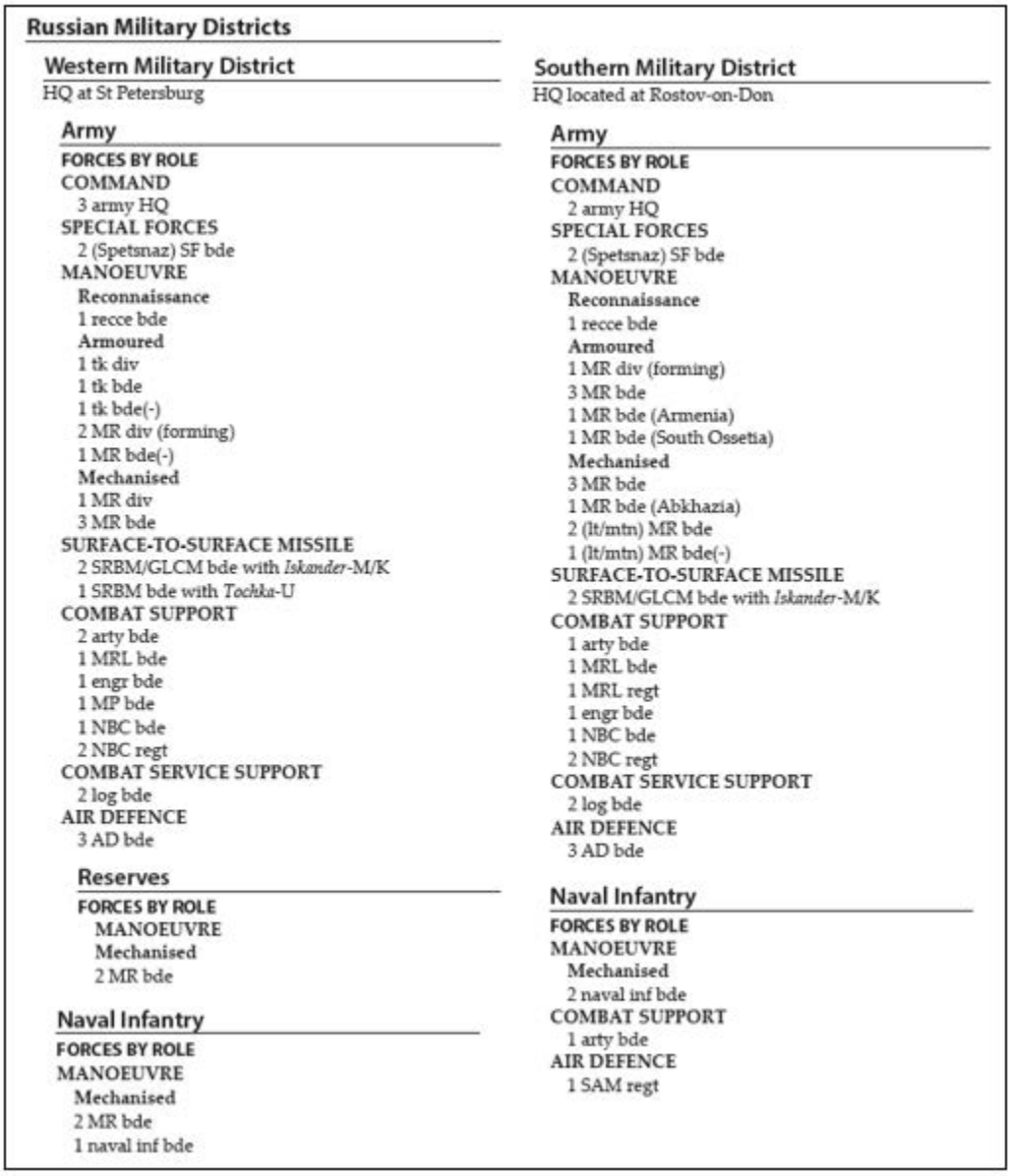
Appendices

Appendix 1 – Total Russian ground forces

- Commands:
  - 11x Army HQs
  - 1x Corps HQs
- Special Forces:
  - 7x (Spetsnaz) SF Brigades (BDE)
- Maneuver:
  - Reconnaissance:
    - 2x RECCE BDEs
  - Armored:
    - 2x Tank Divisions (DIV)
      - 2x Tank Regiments (RGT)
      - 1x Artillery RGT
      - 1x ADA RGT
    - 4x Tank BDEs
      - 1x Armored RECCE BN
      - 3x Tank BN
      - 1x Armored IN BNs
      - 1x Arty BN
      - 1x MRL BN
      - 1x ADA BNs
      - 1x EN BN
      - 1x EW Co.
      - 1x CBRN Co.
    - 3x Motorized Rifle (MR) DIVs
    - 17x MR BDEs
      - 1x Armored RECCE BN
      - 1x Tank BN
      - 3x Armored IN BNs
      - 2x Arty BNs
      - 1x MRL BN
      - 1x Anti-Tank (AT) BN
      - 2x ADA BNs
      - 1x EN BN
  - Mechanized:
    - 1x MECH IN DIV
      - 2x MECH IN RGTs
      - 1x Arty RGT
      - 1x ADA RGT
    - 19x MECH IN BDEs
      - Same as MR BDEs (above)
- Surface-to-Surface Missile:
  - 9x SRBM/GLCM BDEs
    - 9K720 *Iskandar*-M/K (SS-26 *Stone*)
  - 1x SRBM BDE
    - 9K79-1 *Tochka*-U (SS-21B *Scarab*)
- Combat Support:
  - 10x Arty BDEs
  - 4x MRL BDEs
  - 1x MRL RGT
  - 4x EN BDEs
  - 1x MP BDE
  - 5x CBRN BDEs
  - 10x CBRN RGTs
- Combat Service Support:
  - 10x Logistics BDEs
- Air Defense:
  - 13x ADA BDEs
- Naval Infantry (Marines):
  - 3x (Fleet) SF BDEs
  - 1x RECCE BDE
  - 3x MR BDEs
  - 1x MR RGT
  - 6x (Independent) Naval IN BDEs
- Airborne Troops:
  - 1x ABN RECCE SF BDE
  - 4x ABN DIVs
    - 2x ABN RGTs
    - 1x Arty RGT
    - 1x ADA RGT
  - 1x (Independent) ABN BDE
  - 3x AASLT BDEs
- Reserves
  - 13x (Cadre) Mech IN BDEs
  - 2,000,000 Men Available
    - All arms of military
    - Service within last 5 years

Source: Created by the author from James Hackett (ed.), "Chapter Five: Russia and Eurasia," pp. 183-236 in *The Military Balance*, 117:1 (2017), 211-223.

Appendix 2 – Russian ground forces in the Western and Southern Military Districts



Russian Military Districts

Western Military District

HQ at St Petersburg

Army

FORCES BY ROLE

COMMAND
- 3 army HQ

SPECIAL FORCES
- 2 (Spetsnaz) SF bde

MANOEUVRE

Reconnaissance
- 1 recce bde

Armoured
- 1 tk div
- 1 tk bde
- 1 tk bde(-)
- 2 MR div (forming)
- 1 MR bde(-)

Mechanised
- 1 MR div
- 3 MR bde

SURFACE-TO-SURFACE MISSILE
- 2 SRBM/GLCM bde with *Iskander*-M/K
- 1 SRBM bde with *Tochka*-U

COMBAT SUPPORT
- 2 arty bde
- 1 MRL bde
- 1 engr bde
- 1 MP bde
- 1 NBC bde
- 2 NBC regt

COMBAT SERVICE SUPPORT
- 2 log bde

AIR DEFENCE
- 3 AD bde

Reserves

FORCES BY ROLE

MANOEUVRE

Mechanised
- 2 MR bde

Naval Infantry

FORCES BY ROLE

MANOEUVRE

Mechanised
- 2 MR bde
- 1 naval inf bde

Southern Military District

HQ located at Rostov-on-Don

Army

FORCES BY ROLE

COMMAND
- 2 army HQ

SPECIAL FORCES
- 2 (Spetsnaz) SF bde

MANOEUVRE

Reconnaissance
- 1 recce bde

Armoured
- 1 MR div (forming)
- 3 MR bde
- 1 MR bde (Armenia)
- 1 MR bde (South Ossetia)

Mechanised
- 3 MR bde
- 1 MR bde (Abkhazia)
- 2 (lt/mtn) MR bde
- 1 (lt/mtn) MR bde(-)

SURFACE-TO-SURFACE MISSILE
- 2 SRBM/GLCM bde with *Iskander*-M/K

COMBAT SUPPORT
- 1 arty bde
- 1 MRL bde
- 1 MRL regt
- 1 engr bde
- 1 NBC bde
- 2 NBC regt

COMBAT SERVICE SUPPORT
- 2 log bde

AIR DEFENCE
- 3 AD bde

Naval Infantry

FORCES BY ROLE

MANOEUVRE

Mechanised
- 2 naval inf bde

COMBAT SUPPORT
- 1 arty bde

AIR DEFENCE
- 1 SAM regt

Source: Created by the author from James Hackett (ed.), "Chapter Five: Russia and Eurasia," pp. 183-236 in *The Military Balance*, 117:1 (2017), 218-221.

Appendix 3 – Belorussian ground forces

Army 16,500

FORCES BY ROLE

COMMAND
2 comd HQ (West & North West)

MANOEUVRE
Mechanised
2 mech bde
2 mech bde(-)

COMBAT SUPPORT
2 arty bde
2 MRL regt
2 engr regt

EQUIPMENT BY TYPE

ARMOURED FIGHTING VEHICLES
MBT 515: 446 T-72; 69 T-80
RECCE 136 BRM-1
IFV 875 BMP-2
APC • APC (T) 50 MT-LB

ENGINEERING & MAINTENANCE VEHICLES
AEV MT-LB
VLB MTU

ANTI-TANK/ANTI-INFRASTRUCTURE • MSL
SP 236: 126 9P148 *Konkurs*; 110 9P149 *Shturm*
MANPATS 9K111 *Fagot* (AT-4 *Spigot*); 9K111-1 *Konkurs* (AT-5 *Spandrel*); 9K115 *Metis* (AT-7 *Saxhorn*)

ARTILLERY 961
SP 434: **122mm** 198 2S1 *Gvozdika*; **152mm** 236: 108 2S3 *Akatsiya*; 116 2S5; 12 2S19 *Msta-S*
TOWED 152mm 180: 48 2A36 *Giatsint-B*; 132 2A65 *Msta-B*
GUN/MOR 120mm 48 2S9 NONA-S
MRL 238: **122mm** 126 BM-21 *Grad*; **220mm** 72 9P140 *Uragan*; **300mm** 40: 36 9A52 *Smerch*; 4 *Polonez*
MOR 120mm 61 2S12

RADAR • LAND GS-13 *Long Eye*/SNAR-1 *Long Trough*/SNAR-2/-6 *Pork Trough* (arty); some *Small Fred*/*Small Yawn*/SNAR-10 *Big Fred* (veh, arty)

Special Operations Command 6,000

FORCES BY ROLE

SPECIAL FORCES
1 SF bde

MANOEUVRE
Mechanised
2 (mobile) mech bde

EQUIPMENT BY TYPE

ARMOURED FIGHTING VEHICLES
APC • APC (W) 192: 39 BTR-70; 153 BTR-80

ARTILLERY • TOWED 122mm 48 D-30

ANTI-TANK/ANTI-INFRASTRUCTURE • MSL
MANPATS 9K111 *Fagot* (AT-4 *Spigot*); 9K111-1 *Konkurs* (AT-5 *Spandrel*); 9K115 *Metis* (AT-7 *Saxhorn*)

Joint 10,500 (Centrally controlled units and MoD staff)

FORCES BY ROLE

SURFACE-TO-SURFACE MISSILE
2 SRBM bde

COMBAT SUPPORT
1 arty gp
1 MRL bde
2 engr bde
1 EW unit
1 NBC regt
1 ptn bridging regt
2 sigs bde

EQUIPMENT BY TYPE

ARMOURED FIGHTING VEHICLES
APC • APC (T) 20 MT-LB

ARTILLERY 196
SP 152mm 70 2S5 *Giatsint-S*
TOWED 152mm 90 2A65 *Msta-B*
300mm 36 9A52 *Smerch*

SURFACE-TO-SURFACE MISSILE LAUNCHERS
SRBM • Conventional 96: 36 FROG/9M79 *Tochka* (SS-21 *Scarab*); 60 *Scud*

Source: Created by the author from James Hackett (ed.), "Chapter Five: Russia and Eurasia," pp. 183-236 in *The Military Balance*, 117:1 (2017), 203-204.

Appendix 4 – US Army total forces available (summary)

Total Active Duty DIV HQs, BCTs/BDEs, and CABs potentially available:

- 8x DIV HQs
  - 2x more DIV HQs (7th & 25th) assumed unavailable initially
- 8x ABCTs
  - 2x more ABCTs assumed unavailable initially (PACOM & CENTCOM)
- 3x SBCTs
  - 4x more SBCTs assumed unavailable initially (PACOM)
- 11x IBCTs
  - 6x IBCTs are ABN
  - 2x more IBCTs assumed unavailable initially (PACOM)
- 8x Combat Aviation BDEs
  - 1x more CAB assumed unavailable initially (PACOM)

Total National Guard DIV HQs, BCTs/BDEs, and CABs potentially available:

- 8x DIV HQs
- 9x ABCTs
- 1x SBCT
- 18x IBCTs
- 8x Combat Aviation BDEs
- 1x Military Intelligence BDE
- 2x Military Police BDEs

Total US Army Reserve units potentially available:

- 1x Aviation BDE
- 1x Military Intelligence BDE
- 4x Military Police BDEs
- 6x Maneuver Enhancement / Engineer BDEs
- 2x Theater Tactical Signal BDEs
- 5x Expeditionary Sustainment Commands
- 1x Psychological Operations Group
- 4x Civil Affairs Commands

Source: Created by the author from "US Army Force Structure," *Military Periscope.com*, September 01, 2016, accessed October 30, 2017, http://www.militaryperiscope.com.lumen.cgsccarl.com/nations/usa/usa/army/index.html.

Appendix 5 – US Army total forces available (in detail)

US Army Active Duty Commands:

- US Army Training and Doctrine Command (TRADOC)
- US Army Materiel Command (AMC)
- US Army Africa / Southern European Task Force
- Military Surface Deployment and Distribution Command (SDDC)
- US Army Space and Missile Command / Army Strategic Command
- US Army Cyber Command (Second Army)
- US Army Central (Third Army)
- US Army North (Fifth Army)
- US Army South (Sixth Army)
- US Army Pacific (with Assigned forces / assumed initially unavailable to a Western European conflict):
  - I Corps:
    - 25th Infantry Division (ID):
      - 2x IBCTs
      - 1x Artillery BDE (DIVARTY)
      - 1x Sustainment BDE
      - 1x Combat Aviation BDE (CAB)
    - 7th ID (Administrative):
      - 2x SBCTs, 25th ID
      - 4th IBCT (ABN), 25th ID
  - Eighth Army:
    - 2nd ID:
      - 1x ABCT
      - 1x CAB
      - 1x Sustainment BDE
- US Army Special Forces Command:
  - 7x Special Forces (SF) Groups (incl. 2x ARNG SF Groups)
  - 75th Ranger Regiment
  - 160th Special Operations Aviation Regiment (ABN)
  - Special Operations Support Command
  - 2x Military Information Support Operations Groups (ABN)
  - 95th Civil Affairs BDE (ABN)
  - 528th Sustainment BDE (ABN)
- US Army Europe (Seventh Army):
  - 2nd Cavalry Regiment (SBCT)
  - 173rd IBCT (ABN)
  - 12th CAB
  - 1x ABCT (Rotational from FORSCOM, will be counted against FORSCOM)
  - 1x Multi-National Battle Group – East (Poland)
  - 21st Theater Sustainment Command
  - 5th Signal Command
  - 10th Army Air and Missile Defense Command
  - 66th Military Intelligence Group
  - 19th Battlefield Coordination Detachment
  - Regional Health Command Europe

Appendix 5 (continued)

US Army Active Duty Commands (continued):

- US Army Forces Command (FORSCOM):
  - III (Armored) Corps:
    - 3rd Cavalry Regiment (SBCT)
    - 1st ID:
      - 2x ABCTs
      - 1x IBCT
      - 1x DIVARTY
      - 1x CAB
      - 1x Sustainment BDE
    - 1st Cavalry DIV (CD):
      - 3x ABCTs
      - 1x CAB
    - 1st Armored DIV (AD):
      - 2x ABCTs
      - 1x SBCT
      - 1x DIVARTY
      - 1x CAB
      - 1x Sustainment BDE
    - 4th ID:
      - 1x ABCT
      - 1x SBCT
      - 1x IBCT
      - 1x CAB
      - 1x DIVARTY
      - 1x Sustainment BDE
    - 13th Sustainment Command (Expeditionary)
    - 89th Military Police (MP) BDE
    - 504th Military Intelligence BDE
    - 36th Engineer BDE
  - XVIII (ABN) Corps:
    - 3rd ID:
      - 1x ABCT
      - 1x IBCT
      - 1x CAB
      - 1x Sustainment BDE
    - 10th (Mountain) DIV:
      - 3x IBCTs
      - 1x CAB
      - 1x Sustainment BDE
    - 82nd (ABN) DIV:
      - 3x IBCTs
      - 1x CAB
      - 1x DIVARTY
      - 1x Sustainment BDE

Appendix 5 (continued)

US Army Active Duty Commands (continued):

- US Army Forces Command (FORSCOM) (continued):
  - XVIII (ABN) Corps (continued):
    - 101st (ABN) DIV:
      - 3x IBCTs
      - 1x CAB
      - 1x Sustainment BDE
    - 1st Theater Sustainment Command
    - 16th Military Police BDE
    - 20th Engineer BDE (Combat) (ABN)
    - 35th Theater Tactical Signal BDE
    - 44th Medical Command
    - 108th Air Defense Artillery BDE
  - 32nd Army Air and Missile Defense (ADA) Command
    - 4x ADA BDEs
  - 20th Support Command:
    - 48th Chemical BDE
    - 2x Explosive Ordinance Disposal (EOD) Groups

Total Active Duty DIV HQs, BCTs/BDEs, and CABs potentially available:

- 8x DIV HQs
  - 2x more DIV HQs (7th & 25th) assumed unavailable initially
- 8x ABCTs
  - 2x more ABCTs assumed unavailable initially (PACOM & CENTCOM)
- 3x SBCTs
  - 4x more SBCTs assumed unavailable initially (PACOM)
- 11x IBCTs
  - 6x IBCTs are ABN
  - 2x more IBCTs assumed unavailable initially (PACOM)
- 8x Combat Aviation BDEs
  - 1x more CAB assumed unavailable initially (PACOM)

Appendix 5 (continued)

Army National Guard DIVs/BCTs/CABs:

• 28th Infantry Division	Harrisburg, Pa.
• 2nd Infantry Brigade Combat Team	Pennsylvania
• 55th Armored Brigade Combat Team	Pennsylvania
• 56th Stryker Brigade Combat Team	Pennsylvania
• 28th Combat Aviation Brigade	Pennsylvania
• 29th Infantry Division	Ft. Belvoir, Va.
• 116th Infantry Brigade Combat Team	Virginia
• 30th Armored Brigade Combat Team	North Carolina
• 53rd Infantry Brigade Combat Team	Florida
• 29th Combat Aviation Brigade	Maryland
• 34th Infantry Division	Saint Paul, Minn.
• 116th Calvary Brigade Combat Team	Saint Paul, Minn.
• 32nd Infantry Brigade Combat Team	Camp Douglas, Wis.
• 1st Armored Brigade Combat Team	Bloomington, Minn.
• 2nd Infantry Brigade Combat Team	Boone, Iowa
• 34th Combat Aviation Brigade	Saint Paul, Minn.
• 35th Infantry Division (Mechanized)	Ft. Leavenworth, Kan.
• 33rd Infantry Brigade Combat Team	Illinois
• 45th Infantry Brigade Combat Team	Oklahoma
• 48th Infantry Brigade Combat Team	Georgia
• 35th Combat Aviation Brigade	Missouri
• 36th Infantry Division	Austin, Texas
• 56th Infantry Brigade Combat Team	Texas
• 72nd Infantry Brigade Combat Team	Texas
• 256th Armored Brigade Combat Team	Louisiana
• 155th Armored Brigade Combat Team	Mississippi
• 45th Infantry Brigade Combat Team	Oklahoma
• 36th Combat Aviation Brigade	Texas
• 38th Infantry Division	Indianapolis, Ind.
• 76th Infantry Brigade Combat Team	Indiana
• 38th Combat Aviation Brigade	Indiana
• 219th Battlefield Surveillance Brigade	Indiana
• 40th Infantry Division (Mechanized)	Los Alamitos, Calif.
• 79th Infantry Brigade Combat Team	San Diego, Calif.
• 41st Infantry Brigade Combat Team	Oregon
• 29th Infantry Brigade Combat Team	Hawaii/Arizona
• 81st Armored Brigade Combat Team	Washington/California
• 40th Combat Aviation Brigade	California
• 42nd Infantry Division	Troy, N.Y.
• 27th Infantry Brigade Combat Team	Syracuse, N.Y.
• 42nd Combat Aviation Brigade	Latham, N.Y.

Appendix 5 (continued)

Army National Guard DIVs/BCTs/CABs (continued):

- 39th Infantry Brigade Combat Team (Separate) — Arkansas
- 45th Infantry Brigade Combat Team (Separate) — Oklahoma
- 155th Armored Brigade Combat Team (Separate) — Mississippi
- 278th Armored Cavalry Regiment (Separate) — Tennessee
- 300th Military Intelligence Brigade (Separate) — Utah
- 43rd Military Police Brigade (Separate) — Rhode Island
- 177th Military Police Brigade (Separate) — Michigan

Total National Guard DIV HQs, BCTs/BDEs, and CABs potentially available:

- 8x DIV HQs
- 9x ABCTs
- 1x SBCT
- 18x IBCTs
- 8x Combat Aviation BDEs
- 1x Military Intelligence BDE
- 2x Military Police BDEs

Appendix 5 (continued)

US Army Reserve Command:

• 11th Aviation Command	Ft. Knox, Ky.
• 244th Aviation Brigade	Ft. Dix, N.J.
• 1st Mission Support Command	Ft. Buchanan, Puerto Rico
• 200th Military Police Command	Ft. Meade, Md.
• 11th Military Police Brigade	Los Alamitos, Calif.
• 290th Military Police Brigade	Nashville, Tenn.
• 300th Military Police Brigade	Inkster, Mich.
• 333rd Military Police Brigade	Farmingdale, N.Y.
• 3rd Medical Command (Deployment Support)	Forest Park, Ga.
• 5th Medical Brigade	Birmingham, Ala.
• 8th Medical Brigade	Staten Island, N.Y.
• 332nd Medical Brigade	Nashville, Tenn.
• 338th Medical Brigade	Horsham Air Guard Station, Pa.
• 804th Medical Brigade	DRFTA, Mass.
• 335th Signal Command (Theater)	East Point, Ga.
• 505th Theater Tactical Signal Brigade	Las Vegas, Nev.
• 359th Theater Tactical Signal Brigade	Ft. Gordon, Ga.
• Army Reserve Cyber Operations	
• 377th Theater Sustainment Command	Belle Chasse, La.
• Army Reserve Deployment Spt. CMD	Birmingham, Ala.
• Army Reserve Sustainment Command	Birmingham, Ala.
• 310th Expeditionary Sustainment CMD	Indianapolis, Ind.
• 143rd Sustainment CMD (Expeditionary)	Orlando, Fla.
• 103rd Sustainment CMD (Expeditionary)	Des Moines, Iowa
• 316th Expeditionary Sustainment CMD	Coraopolis, Pa/
• 412th Theater Engineer Command	Vicksburg, Miss.
• 302nd Maneuver Enhancement Brigade	Chicopee, Mass.
• 411th Engineer Brigade	New Winsor, N.Y.
• 926th Engineer Brigade	Montgomery, Ala.
• 416th Theater Engineer Command	Darien, Ill.
• 301st Maneuver Enhancement Brigade	JB Lewis-McChord, Wash.
• 372nd Engineer Brigade	Ft. Snelling, Minn.
• 420th Engineer Brigade	Bryan, Texas
• 76th Operational Response Command	Salt Lake City, Utah
• 415th Chemical Brigade	Greenville, S.C.
• 1st Space Brigade	Colorado Springs, Colo.
• 79th Sustainment Support Command	Los Alamitos, Calif.
• 451st Expeditionary Sustainment CMD	Wichita, Kan.
• 311th Expeditionary Sustainment CMD	Los Angeles, Calif.
• 364th Expeditionary Sustainment CMD	Marysville, Wash.
• 4th Expeditionary Sustainment CMD	San Antonio, Texas

Appendix 5 (continued)

US Army Reserve Command:

• 7th Mission Support Command	Kaiserslautern, Germany
• 361st Civil Affairs Brigade	Grafenwoehr, Germany
• 807th Medical CMD (Deployment Support)	Ft. Douglas, Utah
• 139th Medical Brigade	Independence, Miss.
• 2nd Medical Brigade	San Pablo, Calif.
• 176th Medical Brigade	Seagoville, Texas
• 307th Medical Brigade	Blacklick, Ohio
• 330th Medical Brigade	Fort Sheridan, Ill.
• Army Reserve Medical Command	Pinellas Park, Fla.
• Military Intelligence Readiness Command	Ft. Belvoir, Va.
• 505th Military Intelligence Brigade	Ft. Sam Houston, Texas
• Civil Affairs and Psych. Ops. CMD (Airborne)	Ft. Bragg, N.C.
• 2nd Psychological Operations Group	Twinsburg, Ohio
• 350th Civil Affairs Command	Pensacola, Fla.
• 351st Civil Affairs Command	Mountain View, Calif.
• 352nd Civil Affairs Command	Ft. Meade, Md.
• 353rd Civil Affairs Command	Staten Island, N.Y.

Total US Army Reserve units potentially available:

- 1x Aviation BDE
- 1x Military Intelligence BDE
- 4x Military Police BDEs
- 6x Maneuver Enhancement / Engineer BDEs
- 2x Theater Tactical Signal BDEs
- 5x Expeditionary Sustainment Commands
- 1x Psychological Operations Group
- 4x Civil Affairs Commands

Source: Created by the author from "US Army Force Structure," *Military Periscope.com*, September 01, 2016, accessed October 30, 2017, http://www.militaryperiscope.com.lumen.cgsccarl.com/nations/usa/usa/army/index.html.

Appendix 6 – British, French, and German contribution

Great Britain

The British Army is in a decades-long draw down of their force to a total of 82,000 Soldiers. The British Army's Future Force 2020 initiative began in 2015. The blueprint of this plan has the British Army divided into two forces. The Adaptable Force would consist of seven medium-to-light brigades geared towards global stability operations. They would keep the bulk of this force at a low state of readiness and only deploy after a training and readiness program. They would center the Reaction Force around one light air assault brigade and three armored infantry brigades optimized to wage MCO. They would keep one heavy brigade along with one battalion of the AASLT brigade on a high state of readiness. The remaining two-thirds of the force would remain at much lower states of readiness. In the event of a long-term commitment, they plan to then rotate a third of the force through every six months for a total of eighteen months.[124]

As of June 2016, the British Army could field a total MCO-capable force equivalent to three US Army ABCTs and one ABN IBCT. The British Army is organized in regiments which are each equivalent to US Army battalions. The British have three armored regiments, each holding forty-eight Challenger II main battle tanks (MBT). They have three armored cavalry regiments, each holding a mixture of forty-eight Scorpion, Scimitar, Spartan, Sultan, Samaritan, Striker, and Samson Combat Vehicles Reconnaissance (Tracked) or CVR(T). The British Army has six armored infantry regiments, each holding forty-two infantry fighting vehicles (IFV). In a large-scale emergency, they could task-organize these regiments into the equivalent of three US Army ABCTs. However as stated previously, keeping just one of these ABCTs in the field at any given time would be a stretch for the British.[125] Just as with the Russian model, this section of the project shows the total force structure available to the

[124] Shurkin, "British, French, and German Armored Brigades in the Baltics," RAND, RR-1629 (2017), 3-5.

[125] Ibid., 3.

British. This essay will use the RAND estimate of one ABCT and one ABN IBCT for the British contribution when forces are arrayed.

France

While the French Army is bigger and more mobile than either the British or the German armies, it is also overstretched. Much of the French Army is serving in a constabulary role guarding critical infrastructure from terrorist attacks around former French protectorates and within France itself. While trying to provide a presence at all of these points, training in warfighting skills has fallen off sharply since 2015. They have especially felt this in those skills needed to wage MCO. French budget law requires units to participate in ninety days of training a year, not to include specialized pre-deployment training. Since 2015 no unit in the French Army has received more than sixty-four days of training.[126]

The French Army is the largest and most expeditionary of the three NATO armies in this study. In May 2015, they began an organizational re-design of the French Army to create an operational force called Combined Arms Force Scorpion. Scorpion has two French combat divisions support by four functional brigades (intelligence, logistics, CBRN, and engineers). Each division has three brigades consisting of one ABCT and two Mechanized IBCTs each. The French First Division has an additional Franco-German IBCT.[127] Just as with the British model previously, this project will use the RAND estimate of one ABCT and one IBCT for the French contribution when forces are arrayed.

Germany

The German Army is also in the midst of a program to reduce the size and expense of its MCO-capable forces. Their current objective is to have 10,000 deployable Soldiers for a short-term crisis with the ability to sustain up to 4,000 (about one brigade) deployed indefinitely. In reality however, the German Army only has about enough equipment to deploy one ABCT. While the German Army does

[126] Shurkin, "British, French, and German Armored Brigades in the Baltics," RAND, RR-1629 (2017), 5-6.

[127] Ibid., 5.

have some very capable light infantry and airborne infantry units optimized to perform early entry operations, noncombatant evacuations, irregular warfare, and deep interdiction operations. The only medium-to-heavy units are in the two German Panzer Divisions. While Germany's light forces maintain a higher level of readiness, the forces slated to fulfill Germany's role in NATO's Very High Readiness Joint Task Force (VJTF) would both come out of the German 1st Panzer Division. They would have to strip other units just to meet this requirement.[128]

On paper, the German Army has five armored battalions, each with forty-four Leopard 2 MBTs. One of these battalions is a Dutch/German combined battalion with five additional tanks. They also have twelve mechanized infantry battalions. Two of these battalions are Dutch with forty-four CV90 IFVs in each battalion. The remaining ten battalions are German with forty-four Puma IFVs each. These battalions are organized into two Panzer Divisions with four brigades in each division. The greatest limiting factor for the German Army is the age and efficacy of the German equipment. Only two of the German battalions have equipment modern enough to face the Russians. As with Great Britain and France, Germany will only contribute a single ABCT and one IBCT when forces are arrayed.[129]

[128] Shurkin, "British, French, and German Armored Brigades in the Baltics," RAND, RR-1629 (2017), 7-9.

[129] Ibid.

Appendix 7 – Relative combat power comparison

In an effort to mitigate the large number of variables that went into to building of Table 4, the maximum number of units that each side were capable of providing to the fight were used. The purpose was to measure capability, not intent. Simply put, to keep the Russians from reinforcing the WMD with any of these assets from any of the other military districts, then the US/NATO would have put an asset on the table to "fix" that force.

Table 4 – Summary of Combat Power Comparison

	US/NATO	Russia	Ratio (US/Rus)	Notes
Field Army HQs	1	3	1:3	All HQs are currently permanently assigned to Europe
Corps HQs	3	1	3:1	No US Corps HQs permanently assigned to Europe; One Russian Corps HQs in WMD
DIV HQs	10/18	4	5:2	No US DIV HQs permanently assigned to Europe; Four DIV HQs in WMD
ABCTs	19/21	44	4.75:11 (<1:2)	Includes NATO ABCTs, Excludes 2x ABCTs supporting other GCCs
ACRs	0	2	0:2	
IBCTs	32	12	4:3	
SBCTs	4/8	6	2:3	
CABs	12/17	8	3:2	Russian RW falls under their Aerospace Forces, not the Russian Army
Naval Infantry	2/6	4/10	1:2	
ADA	2/6	3/13	1:2	
EN	6	1	6:1	
Fires BDEs	2	5	2:5	

Source: Table created by the author by summarizing the detailed information from the following sources: Shlapak, David A. and Michael Johnson, "Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics." RAND Corporation, RR-1253-A, (2016): 1-12, accessed September 7, 2017. https://www.rand.org/pubs/research_reports/RR1253.html; "US Army Force Structure," *Military Periscope.com.* September 01, 2016, accessed October 30, 2017, http://www.militaryperiscope.com. lumen.cgsccarl.com/nations/usa/usa/army/index.html; James Hackett (ed.), "Chapter Five: Russia and Eurasia," pp. 183-236 in *The Military Balance*, 117:1 (2017); and Michael Shurkin, "The Abilities of the British, French, and German Armies to Generate and Sustain Armored Brigades in the Baltics." RAND Corporation, RR-1629, (2017): 1-10, accessed September 7, 2017, https://www.rand.org/t/rr1629.

The following were exceptions to the maximum capability formula: As stated previously, in accordance with the RAND study (RR-1629), this study used the lesser of German, British, and French capabilities. As also stated previously, it did not include US Army units that are already held back in support of other Geographic Combatant Commands. And Finally, it used only a minimum number of Russian Naval Infantry BDEs and US Marine Expeditionary Brigades as they are also supporting other commands.

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