2-2015

Why The Wehrmacht Should Have Invaded The Soviet Union In 1940

Rodney Scott Bryan

Follow this and additional works at: http://digitalcommons.apus.edu/theses
Part of the European History Commons, and the Military History Commons

Recommended Citation

This Capstone-Thesis is brought to you for free and open access by DigitalCommons@APUS. It has been accepted for inclusion in Master's Capstone Theses by an authorized administrator of DigitalCommons@APUS. For more information, please contact digitalcommons@apus.edu.
The thesis for the master’s degree submitted by

Bryan Rodney

under the title

*Why The Wehrmacht Should Have Invaded The Soviet Union In 1940*

has been read by the undersigned. It is hereby recommended for acceptance by the faculty with credit to the amount of

3 semester hours

First Reader: Robert Young, PhD  Date: 9 November 2014
Second Reader: Thomas Goetz, PhD  Date: 20 November 2014

Recommended for approval on behalf of the program

Richard K. Hines, PhD  Date: 19 December 2014

Recommendation accepted on behalf of the program director

Date: 19 December 2014

Approved by academic dean

Date: 19 December 2014
WHY THE WEHRMACHT SHOULD HAVE INVADED THE SOVIET UNION IN 1940

A thesis submitted in partial fulfillment of the
Requirements for the degree of
MASTER OF ARTS
in
MILITARY HISTORY

by
Rodney Scott Bryan

Department Approval Date: 23 November 2014

The author hereby grants the American Public University System the right to display these contents for educational purposes.

The author assumes total responsibility for meeting the requirements set by United States Copyright Law for the inclusion of any materials that are not the author’s creation or in the public domain.
© Copyright 2014 by Rodney Scott Bryan

All rights reserved.
DEDICATION

I dedicate this to my wife Alyssa who has kept me focused, driven and confident.

Your friendship, love, patience, and understanding have kept me focused and continues to help me pursue my goals.
ACKNOWLEDGMENTS

I would like to thank all my friends and family who have supported me through this process. In particular I’d like to thank my wife Alyssa who has endured my complaining and my long hours working on research. Thanks to Dr. Arthur Coumbe and Dr. Peter Milich for their guidance in the field of World War II. I’d like to thank, in particular, Dr. Robert Young for guiding me through this process and Dr. Thomas Goetz for providing excellent feedback- both of you have focused me in the right direction and made this project more feasible.
ABSTRACT OF THE THESIS

WHY THE WEHRMACHT SHOULD HAVE INVADED THE SOVIET UNION IN 1940

by

Rodney Scott Bryan

American Public University System, 23 November 2014

Charles Town, West Virginia

Professor Dr. Robert Young, Thesis Professor

This study examines the reasons why the German plan to invade the Soviet Union would have succeeded had they invaded in 1940 rather than 1941. It examines the historical background prior to the invasion and that by 1941, the Red Army was (or would be soon) more than twice the size the Germans anticipated, making a decisive, quick victory much more difficult. For most of the previous year, Stalin had decided to greatly expand the Red Army. This was in reaction to the surprise of the total, rapid and complete German victory over France in 1940. In 1941, the Germans were overconfident and ignored the Soviet buildup. As a result, they violated many of the Principles of War and were too ambitious in their objectives. Had they limited their objectives to those assigned to Army Groups’ Center and South they could have more easily secured their objectives.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>6</td>
</tr>
<tr>
<td>I. A SHORT HISTORY</td>
<td>11</td>
</tr>
<tr>
<td>II. GERMAN VICTORY IN THE WEST; TROUBLE ON THE HORIZON</td>
<td>20</td>
</tr>
<tr>
<td>III. THE EMERGENCE OF THE SOVIET MACHINE</td>
<td>35</td>
</tr>
<tr>
<td>IV. AN ALTERNATE BARBAROSSA?</td>
<td>56</td>
</tr>
<tr>
<td>V. CONCLUSION</td>
<td>68</td>
</tr>
<tr>
<td>LIST OF TERMS</td>
<td>73</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>76</td>
</tr>
</tbody>
</table>
INTRODUCTION

The German invasion of the Soviet Union in 1941 has often been seen as the seminal event that would eventually cause the downfall of the Third Reich. Operation Barbarossa, as it was known, was Adolph Hitler’s idealized plan to firmly cement his own legacy, as well as set the conditions for his planned “Thousand Year Reich”. It has been well chronicled that the defeat of the Soviet Union would go far in accomplishing a number of his goals-among them destroying communism and his main enemy-Joseph Stalin, as well as providing the living space and resources for his empire.

Operation Barbarossa (or Case Barbarossa) was named after Frederick Barbarossa, the medieval Holy Roman Emperor. The invasion was the brainchild of Hitler and he authorized it on 18 December 1940. It was known as Directive No. 21 with a proposed date of 15 May 1941 for the commencement of operations. The Wehrmacht was delayed in its initiation due to other factors such as required operations in the Balkans and Barbarossa actually began on 22 June 1941.

It is widely believed that Germany was defeated on the Eastern Front against the Soviet Union by a number of factors including; German arrogance, a delayed start to the campaign because of a last minute operation in the Balkans, supply issues, and the Russian Winter. These were contributing factors but the fact is that Barbarossa was primarily a success, the failure was in the second year of operations. This begs the question of why. Why were the Germans so successful in 1941, but by the second year of the offensive their operations began to unravel? Were there other reasons that the Germans were ultimately defeated? It also begs the question what would have happened had Germany invaded in 1940 rather than 1941? What factors had changed in that year as far as the troop
strength, disposition of forces, leaders and equipment for both the Wehrmacht and the Red Army and were there sizeable differences in the areas between 1940 and 1941?

This study will examine the political and military events leading up to the operation with an analysis of the situations in both countries, their preparedness for war as well as their ability to wage war. It will show that the Germans in 1939 and 1940 were far more prepared for war in nearly all aspects of military and economic preparedness than the Soviet Union. It will also show that by 1941 the Soviets had considerably closed the gap and the Germans had lost some momentum due to their operations against Great Britain, Greece and Yugoslavia. This study will also illustrate that, although Barbarossa was successful in 1941, it was the sustained operations over the next few years that defeated Germany.

The German plan as designed would have worked in 1940 because of the disparity between German and Soviet strength; the follow on operations of 1941 would have been achievable. By initiating Barbarossa in 1941 that same plan needed to achieve all of its goals, not just some. The only way to be more successful in 1941 was with a plan smaller in scope. The Red Army of 1939 to 1940 to 1941 had evolved tremendously and by 1942 it was a more competent military machine. The Germans missed their opportunity by invading a year too late. By 1941 the Soviet military was nearly twice the size anticipated by the Germans.

By 1941, the Red Army was (or would be soon) more than twice the size the Germans anticipated, making a decisive, quick victory much more difficult. The main reason that the massive defeats inflicted on the Red Army in 1941 did not cause the collapse of the USSR was because for most of the previous year, Stalin had decided to greatly expand the Red Army. This was in reaction
to the surprise of the total, rapid and complete German victory over France in 1940, and the poor performance of the Red Army in the war with Finland.

Stalin’s plan was to add an additional five million men to his total force structure. This would be done by expanding his current units and by calling up reserve troops. While his plans were not close to complete when the Germans invaded, it did build the infrastructure that allowed the Soviets to quickly replace losses as the Germans drove deeper into Soviet territory. In 1941, these troops were enough to slow down the German advance. In 1940, this system was not yet in place and would have made German penetrations deep into the Soviet Union much easier. There were concerns in Germany, but they went ignored. By late 1940, a group of senior German planners and officers drafted a memorandum warning Hitler about the risks and dangers of invading the Soviet Union. In the document they outlined that the “Ukraine, Belorussia and the Baltic States would end up as only a further economic burden for Germany.” The document also stated that the Soviet Union in its current form was harmless, that an invasion and ensuing occupation would not be advantageous to Germany and "why should it not stew next to us in its damp Bolshevism?" ¹

Part of the reason for the difficult German army situation near the end of 1941 was in part due to the Soviet Army's growing strength as mentioned before- as well as other factors that had severe impacts on German effectiveness. Part of the German problems were derived from the deep penetration into the Soviet Union, major transportation issues and eventual divisional losses of men and material. For the rest of the war the German army would be severely short of infantry soldiers that once lost, could not be replaced- certainly not at the rate of their Soviet enemies. Further

---
¹ Gabriel Gorodetsky, Grand Delusion: Stalin and the German Invasion of Russia (New Haven: Yale University Press, 2001), 69-70.
complicating matters was that the Germans could not mass produce tanks like the Soviets could once their industry became fully mobilized.

The German High Command never understood the vast potential for Soviet mobilization. From the beginning of Barbarossa through the end of the year 1941, the Red Army built the equivalent of 825 divisions. The ability to build such a sizeable force structure illustrated its ability to mobilize, train and equip a group of more than 10 million men.²

The leadership of the Red Army was perhaps the most fragile part of the Red Army prior to 1941. It had been completely destroyed by Stalin's Great Purge of 1936-1938. The men who replaced those officers- who for political reasons were appointed and commissioned by Stalin in many cases- did not possess the military ability and skills required to fight and win. This was very clearly illustrated and exposed as a weakness in the Soviet War with Finland from 1939-1940, a war which proved to be a very costly victory for the Soviet Union.³

By 1941, the Germans were overconfident because of their rapid victories in the west the year before and they ignored the Soviet buildup. As a result, they violated many of the Principles of War and were too ambitious in their objectives that were outlined in the Barbarossa plan. The Barbarossa plan called for three Army Groups (North, Center and South) to secure objectives deep into the Soviet Union. Success for the German designs in the invasion of the Soviet Union was predicated on the belief of German planners that the Wehrmacht would win if it was able to destroy the Soviets west of the Dvina and Dnieper Rivers. In 1940 the Germans had a legitimate chance to achieve these goals,

but by 1941, the dynamic had changed. In 1941, had they limited their objectives to those assigned to Army Groups’ Center and South they could have more easily secured their objectives and could have more effectively supported the Wehrmacht forces during Operation Barbarossa.
CHAPTER I

A SHORT HISTORY

Operation Barbarossa was the largest military campaign in history with regard to the number of people involved as well as casualties. The failure of the operation was the end of the Third Reich. Operation Barbarossa created a second front in the east where more forces were committed than in any other theater of war in world history. The Eastern Front saw some of the largest battles, most atrocities and casualties which influenced the course of both World War II and 20th-century history.4

Following the defeat of France in June 1940, Germany sat above the European hierarchy as no other country had since France herself under Napoleon Bonaparte more than 100 years before. Other than Great Britain, Germany dominated Central, Southern and Northern Europe. Other than Britain, the island empire, the only serious threat to Hitler was the Soviet Union on Germany’s northeastern flank. Hitler felt that both ideologically and militarily, the Soviet Union was ripe for collapse. Hitler had “enjoyed a run of success that seemed to promise him the complete domination of Europe, if not of the world. Five years later that midsummer night’s dream had turned into a nightmare.”5

In July 1940, Hitler shared his planned intentions and desires regarding a plan of action for the Soviets. According to General Franz Halder’s (German General and the Chief of the OKH General Staff from 1938 until September 1942), war diary of 22 July 1940, Hitler’s intention was: “… the defeat of the Russian Army, or the capture of at least as much Russian territory as necessary to prevent enemy attacks against Berlin and the Silesian industrial areas.”6 On 31 July 1940, just after the domination of France, Hitler ordered his staff planners to initiate plans for a campaign to

---
annihilate the Soviet Union. By early 1941 Hitler’s decision was complete and there was no turning back.  

Throughout the summer of 1940, there were three issues in relation to England that were at the top of the list of dangers for Hitler: Great Britain, the Commonwealth, and Winston Churchill. Churchill became Prime Minister on 10 May 1940, the day of the German invasion of the west. He understood the threat posed by Hitler, by Nazism and he understood that no other nation in Central or Western Europe could boast the might of Germany. Unlike his predecessors or most other European leaders, Churchill was “ready and able to set himself against the apparently invincible German conquerors using all available means, even when that meant placing the entire British Empire on the scales.” 8 It was Churchill’s plan and mandate to resist the German threat and even though he was fundamentally against communism, Germany was his biggest threat, not the Soviet Union. His international policy was basically one of independence for the British, made without the support of any real allies. It absolutely was ‘the finest hour’. 9 Britain would succeed or fail on her own merits, strength and ability to stave off disaster. It seemed to Hitler at the time that although the Soviet Union was a natural enemy of Germany in many ways, Britain was close to defeat so that’s where Hitler should focus his efforts. Looking back with 20/20 hindsight, it may have made more sense to isolate Britain and initiate plans for the Soviet Union sooner rather than later. As we will discuss later, the Germans were now at their strongest point of military readiness and would only get weaker. Meanwhile, the Soviets were still weak and would only get stronger over time.

---

9 Ibid, 10.
Hitler's planned invasion of the Soviet Union was meant to “open up radical possibilities for both sides. Britain was at last to acquire another major continental ally, while Germany stood to gain economic autarky and complete dominance of the continent (which Hitler hoped would force Britain to agree to terms).” During the summer of 1941, at face value this appeared to be an extremely dominant period of German conquest. A deeper look shows that the Battle of Britain expended so much of the Wehrmacht's resources and materials- in particular their air assets- that a long, extended war in the east became inevitable in order to replenish their war chest.\textsuperscript{10} It was an outcome Hitler and his military commanders had not foreseen and had no contingency for. Instead of benefiting from a wealth of raw materials and strategic freedom, the Wehrmacht found itself even more limited in both.

As the German Army became critically overextended during operations in the Soviet Union, Great Britain's relatively inferior forces were able to be an annoying pest to the Nazi regime on numerous secondary fronts.\textsuperscript{11} But these fronts, along with the war in the east, would eventually take its toll on Germany.

Interestingly enough, Hitler was of the opinion that eastward expansion posed no little to no threat to the British Empire. As a result, if Hitler chose to essentially leave Britain at bay and not further challenge her in any measureable way, the British would be an isolated, almost neutral entity that would be little or no threat to Germany; Britain might even assist Germany in the destruction of Russia.\textsuperscript{12} Even during the 1920s and 1930s, up to the initiation of hostilities of World War II, Hitler continued the opinion that Britain would, ultimately, be an ally of German-dominated Europe in an

\textsuperscript{11} Ibid, 485-486.
obvious fight with the United States for world domination.\textsuperscript{13} The sheer folly of this thinking shows that Hitler was living in a somewhat clouded state of fantasy regarding Great Britain during this period.

When Hitler ordered his staff to begin planning for Operation Barbarossa in the summer of 1940, Germany had been at war for almost a full year. As was the case during the latter half of the 1930s, Hitler’s “diplomatic and military audacity had exploited his foes’ weaknesses and timidity, producing victories that belied the real strength of the Wehrmacht (Armed Forces) and Luftwaffe (Air Force).” Prior to the start of the war on 1 September 1939, the inexperienced German Army armies had “reoccupied the Rhineland (1936), annexed Austria (1938), dismembered Czechoslovakia (1938) and annexed Memel’ (1939), all bloodlessly and with tacit western approval.” Once the war began, Hitler’s armies “conquered Poland (September 1939), seized Denmark and Norway (April 1940) and vanquished the West’s finest armies to occupy the Netherlands, Belgium and France (May-June 1940), driving the British Army from the continent at Dunkirk in utter defeat.” But Britain was a different story. She had weathered the sustained and lethal air attacks during the Battle of Britain, but just enough to stay in the war and maintain her tenuous lifelines.\textsuperscript{14}

Though the primary plan to invade the Soviet Union did not change much between December 1940, and the initial start of the campaign in June 1941, German intelligence reported to Hitler and his generals that the Red Army was massing its forces south of the Pripet Marshes. In spite of this information, Hitler and his staff were not swayed to change or alter the plan, continuing with

\textsuperscript{13} Ibid, 362-365.

Army Group Center as the most powerful Army Group and facing the bulk of the Soviet buildup. This is an example that Hitler and German leadership were, by this time in the war, convinced of their own invincibility and that the Red Army was a second class entity. The reality is that the Red Army was already in a state of improvement after the Purges. While they were still behind the Germans in readiness, they had begun to close the gap in men, quality and quantity of equipment and the ability to mass men and equipment easier than the Germans—a situation which would be evident the closer the Germans moved into Russia. Soviet forces would lag behind Germany for the first year of Barbarossa, but after the first year the Wehrmacht had tapped out its potential. A year earlier, in 1940 the Germans were much stronger prior to the invasion of France—and the Soviet situation was much more tenuous than in 1941.

Historian John Snively has stated that “throughout the entire Barbarossa planning process, three major assumptions/problems characterized, and undermined German attempts to create a fundamentally campaign plan. The first problem was that the German planners were basically unfamiliar with the terrain in which they would be fighting. While major features such as the Pripet Marshes were dealt with, the general time/space scenario as it would relate to blitzkrieg was not properly considered.” He further stated that “This problem can be related to the second which is a general assumption maintained by most of the German military leadership. Due to the Nazis’ inherent belief in their military superiority, and dismally inadequate intelligence relationship between the OKW (German High Command), and the OKH (Army General Staff). While it has been well documented that there was a rivalry between these two organizations, this explanation is too simplistic regarding the planning process for Barbarossa. In a sense, the planning (and execution) of

---

15 Snively, 213-216.
this campaign is a composite story of egos in conflict, characterized by power plays which resulted in a compromise plan.”

This was a fundamental problem that began prior to the war and would never be corrected, ultimately causing deep rooted issues later in the war.

As author Bryan Fugate wrote “The strategy Hitler and his generals agreed on involved three separate army groups assigned to capture specific regions and cities of the Soviet Union. The main German thrusts were conducted along historical invasion routes. Army Group North was to march through the Baltics into northern Russia, and either take or destroy the city of Leningrad. Army Group Center would advance to Smolensk and then Moscow, marching through what is now Belarus and the west-central regions of Russia proper. Army Group South was to strike the heavily populated and agricultural heartland of Ukraine, taking Kiev before continuing eastward over the steppes of the southern USSR to the Volga with the aim of controlling the oil-rich Caucasus.”

Many of the German Generals including Heinz Guderian, Gerhard Engel, Fedor von Bock and Franz Halder, believed the objective should be Moscow. Hitler was impatient to gain his main objective-securing land and resources in the east and subjugating the Slavs. He was counting on the idea that by winning in the East Germany would destroy Britain's hope of victory.

One of the biggest problems was that Hitler had become overconfident from his quick successes in Western Europe as well as the Red Army’s poor performance against Finland in 1939–1940. Hitler never expected a prolonged campaign. As a result, the troops in the east went into the offensive without the proper equipment- mainly clothing because the assumption was that it would be

---

16 Ibid, 130-141.
a very short affair. Once Germany initiated this campaign there was no turning back, no matter how unprepared they were in the end.

Stalin had never fully discounted the possibility of an alliance with Germany. Although the “ideological contrasts could hardly be starker and although the two tyrants’ strategic intentions were entirely contradictory, their short-term interests seemed to complement each other rather well. Hitler wanted his rear secure, at least initially, and Stalin wanted to keep his country out of a general European war, for the time being.” After all the back and forth diplomacy between the two nations, the result was the Nazi / Soviet Non-Aggression Pact that was signed on 23 August 1939. The pact itself was surprising enough, but what made it even more incredible was the degree of secrecy and details- it clearly divided Eastern Europe between the two polar opposite forms of government.

Stalin’s intention was to take advantage of the situation to seize as much land as possible, further fostering and expanding the communist agenda by gaining more territory, while simultaneously keeping the Soviet Union out of the war. Additionally, Hitler factored in the purges of the Soviet military leadership during the late 1930s, and the extremely poor performance of the Russian troops during their war with Finland from 1939-1940. These factors, when combined with the “exceedingly poor German net assessment of Soviet strength and fighting capability, led Hitler to believe that success could most certainly be accomplished in a short time. It was under these perceived circumstances, that Hitler directed the planning for the invasion of Soviet Russia in 1940.”

Table 1-1 depicts the German estimate of Soviet strength.

---

19 Glantz, Barbarossa Derailed, 56-60.
20 Hartmann, 22-23.
21 Snively, 69-73.
This is a point where Hitler badly calculated the situation. He felt that the Soviet expansion in the east seemed to offer few risks. He felt it afforded Germany a buffer zone with Russia, and eventually Germany would conquer the necessary living space at the expense of the racially inferior Slavs- but at a time of his choosing. When he did invade in the east, it would gain resources required for Germany to become self-sufficient, and more importantly it would juxtapose Germany to a position where it could eliminate the “Jewish-Bolshevik enemy”. Hitler felt that the Jewish-Bolshevik rule had already ruined the Russian state and it was primed to fall apart.  

22 Fritz, 356-360.
understand, or chose to ignore, was that the Soviet Union was already well on its way to recovery. It had started to undo the damage of the purges by developing quality officers, it was beginning to mobilize its economy and was developing better equipment. By comparison, Germany now had expanded its territory in the west which required troops to man that territory and still had an, albeit weakened, enemy alive in Britain. Further, German resources were drained after the battles in France, over the skies of Britain, and eventually in the Balkans and Africa. Germany didn’t realize it yet, but the playing field with the Red Army was beginning to become more level by June 1941.
CHAPTER II
GERMAN VICTORY IN THE WEST; TROUBLE ON THE HORIZON

The German Economic Situation and Armaments

One of the greatest challenges facing Germany was also one of the things that drove her toward war with the Soviet Union- she lacked natural resources, and the Soviet Union had plenty. While there was also a desire to crush communism, wipe out Jews and Slavs and gain living space, Germany needed resources- and she was in even more need now after the campaigns in the west, the Balkans, and Africa.

Germany’s problems of overpopulation, lack of resources, and the need for living space were nothing new and not to be taken lightly. Hitler stated “I set the following tasks, I: The German Armed Forces must be operational within four years. II: The German economy must be fit for war within four years.” With his announcement of the Four-Year Plan in October 1936, Hitler set Germany on the road to rearmament with the intent of waging war in the near future.23 By the spring of 1939 military production occupied one-quarter of the entire German labor force while at the same time the state of German financial and economic stability was challenged by the quickness of rearmament. Hitler had given a directive to Hermann Goering, Chief of the Luftwaffe and his Second in Command: “to make Germany ready for war, in terms of armaments and economic self-sufficiency in key raw materials, in four years.” No specific war plan had yet been developed, but it was Hitler’s deep rooted belief that war with Russia was inevitable.24 Germany would have challenges in modernization and mass production. Even with a start in 1936, they could not fully mobilize their

23 Fritz, 438-440.
economy the way America or the Soviet Union could. Those nations were built for mass production, Germany was not.

Germany’s greatest weaknesses were in logistics. Historian David Glantz has written that “only 40,000 miles of hard-surfaced, all-weather roads and 51,000 miles of railroads spanned the vast Soviet Union, and the railroads were of a wider gauge than those found in Germany. Even though they frantically converted captured railroad lines to western gauge as they advanced, German logistical organs had to transfer most of their supplies forward employing whatever Soviet-gauge rolling stock they could capture.” He also pointed out that the same applied to important railroad bridges, which often required long periods of time to repair and whose repair severely impeded adequate resupply of panzer and infantry forces alike. 25

Because of these shortcomings the German leadership spent a lot of time and energy planning for Barbarossa’s logistical requirements. This proved to not be time well spent, or effective. Göring accurately predicted in February 1941 that logistics would “endanger the entire operation.” German staff officers simply assumed that the roads and railroads west of the Dvina and Dnepr rivers would be superior to those east of that line; but that was only partially true; they would find that maneuverability was an issue as soon as they crossed the border in 1941. 26 This was the quagmire now facing Germany, it needed the resources of the Soviet Union, but did not have enough of its own to defeat Russia and secure those resources. It was evident that by 1941 there would be troubles invading deep into the Soviet Union this late in the war. Therefore, it would seem logical that an operation against the Soviet Union in 1940, rather than against France would have been more

prudent. True, France was a natural enemy to Germany and a bordering country—but the situation in France was even more hectic than in the Soviet Union, and we know now that France wanted to do everything to avoid war. By avoiding a war with France and invading the Soviet Union, Hitler would have had a true advantage over Stalin that he didn’t in 1941. If he so chose, Hitler could have attacked France after the end of the Russian campaign.

Germany’s greatest logistical vulnerability was the fact that they had not mobilized its economy for war. There were devastating shortages of fuel and other raw materials. These shortages limited German production and transportation during the course of the war. The situation was compounded by a very weak communications and road network in the Soviet Union. More often than not, this prevented the timely resupply of German panzer and motorized forces with the essential fuel and ammunitions stocks that were required for such a vast army. “Manpower for German industry was also a problem. Because of the Wehrmacht’s mobilization requirements, German industry was “already dependent on three million foreign workers by June 1941, and this labor shortage became more acute with each new draft of conscripts for the army.”27 The labor that Hitler sought and that was required was actually in the east, not the west; further, an invasion of the west was a sheer waste of time and resources in 1940. Although he gained some relief with the invasion of Poland in 1939, it was limited because Poland was carved up with Stalin. France added little in the way of manpower and industry, save the Rhineland. This is another example that the gains Hitler wanted were in the Soviet Union. By waiting to invade the Soviet Union until resources were dwindling, he made the success of the invasion a necessity.

In an attempt to even the odds, Hitler considered peacetime military expenditures that were unprecedented in a western capitalist economy as early as the mid 1930’s (only Stalin’s actions in the

---

27 Glantz, Barbarossa Derailed, 650-656.
Soviet Union after 1928 were comparable).\textsuperscript{28} This policy of rearmament really did surprisingly little to increase the strength of the German military. It was the tactical rather than material superiority of the Wehrmacht that made the Germans so successful. The reality is that it resulted in a series of production logjams, shortages in foreign currency and raw materials and, feuds between the Luftwaffe, Heer (Army), Kriegsmarine (Navy), and other government entities; this all resulted in a lack of priority for what weapons should be put into production.\textsuperscript{29} Armaments were one area of economic and industrial activity where Hitler exhibited a persistent interest. It was military spending that increasingly dominated the effectiveness of the German economy. Of the growth in the total output in Germany between 1935 and 1938 almost half was tied directly to the increase in the Reich’s military spending.\textsuperscript{30}

Historian David Stahel discussed the economic situation in Germany:

By the start of the campaign in the west in May 1940, progress towards economic mobilization had been steady, but importantly, at this stage economic planning matched strategic forecasts for a long-term ground war requiring armaments in depth. The startling success of the French campaign, however, proved a watershed. It led to a dangerous hubris in Hitler's strategic thinking (supported by Germany's political and military elites), causing him to underestimate Britain's future prospects in the war, and then to discount the danger of turning against his valuable economic ally, the Soviet Union. Not only did the prospect of war against the Soviet Union exchange a major economic lifeline for a new and unprecedented strain on the German economy, but the unexpected course of the French campaign also led to radical changes in the previous armament plans. Emboldened by the success of their seemingly unstoppable blitzkrieg strategy, Hitler and his commanders no longer feared a costly war of attrition in which the army could be forced to shed massive quantities of equipment or consume large stocks of munitions. Operation Barbarossa was to be a short and decisive campaign establishing Germany's complete dominance of the continent, and the rapid success of the intervening Balkan campaign served only to reinforce further Nazi Germany's fervent faith in the prospects of a quick victory. As a result, rather than continuing to

\textsuperscript{28} Fritz, 456-457.
\textsuperscript{29} Ibid, 452-455.
\textsuperscript{30} Tooze, 3907-3910.
gear up for a potentially costly war of unforeseen duration, Hitler abruptly cut production of munitions and began a complete reordering of economic priorities.³¹

Germany, Hitler in particular, believed that they had everything they needed to invade Russia in 1941; further, Hitler believed that after his successes in the west the previous year combined with the poor Russian performance against the Finns meant that victory against the Soviet Union would be quick, easy and painless. In addition, the German panzer and motorized divisions did not adequately possess the required maintenance capacity for a long campaign. One of the problems with German equipment was that the mechanical complexity of the tanks and armored personnel carriers, when combined with a wide array of models containing incompatible parts, made the German supply and maintenance system very complicated- often creating a situation where necessary repair parts were not available. In fact, previous campaigns resulted in a depletion in the bench stock of repair parts, as well as a shortage of trained maintenance personnel. The Wehrmacht encountered more intense Red Army resistance than they planned. This is another example of why the German Army had lost much of its “sharp armored tip” by late 1941.³² The ability of the German Army to succeed in Russia continued to be diminished when all these areas are gradually degraded.

As part of rearmament in the 1930’s, Germany added 48 tank battalions to their original projection of 36 divisions in December 1935. This created an offensive force that had originally been planned for the second phase of rearmament. Simultaneously, the Luftwaffe underwent an expansion that was expected to raise its strength from 48 squadrons in August 1935 to over 200 by October 1938. Further adding to this acceleration, in March 1936 Hitler authorized the Luftwaffe to begin

³¹ Stahel, Kiev, 1941, 1232-1238.
³² Glantz, Barbarossa Derailed, 649-650.
introducing a new air arm consisting of all-metal aircraft. These improvements and advancements were far ahead of any other country in Europe and set Germany on a path of military innovation that would continue until other nations began to catch up. The problem facing Germany was that once other industrialized nations began mobilizing their industry for military production, many such as America and the Soviet Union would quickly pass Germany. While Germany was fully in the midst or rearment, the armaments effort of the Third Reich was not centered on the construction of a motorized ‘Blitzkrieg’ force. In quantitative terms, however, the German army’s expansion undoubtedly set new standards.

We would think on the surface that when France, Belgium and other nations were conquered by Germany, that that would be a good endeavor for Germany in the long run. However, once they were subjected to German rule, they were also gripped by Britain's blockade. These countries immediately looked to Germany for supplies of all essential raw materials, since they also lacked natural resources. Oil was indispensable, but Germany was itself dependent on the comparatively small production emanating from Romania, which produced only 1.5 million tons of oil each year between 1940 and 1943. By contrast, Britain alone imported 10 million tons in 1942. By defeating France, Germany gained not as much as they now lost. In other words, Germany had more land to secure, partisans to fight, civilians to police and borders to secure with their victories over France, Belgium, Norway, et al. For their efforts, they now stretched their own logistics tail even further, with nothing gained of significance. The actions of 1940 would, again, have been better utilized against the Soviet Union than the west.

33 Tooze, 3938-3942.
34 Ibid, 4021-4025.
35 Stahel, Kiev, 1941, 1258-1262.
Germany needed Soviet oil wells in the south. They tried heavy investment in synthetic fuel plants, and this allowed Germany to avoid a major collapse. Even though these installations were substantial, they only produced four million tons of fuel in 1940. Germany’s allies could be of little help when it came to oil. The Italians imported 3–4 million tons of oil annually, and when war was declared fuel reserves were so low that the army reportedly possessed just 200,000 tons. This amount “would last only eight months and that was without the high demands of an active campaign over long distances in North Africa. Germany was left to prop up its Axis ally and between June 1940 and September 1943 at least 3,572,000 tons of fuel had to be diverted to Italy.”\(^{36}\) One of the main reasons for the war in North Africa—other than to support Mussolini’s dream of empire, was an attempt to secure more oil reserves.

Of the total of all goods purchased by the German Reich, the German military “accounted for 70 per cent in 1935 and 80 per cent three years later. Not surprisingly, therefore, discussion of every aspect of economic policy was increasingly dominated by rearmament.”\(^{37}\) By the start of Barbarossa, Hitler still had not fully mobilized the German economy for total war. He most likely intended to minimize the impact of the war on his people, this was a monumental mistake when it came to material replacement during the campaign.\(^{38}\) Further, this lack of mobilization, just as the Soviet Union was on the cusp of full mobilization, would eventually be a disaster for the Wehrmacht in the east.

The German economy would eventually hit levels of production that were previously unimagined early in the war, Albert Speer's so-called “economic miracle” starting in early 1942. For

---

\(^{36}\) Ibid, 1262-1271.

\(^{37}\) Tooze, 3914-3916.

\(^{38}\) Snively, 305-307.
the Germans, they had reached a point of materiel inferiority and were never able to catch up to the Allies.³⁹ For Germany to win, they needed to have such a lead in men, material, resources, and a mobilized industry by 1939-1940 that their superiority in these areas left no question about their ability to dominate. That they lacked in these areas is part of the reason for their failure. They may have been able to overcome these deficiencies by mobilizing in a more complete manner earlier-as well as invading the Soviet Union in 1940 rather than France. When both of these things did not occur, it sealed the fate of Germany.

Although there was a modernization of the German tank fleet it was in no way proportional to the demands that the Wehrmacht would eventually encounter in Barbarossa. Even a one to one comparison with the Russian T-34 tanks left the German counterparts lacking. German armament also failed to deliver some 30 percent of the necessary vehicles for an invasion of the Soviet Union. Even the expansion of the army by some 20 percent in the late 1930’s did not produce a net gain for the army's offensive strength. The increases were used up by actions in the war against Britain as well as other duties such as Atlantic Wall construction, police actions, etc. The army that was deployed for Barbarossa consisted of everything Germany could muster. After all the subtractions, there were little operational reserves allotted for Barbarossa with the exception of two panzer divisions being reconditioned following the Balkan campaign, meaning that the Germans had just one chance to crush the Soviet Union. The economic backing for the army through new production was not of the quantity required.⁴⁰ The resources available to Germany area of control were, in reality, too few for a two front war against a strong coalition- one like they would eventually fight.⁴¹ As time wore on, these incongruences became even more disparate.

³⁹ Stahel, Kiev, 1941, 1205-1209.
⁴⁰ Stahel, Kiev, 1941, 1471-1480.
⁴¹ Hartmann, 25.
New Plans and Force Structure

It is evident that the German leadership did not really feel threatened by the Red Army as an opponent and the Red Army was not seriously war gamed by Wehrmacht planners. In *Operation Barbarossa* it is possible that Hitler executed a pre-emptive strike in order to anticipate an imminent Soviet invasion; it is possible that Stalin had imperialist goals that aimed partly at the center of Europe.\(^{42}\) However, war with the Soviets was always viewed by the Germans as one of an offensive nature rather than a defensive one.

The German victory in the west unleashed a wave of optimism throughout the country— as Minister of Propaganda Josef Goebbels said, that “a new Europe is in being.” In spite of all this Hitler appeared uncertain about how to proceed, considering Great Britain continued to display a determination to fight on.\(^{43}\) Even if Britain had made peace with Germany, “Hitler would still have pursued war in Russia, for his ideology made no sense otherwise”. In February 1939, he made it clear to his army commanders that the next war “would be a pure war of ideologies, that is, consciously a national and racial war.” The purpose of *Operation Barbarossa* was not only expanding Germany’s but “the final reckoning with Jewish-Bolshevism.”\(^{44}\)

Although the German Army seemingly was at the height of its power in June 1941, based on its total and remarkable victories in 1939 and 1940, it was by no means invincible. The German officer corps had traditionally prided itself on its “doctrine, a unity of training and thought that allowed junior officers to exercise initiative because they understood their commander’s intentions

\(^{42}\) Ibid, 24.
\(^{43}\) Fritz, 831-834.
\(^{44}\) Ibid, 1714-1721.
and knew how their peers in adjacent units would react to the same situation.”\textsuperscript{45} The Wehrmacht’s mounted arm—its panzer forces—exhibited in France that when used properly massed mobile offensive power could be used to penetrate enemy defenses in narrow front sectors. Following the penetration, they could move into enemy rear areas where they could disrupt command and control and logistics. If the enemy was confused they could then encircle larger forces and in coordination with follow-on infantry the panzers could continue to “exploit success deep into the enemy rear area.”\textsuperscript{46}

Previous operations also illustrated that the encircled forces could escape if the infantry was slow to arrive or not able to mass. When this happened it was because Germany was not able to mass enough motorized assets to equip more than a small portion of its infantry troops. The Panzergrenadier units were still a novelty at this point in the war. Contrary to myth, the majority of the German Army during the Second World War consisted of light infantry and horse-drawn artillery and supplies, “sometimes forcing the mechanized and motorized spearheads to pause while their supporting units caught up by forced marches.”\textsuperscript{47} In Russia this would be an issue because of the vast expanse of space that needed to be conquered. The armored units could advance deep into Soviet territory, but would have to wait on the other units to arrive so the bulge they created would not be a trap to themselves. In 1939 and 1940, the Red Army did not have modern armor or as much motorized units as they would have by 1941. Even during the initial stages of Barbarossa, the Red Army units folded quickly. This German shortage was lost on Britain and France early in the war. Historian Samuel Mitcham stated that:

> At this time, Britain and France missed one of the greatest opportunities of the war. With the best German divisions engaged in Poland, a major Allied offensive

\textsuperscript{45} Glantz, \textit{Operation Barbarossa}, 242-249.
\textsuperscript{46} Ibid, 242.
\textsuperscript{47} Ibid, 249-253.
would have captured the Ruhr industrial area, without which Germany could not wage a major war. Leeb defended it with 800,000 men. A third of his 33 divisions were Landwehr, men 35 years old or older with little or no military training. Several of his divisions had no artillery and Leeb did not have a single tank. He faced a French army of 2,800,000 men in frontline units (not counting 2,000,000 in reserve), 11,000 guns, and 3,286 tanks. Leeb understood his task, however, and exhibited no nervousness, although he forbade his men from undertaking any aggressive action. The Allies launched one minor offensive, which gained an average of 1.5 miles along a 15-mile front.48

The Germans planned to destroy the majority of the Soviet Union’s Army prior to the mobilization of its reserves. “Although German military planners began contingency planning for an invasion of the Soviet Union in the summer of 1940, Hitler did not issue his Directive 21 for Fall Barbarossa until 18 December.”49 Hitler’s intention was to destroy the Red Army; it wasn’t to capture territory or the capitol of Moscow. Based on these objectives, it is clear that the situation in 1940-with the disparity of resources certainly favored the Germans rather than the Russians. Hitler’s directive stated that “the mass of the army stationed in western Russia is to be destroyed in bold operations involving deep penetrations by armored spearheads, and the withdrawal of elements capable of combat into the extensive Russian land spaces is to be prevented. By means of rapid pursuit a line is then to be reached from beyond which the Russian air force will no longer be capable of attacking the German home territories.”50 If Hitler’s intent would have been to capture territory, then the situation in 1940 versus 1941 would not have been that different, because the center of mass would have been the vastness of the Soviet Union- which was the same in both 1940 and 1941. By making destruction of the Red Army the priority, there was certainly a difference in Soviet strength in

---

48 Samuel W. Mitcham Jr., *Men of Barbarossa: Commanders of the German Invasion of Russia, 1941* (Havertown, PA: Casemate Publishers, 2009), 43-44.
those two years as we will see in Chapter III. Map 2-1 illustrates the initial stages of Operation Barbarossa.

Map 2-1: German Invasion of Russia

Source: The History Department of the United States Military Academy - http://www.diean.usma.edu/history/web03/atlas/ww20europe/EuropeanTheaterGIF
During the initial phase of Operation Barbarossa the Germans deployed 3,000,000 men, 3,350 tanks, 7,184 guns, 600,000 motorized vehicles, and 625,000 horses against the Soviets, which outnumbered them by 1,500,000 men in European Russia alone. “Hitler’s decision to invade Russia at this time did not meet unanimous approval within the Wehrmacht. Field Marshal Fedor von Bock, for one, objected to the entire idea of invading Russia.”51 The foundation of the German Army in the operation were the Infantry Divisions, which were units of over 17,000 men. Their weaknesses were in shortages of vehicles, anti-tank guns, and heavy weapons. They marched and fought as in the Napoleonic era- “on foot or by horse and cart, with rifles and artillery.” 52

One of the main problems face by the Germans in the east was that only small parts were mechanized or motorized- those that were panzer-centric. Much of the German logistics train was still on foot or horse drawn. The German Eastern Army began Operation Barbarossa with 750,000 horses; during the course of the war, the demand for more horse grew steadily, along with the need for carts. 53 This was not conducive to trying to drive deep in the Soviet Union. In 1940, with the state of the Red Army in relative anarchy, this would have been a tall order. In 1941, with Soviet improvements, the task was not nearly impossible- especially if the Germans did not reach all of their objectives in the first assault.

Glantz summed up the German force structure for the Soviet campaign:

At the time, most German panzer divisions were equipped with a mixture of the Pz. (Mark) I and Pz. (Mark) II light tanks, Pz. (Mark) III, and Pz. (Mark) IV medium tanks, and Pz. Befehl (command) tanks, plus Pz. 38t Czech-built medium tanks, with 37mm main guns, as substitutes for Pz. III models in many divisions. However, the light and command tanks, which constituted as much as one third of the

51 Mitcham, 37.
52 Hartmann, 27.
53 Ibid, 26-27.
divisions’ combat strength, were seriously under-gunned (with machine-guns and 20mm main guns) and, therefore, unable to contend with new model Red Army tanks such as the T-34 and KV. On the other hand, although the dependable second-generation Pz. III and Pz. IV tanks were more than a match for the older Soviet tanks, such as the T-26 light, T-8 medium, and T-35 heavy models, even they experienced difficulty destroying T-34 and KV-1 and 2 tanks. In 1941 Germany was in the process of re-arming all Pz. III’s with a medium-velocity 50mm main gun, while the Pz IV’s still retained a low-velocity 75mm gun. The velocity of these weapons was at least as important as the size of the shell because high velocity was necessary for effective armor penetration. Neither German weapon could penetrate the thick frontal armor of the T-34 medium tanks and KV-1 heavy tanks that were just coming off the assembly lines in Russia. In addition, the panzer division included five infantry battalions, four truck-mounted and one on motorcycles. Few of these motorized infantry units were equipped with armored personnel carriers; hence they inevitably suffered higher casualties. The panzer division, which also included armored reconnaissance and armored engineer battalions and three armored artillery battalions equipped with guns towed behind trucks or tractors, and communications, antitank, and antiaircraft units, totaled roughly 17,000 men. The slightly smaller motorized infantry divisions consisted of one tank battalion with roughly 30 tanks or assault guns, seven motorized infantry battalions, and three or four artillery battalions. The organization of the first four Waffen [combat] SS [Schutzstaffel – Hitler’s personal bodyguard] divisions was identical to that of regular army motorized infantry divisions, although they later evolved into lavishly-equipped panzer divisions. The 1941 motorized (panzer) corps consisted of two panzer divisions and one motorized infantry division, and two to four of these motorized corps formed a panzer group. During the battle for Smolensk and latter stages of Operation Barbarossa, several panzer groups were augmented by the addition of army (infantry) corps and renamed panzer armies. 54

Glantz further discussed the Luftwaffe:

The German Luftwaffe (Air Force) shared in the German Army’s lofty reputation. The 2,770 Luftwaffe aircraft deployed to support Barbarossa represented 65 per cent of Germany’s first-line strength. Although the Messerschmidt Bf-109f fighter was a superb aircraft, other German models were rapidly approaching obsolescence. The famous Ju-87 Stuka dive bomber could survive only when the enemy air force was helpless and the Dornier-17 and Ju-88, Germany’s primary bombers, and the versatile Ju-52 transport were inadequate both in range and load (bomb) capacity. Since German industry had not made up for losses during the Battle of Britain, Germany actually had 200 fewer bombers in 1941 than it had possessed the previous spring. Given these shortages and the requirement to operate from improvised forward airfields, it was exceedingly difficult for German pilots to provide effective air superiority or offensive air strikes over the vast expanse of European Russia. In short,

the Luftwaffe was primarily a tactical air force, capable of supporting short-term ground offensive operations but not a deep and effective air campaign. 55

If it is possible to understand the seriousness of the German position by October 1941 a simple comparison of the opposing forces is not enough. In Chapter III I will offer a modest depiction of the Soviet force structure. The outcome of the war depended more on geography and economic factors than any individual battle or offensive. 56 The “depth of resources, scale of mobilization and size of the front rendered the Soviet Union far from collapse in October 1941. Only a long series of sustained, resource-intensive offensives, separated by temporary halts to rebuild armies and bring up supplies, could lead to outright victory on the eastern front.”57 The German Army in 1939 and 1940 was very successful in its campaigns in the west and in the south. When they fought these opponents the German war machine was at its height. It was a fresh army fighting a single front war, against opponents with inferior numbers, resources and equipment. By 1941 when Germany initiated Operation Barbarossa, it had a Western and Southern Fronts- with threats from Great Britain which required it to man to borders. It also had to utilize troops to maintain order on those fronts. In addition, its resources were drained somewhat with a smaller pool to draw from. By 1941, the Soviets were becoming more prepared for defending their homeland- something the Germans did not consider.

57 Ibid, 503-505.
CHAPTER III
THE EMERGENCE OF THE SOVIET MACHINE

During the eighteenth century the Russians began to realize how to use the terrain in the east to their advantage, and started developing tactics toward that end. Russian planning centered on elaborate road networks that connected towns and cities that were as fortified as they could be—this was essentially a fortress theory for the towns. This created a solid command and control network from Moscow throughout all the regions of the country and also allowed for quicker resupply and reinforcement. These avenues of approach would be extremely valuable to the Russians and would provide mobility to the Russians who would, in theory, be more familiar with the labyrinths of road networks than an enemy. “If the Russian empire was attacked these strong points could be defended, forcing time-delaying sieges or leaving Russian strongholds in an invaders’ rear. On the other hand, if an attacking force was too great, the Russians could adopt a more radical solution.” If they resorted to the scorched-earth policy designed by Peter the Great, they could deny an attacker the great resources available within the country and this would prevent an enemy from sustaining a long drive into the Russian mainland. 58 In Barbarossa, this would be the case. The thinly supported German troops with a stretched logistics tail would run out of steam by the winter of 1941.

At the start of the twentieth century Russia was still threatened by foreign invasion in spite of the advancements of the previous century. Russia’s defeat in 1917 in World War I displayed its internal weakness, pressure from the Bolsheviks, and eventually led them into a civil war that enabled the rise of communism within the country. 59 These issues were not lost on the Bolsheviks; starting in the late 1920s and continuing through the 1930s there was a large focus on and expansion of

58 Stahel, Operation Typhoon, 408-413.
59 Ibid, 490-491.
industrialization and modernization of the Soviet economy. In spite of this, in 1941 when Barbarossa was initiated, these advancements were not yet complete. Adding to the sad state of Soviet readiness was the Purges of its officer corps during the interwar period. During the Russo-Finnish War from 1939-40, Stalin believed his army was reformed and he was concerned about Germany and Italy seizing too much territory and the Soviet Union falling behind in both respect and gains. The Red Army’s poor performance against the Finns did the exact opposite, only showing how far behind they actually were in modernizing their military. Making matters worse, the Soviets attempted to implement a pre-war plan intended to force the war into German-occupied Poland. Not only did this fail, but it placed Soviet troops forward of the Soviet frontier, into the path of the German advance during Barbarossa. These troops were very quickly encircled by the Germans when hostilities began.\(^\text{60}\) Due to all of these factors, Stalin realized the Red Army’s shortcomings and sped the modernization of his forces. In a sense, the German victories in the west forced Stalin to strengthen his own position internally; the reality is that had Hitler not attacked, and so thoroughly and quickly dominated France, Stalin would not have been as prepared as he was when Germany did invade the Soviet Union.

As mentioned previously, during 1939-40, the Soviet military was in the midst of transition, or more accurately a transformation. Advanced weapons and tactics ideas were being developed, but the problem was that their doctrine- and Soviet doctrine in general was leader-centric. In other words, initiative and risk taking was frowned upon. The result of this was that in any particular area of the government- from troop leadership to industry to development- any advances were confused and half measures. They had made some outstanding progress in tank design and construction. This was

\(^{60}\) Ibid, 484-490.
eradicated by the lack of a radio-communication system for the tanks meaning that command and control was an issue. This example was indicative of the Soviet problems in the years before 1941. Tables 3-1 and 3-2 illustrate the basic Red Army force structure in 1939 and 1940. The following vignette goes into further detail:

The Soviet Union placed great reliance on cavalry because of vast distances, poor road and rail communications and the inability of Soviet industry to provide vehicles for all of such a huge army. The Soviet Union was divided into 13 military districts and 2 military commissariats. The Army was essentially a standing army which was run by professional cadre, but it relied on conscription for the mass of its personnel. Men were liable for military service for a period of 22 years from the age of 20 to 41. The peacetime strength of the army was estimated at 1,800,000 men, while mobilized strength could be as high as 11,000,000. The baleful influence of Stalin over the Soviet armed forces during the 1930s culminated in the purges of 1938 which decimated the officer corps. Almost inevitably, the most able and outspoken officers were destroyed by the purges and this was a significant factor in the poor performance of the Red Army in the Winter War against Finland in 1939. It has been estimated that Soviet casualties were about 200,000 men during this short campaign.  

### Table 3-1: Basic Red Army Units (1939-1940)

<table>
<thead>
<tr>
<th></th>
<th>Rifle Division</th>
<th>Cavalry Division</th>
<th>Heavy Tank Brigade</th>
<th>Light Tank Brigade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Units</strong></td>
<td>110 (including 23 Territorial divisions)</td>
<td>44</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td><strong>Infantry Regiments</strong></td>
<td>3 with 2,900 officers and men each</td>
<td>2 motorized rifle battalions (total approx. 1,900 officers and men)</td>
<td>2,745 officers and men</td>
<td>2,745 officers and men</td>
</tr>
<tr>
<td><strong>Howitzers and Fieldguns</strong></td>
<td>100 (12 x 152mm, 28 x 122mm, 42 x 76mm, 18 infantry guns)</td>
<td>approx. 50 (76mm)</td>
<td>46 guns, self-propelled or moved by tractors</td>
<td>46 guns, self-propelled or moved by tractors</td>
</tr>
<tr>
<td><strong>Tanks</strong></td>
<td>22 T-26, 16 T-37 (BT or armored cars)</td>
<td>64</td>
<td>136 T-28 (one Brigade with 2/3 T-35s), 37 BT, 10 flame-thrower tanks</td>
<td>278 BT or 267 T-26</td>
</tr>
</tbody>
</table>

Source: [http://ww2-weapons.com/Armies/Russia](http://ww2-weapons.com/Armies/Russia)
Table 3-2: Armored Fighting Vehicles of the Red Army in 1939

<table>
<thead>
<tr>
<th>Armored fighting vehicles</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-27</td>
<td>400</td>
</tr>
<tr>
<td>T-37</td>
<td>approx. 2,400</td>
</tr>
<tr>
<td>T-38</td>
<td>approx. 1,200</td>
</tr>
<tr>
<td>T-18M</td>
<td>approx. 400</td>
</tr>
<tr>
<td>T-26</td>
<td>approx. 9,500</td>
</tr>
<tr>
<td>BT</td>
<td>approx. 5,300</td>
</tr>
<tr>
<td>T-28</td>
<td>488</td>
</tr>
<tr>
<td>T-35</td>
<td>approx. 80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>approx. 19,768</strong></td>
</tr>
</tbody>
</table>

Armored Car Strength of the Red Army 1939: 2,594
Armored Car Strength of the Red Army 1940: 4,819

Source: http://ww2-weapons.com/Armies/Russia

The German doctrine was centered on initiative from subordinates- in fact some of the greatest strengths of the Wehrmacht was the junior officers and non-commissioned officer corps. The Soviets did not trust or believe in this type of de-centralized control, and the purges and other ideology demonstrated the Soviet soldiers that any initiative of this type was not in their best interests.\(^{62}\) Stalin realized that a large amount of the Soviet equipment was obsolete and his purges had decimated the officer corps.\(^{63}\) In April 1941, Stalin ordered a “covert partial mobilization of the

---

\(^{62}\) Glantz, Barbarossa Derailed, 669-670.
Red Army”. He ordered “creeping up to war,” concealing the strategic deployment of forces. In 1941, the Soviet leadership still had these types of issues but they were not as extreme as in the previous years, and there was the tank improvement as mentioned before. While there were still many issues in equipment and leadership by 1941, there was still steady improvement.

Expanding the Soviet Military

Maybe the war with Finland was a blessing in disguise to the Soviet Union and a curse to the Germans. While initially it appeared to be a terrible failure for the Soviets who at times looked overmatched by a smaller opponent, there were lessons to be learned from the war. Many of the leadership and motivational problems encountered in the war needed to be identified and addressed prior to war with Germany. This was done by seeing the shortcomings in the war with Finland and then by employing a wave of nationalism and retraining of officers and soldiers where needed. Stalin and his ministers realized immediately that this was a problem that needed to be corrected immediately and they took action. “A complete top to bottom re-evaluation of the Red Army was commenced, and the changes and improvements were not quite complete in June 1941, but they were well underway- to the extent that it would bear fruit as early as 1942.” The war with Finland had been an embarrassing failure for the Soviets. “The Leningrad Military District had set itself modest objectives and signally failed to achieve them; Despite the fact that Russia had achieved war aims that were as limited as they had been embarrassing, the loss of the Karelian Isthmus had implications for Germany almost as serious as they were for Finland, in that the path to the interior of the entire Scandinavian peninsula now lay open to the Red Army.” Not only had the Soviets acquired

---

64 Glantz, Barbarossa Derailed, 707-709.
66 Ibid, 226.
operational control of both sides of the Baltic that they could now use to defend Leningrad, but in addition they also gained control of the resources of Scandinavia, which would be of use to them in the future.67 The war with Finland was probably a blessing in disguise because it allowed them to essentially test their abilities. When Soviet leadership saw that they were in worse shape than they had thought, they sped up the advancements in the Red Army and Air Force. For the Germans, Hitler was initially emboldened by the poor performance of the Russians to the point that it most likely helped in his overconfidence. In this way, it had the opposite effect on Germany— it lulled them to sleep and let them overlook improvements that would happen in the Soviet Union.

67 Ibid, 278-279.
In June 1941, the Red Army had 10 armies in its operational reserve. Four of these were located on the front facing Germany. Two additional armies were deployed in the Orel region. Two more were located near Moscow and two others served as reserves in the western district. Within this force structure, the elements under the control of Stavka (Soviet Armed Forces) totaled 158,600 men, 1,700 field guns, 200 mortars, and 700 tanks. These armies combined represented the second echelon of forces that was designed to stop any German attack. It was a defense in depth plan, trading space
for time and using the Soviet Union’s road network to the advantage of the defender. The Soviets misunderstood the power of the Wehrmacht and they did not envision the heavy losses they would sustain during the initial fighting. By 10 July 1941, only 90 of the 201 Russian divisions at the front retained effective levels of combat strength, while they maintained 31 divisions in its reserve.  

Author Burkhart Mueller-Hillebrand contrasts German and Soviet doctrine by saying:

The Soviet method of establishing reserves contrasted sharply with German practice. Throughout 1941, German reserves proved inadequate to campaign needs. The German Army rapidly expended its initial 28 reserves divisions. Later, including allied troops, a further 21 divisions and 15 brigades, as well as 2 divisions and 4 brigades formed at the front also moved forward. However, by mid-September it became apparent that Germany lacked the strength to continue attacking all along the front. Only a massive reorganization, including the removal of 16 divisions from Army Group's (AG) North and South permitted the 2 October commencement of the drive on Moscow. Even this effort, however, merely provided AG Center (70 divisions) with a bare equality of force compared to Soviet totals. More worrisome still, total German reserves consisted of only 2 divisions, a situation in marked contrast to the Red Army. By 1 October, the USSR stood ready to meet the anticipated German offensive with an impressive paper strength. The active Red Army totaled 213 rifle, 30 cavalry, 5 tank, and 2 motorized rifle divisions as well as 18 rifle, 37 tank, and 7 airborne brigades. Many of these formations were, however, seriously understrength. Average rifle division strength was 7,500 men; and for tank/cavalry divisions it was 3,000. The total strength of the Army was 3,245,000 men; 2,715 tanks (only 728 were heavy/medium models); 20,580 guns and mortars; and 1,460 aircraft (excluding long-range aviation).

Red Army efforts to design a front line required significant reshuffling and movement of new formations being brought into the force structure. Newly established frontline elements were moved forward in order to complement the new and varied formations receiving artillery and mortar units. These moves allowed the creation of reserve elements. The combined strength on the western axis by

70 Ibid.
mid-November 1941 included 61 rifle, 3 motorized rifle, 3 tank, 17 cavalry divisions, and 19
tank brigades. In 1940, there was no way this type of force structure, with support equipment was
available, nor did the Red Army possess the leaders and skill necessary to move this many troops and
equipment from front to front as effectively. In a one year period the Soviets were able to improve
their readiness substantially. The war with Finland has been seen as a negative stain on the history of
the Red Army by many historians. I actually believe that had the Red Army not fought the Finns in
1939 and 1940, they would not have realized how woefully inept their readiness was at that time. The
poor performance in that war actually led to the Soviet success in the war with Germany. It served as
a primer, a forced preparation, a trial by fire. It was to the Red Army what the Spanish Civil War was
to the Germans in 1936. Table 3-3 shows the ability of the Soviet Union to expand mobilization,
production and equipping.

71 Louis Rotundo, “The Creation of Soviet Reserves and the 1941 campaign,” Scribd,
must-for-any-eastern-front-historian-stuff-that-are-still-missing-fr (accessed September 22, 2014).
Table 3-3: Development of the Soviet Armed Forces

<table>
<thead>
<tr>
<th></th>
<th>1 January 1939</th>
<th>22 June 1941</th>
<th>% increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divisions calculated</td>
<td>131.5</td>
<td>316.5</td>
<td>140.7</td>
</tr>
<tr>
<td>Personnel</td>
<td>2,485,000</td>
<td>5,774,000</td>
<td>132.4</td>
</tr>
<tr>
<td>Guns and mortars</td>
<td>55,800</td>
<td>117,600</td>
<td>110.7</td>
</tr>
<tr>
<td>Tanks</td>
<td>21,100</td>
<td>25,700</td>
<td>21.8</td>
</tr>
<tr>
<td>Aircraft</td>
<td>7,700</td>
<td>18,700</td>
<td>142.8</td>
</tr>
</tbody>
</table>


Once fighting in the east began, Soviet leadership learned how to maintain the strength of the Red Army. Between 1 October and 1 November 1941, Soviet frontline manpower dropped from 3,245,000 to 2,250,000 men. However, by 1 December, it had climbed back to 4,196,000 men.
Further, the strength of the Red Army on the western direction showed substantial growth as revealed in Table 3-4 below.\footnote{Rotundo.}

### Table 3-4: Soviet Strength Versus the Germans (Fall 1941)

<table>
<thead>
<tr>
<th></th>
<th>On October 1</th>
<th>On December 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rifle Divisions</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Rifle Brigades</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Aviation Divisions</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Cavalry Divisions</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Tank Brigades</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>(Reserve) Artillery Regiments</td>
<td>28</td>
<td>53</td>
</tr>
<tr>
<td>Guard Mortar Battalions</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Separate Air Defense Battalions</td>
<td>11</td>
<td>16</td>
</tr>
</tbody>
</table>


This illustrates the vast improvements made by the Red Army in organization and ability to move large elements long distances throughout the theater. They embraced the road networks and fortress mentality envisioned a century before. In 1939 and 1940, the Red Army was so much a mess that not only did they not have the forces needed to slow the Germans, but even if they did possess this type of strength they would not have known how to use them. While in the opening months of Barbarossa Red Army forces were overrun by the Germans, they very quickly used the axiom of trading time versus space in order to exhaust the German momentum and outdistance their logistical abilities. When the Soviets attacked, they used their communications networks, short supply lines and the Russian Winter to their advantage. By 1 December 1941, the western strategic direction possessed...
34 percent of the rifle divisions, 41 percent of the cavalry divisions, 49 percent of the tank brigades, 43 percent of the artillery regiments and 74 percent of the Guard mortar battalions then available on the entire Soviet-German front.  

Soviet State Defense Plan 1941 stated that the Red Army:

Deploy 237 of its 303 active rifle, cavalry, tank, and motorized divisions in the Baltic, Western, and Kiev Special Military Districts and the Odessa Military District’s 9th Separate Army, which, when war began, were to become the Northwestern, Western, Southwestern and, ultimately, Southern Fronts (a front is equivalent in size to a Western army group). As a whole, the Red Army organized its forces in the western Soviet Union into two strategic echelons both to provide depth to its defenses and reinforcements to strengthen any counteroffensive operations it undertook. The first strategic echelon was supposed to consist of 186 divisions assigned to its four western military districts (four operating fronts in wartime), while the second strategic echelon was to consist of 51 divisions organized into five armies, which, after mobilization, were to operate at greater depth, specifically, east of the Western Dvina and Dnepr Rivers, under the control of the wartime headquarters of the Soviet High Command.

The Soviets had been mobilizing, training, equipping and staging troops faster than the Germans noticed or cared to understand. While they were not yet ready for war in 1941, a case can be made that from economical, industrial and manpower capability standpoints the Soviets were becoming healthy while the Germans had already reached the peak of their potential; as a result a natural shift in the paradigm of power was about to occur. The Germans chose to ignore it because they were riding a euphoric high after their victories in the west and they were convinced of Slavic inferiority. It’s possible that the Russians themselves didn’t even see the possibility of what they could accomplish. The Soviets had seen nothing that led them to believe that they could be successful against the Germans at that time. The Germans seemed invincible while the Soviet hierarchy had been virtually destroyed and the overall

---

73 Ibid.
74 Glantz, Barbarossa Derailed, 541-550.
performance of the Red Army had been abysmal. The ability to, later in the war, add Siberian
troops to the mix only compounded the massive ability of the Red Army to outnumber and
mass troops against the Wehrmacht. For now, the Soviet Army was getting healthy and
assuming the role of a sleeping giant.

The Red Air Force Rebuilds

During the 1920's and 1930's the Soviet Government put forth a lot of effort to build an
effective air force. Their first challenge was in trying to find quality pilots and their second challenge
was in designing and mass producing quality aircraft. If the quality and preparedness of the Red
Army was behind that of other world powers, the quality of the Red Air Force was even worse. To
overcome the lack of pilots and mechanics the government invested a significant amount of money
into a voluntary organization used to train pilots. Soon after its formation in 1927 it had a
membership of three million and had grown to 13 million by 1936. Aero clubs were set up to provide
pilots, mechanics and parachutists, and until 1940 all Red Air Force volunteers came from this
source. Its approximate 19,533 aircraft, 7,133 of which were stationed in the western military
districts, made it the largest air force in the world in 1940. While the Red Air Force would by 1940
outdistance in size every other air force in the world, a “shortage of instructors, training aids and
aircraft meant that the standard attained was very low, however, and it was finally decided to select
Air Force recruits from the annual military draft.”75 These issues too were addressed, and while they
did not improve at the same rate as the Red Army, improvements were made. Table 3-5 depicts the
size of the Red Air Force in 1939. Starting in June 1941, the Luftwaffe completely destroyed entire
Red squadrons on the ground. Over time, the Red Air Force would see the fruits of their labor nearly

75 “Soviet Armed Forces in 1939"
as much as the Red Army would see theirs. The Red Air Force was aided, in large part, by American assistance of P-39 Airacobras, among other frames. The P-39 proved to be a very effective close air support asset in ground operations. The foundation for an improved a modern Red Air Force can be summed up best by:

Between 1935 and 1937, 3,576 aircraft, including a large proportion of four-engined bombers, were produced, but as the numbers increased so effectiveness decreased because the technical standard of the aircraft industry was falling behind developments in more advanced industrial nations. The Red Air Force had its first practical experience in the Spanish Civil War and this resulted in certain organizational and operational changes, but it was the traumatic experience of the Winter War against Finland (in which some 1,000 Soviet aircraft were lost) that really showed up the alarming shortcomings in training, tactics and equipment. Red Air Force commanders were not ignorant of these defects but the purges of 1937-1938, which removed many senior commanders, meant that the remedies undertaken were not necessarily the most effective. In April 1939 a thorough re-organization within the Air Force took place. The largest formation was now the air division, which comprised between four and six air regiments (formerly brigades). Each regiment consisted of about 60 aircraft with additional reserve planes (usually about 40 aircraft).
### Table 3-5: Soviet Air Configuration in 1939

<table>
<thead>
<tr>
<th>Important aircraft types in 1939</th>
<th>Number of planes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beriev MBR-2 flying boat</td>
<td>approx. 1,500 built 1933-42</td>
</tr>
<tr>
<td>Illyushin II-4 bomber</td>
<td>1,528 built 1937-39</td>
</tr>
<tr>
<td>Polikarpov I-15 fighter</td>
<td>approx. 1,000+</td>
</tr>
<tr>
<td>Polikarpov I-16 fighter</td>
<td>approx. 5,000</td>
</tr>
<tr>
<td>Tupolev SB-2 bomber</td>
<td>approx. 6,000 built 1936-1941</td>
</tr>
<tr>
<td>Tupolev TB-3 heavy bomber</td>
<td>800 built 1931-1939</td>
</tr>
</tbody>
</table>

Source: http://ww2-weapons.com/Armies/Russia/

In 1941, the Red Air Force did not seem to be an immediate threat to the German Air Force. The Great Purge had struck aircraft manufacturers and designers as well as military commanders, ending the previous Soviet lead in aeronautics. Newer types of aircraft, such as the MiG-3 fighter and the Il-2 Shturmovik ground attack airplane were a match and in many ways better than what the Germans could field. The problem for the Soviets was that they were just entering service in spring 1941, leaving the Red Air Force with a mixture of old and new equipment. Further complicating matters was that the transitioning of qualified and experienced pilots was too slow because Red Air

---

Force commanders often feared that any training accidents would “lead to their arrest for sabotage.” Because of the political paranoia put in place by Stalin over the previous decade (the purge, for example), perhaps the single greatest event that helped mature the Red Army and the Red Air Force was the German invasion in 1941. The paranoia that stifled improvements now took a backseat to a real threat that was truly life or death. Now many things were more or less overlooked, by comparison, and all the advancements that had been put into place were now the number one priority.

Soviet Planning and Path Forward in 1941

Beginning in July 1940, the Red Army General Staff developed new war plans identifying Germany as the most dangerous threat and the region north of the Pripyat River as the most likely German attack axis. Stalin disagreed with that analysis and in October 1940 directed the planners on his General Staff prepare a new plan based on the assumption that if Germany invaded they would most likely thrust into the economically vital region of the Ukraine. After several drafts and changes this plan was named Mobilization Plan (MP) 41 and became the Red Army war plan against Germany. By now the Red Army had 4,826,900 men, with 2.9 million already stationed along the western border, so from a sheer numbers perspective they looked pretty formidable. These numbers were misleading; these soldiers lacked modern weapons and equipment and were really nothing more than sheer numbers. In the paranoia that often was present in the Soviet Union it required an

---

79 Ibid, 719-722.
inordinate amount of time for a new weapon to be approved or rejected. As the paperwork crawled from one desk to another, the army struggled with outdated equipment. 82

Historian David Glantz described how “the Red Army was attempting to implement a defensive strategy with operational concepts based on the offensive deep battle and the deep operations theory developed in the 1930s to the detriment of effective defense at the operational (army) level.” He goes on to say that concurrently, “the Red Army was attempting to expand, reorganize, reequip, and reform its Armed Forces, simultaneously, in the wake the Red Army’s poor performance in the 1939-1940 Finnish War. Complicating matters, Stalin’s military purges, which began in 1937 and were continuing when the Second World War began, produced a severe shortage of trained and experienced commanders and staff officers capable of implementing any concepts, offensive or defensive.” 83 As previously stated in this chapter, the Soviets were still lagging behind the Germans in preparedness and readiness. The reality is that every military has a shelf life from cradle to grave. While the Soviets and Germans both began rebuilding and rearming at roughly the same time, the Germans were much more focused on what they wanted to build and they were not hampered by many of the problems created by Stalin’s purges. The drawback to the German rebuilding was that while they were in a state of readiness earlier than the Soviets and other nations, much of their equipment such as early model tanks, were actually outdated by 1941. By the time the Germans realized this it was 1942 and they had to completely reconfigure their industry to support new, modern tanks. This took time to reset and created a lull in production when these assets were needed the most. By the time the Russians mobilized their industry, they were by sheer luck of timing able to develop modern tanks like the T-34 that would take them through to the end of the war with no lull.

82 Ibid, 956-959.
83 Glantz, Barbarossa Derailed, 661-669.
Historian Constantine Pleshakov described the differences in capability between the Soviet Union and Germany by saying:

The Soviet Union had many more tanks and aircraft than the Germans: 14,200 Soviet tanks against 3,350 German ones, and 9,200 Soviet aircraft against Germany's 2,000. However, simple numerical superiority remained a mantra without meaning. Of the 14,200 tanks, 10,500 were outmoded T-26s and BT-7s, poorly designed and cheaply built. The newly released medium T-34 and heavy KV were superb, but the army had just 1,861 of them, and only 1,475 T-34s and KVs were placed in the west. German tanks did not look particularly impressive to the Soviet experts visiting German factories, and they were even less well regarded by Soviet veterans of the Spanish civil war. The two armies had clashed in Spain between 1936 and 1939, when Stalin had dispatched his tanks and aircraft to support the left-wing Republican government and Hitler had sent his men and weapons to reinforce General Franco. The veterans reported that even the outmoded T-26s were better than German T-Is and T-IIs. The German panzers had weaker guns and thinner armor, they said. Newer German models like the T-III and T-IV sported thicker armor and better guns, but they still didn't stand a chance against the cutting-edge T-34s and KVs. A T-34's armor was 45mm thick (versus 20–30mm). 84

Even though the Germans had a definite qualitative and even quantitative advantages over the Soviet Union in a quick battle, the Soviet Union was now certainly capable of overwhelming Germany in the long term. What was not identified by the over-confident Germans, was that the Soviet Union had massive amounts of troops available to them in the internal military districts and Far East, such as Siberia and nearly a bottomless pool of men to draw from for mobilization. 85 Table 3-6 illustrates the Soviet mobilization of troops in 1941. In addition, the Red Army was” beginning to field a new generations of weaponry, including multiple rocket launchers (the famous Katiushas) and new tanks (T-34 medium and KV heavy models) that were markedly superior to all current and projected German vehicles.”86

84 Pleshakov, 967-968.
85 Glantz, Barbarossa Derailed, 714-719.
86 Pleshakov, 959-967.
The German industry and military was not nearly as organized and disciplined as German propaganda inferred, but it was still far less of an organizational nightmare than the Soviet Union under Stalin. The German T-I and T-II tanks were no match even for older Soviet ones, but the Wehrmacht vehicles were well built and well maintained. Soviet weapons designers were better than their German counterparts, but the workers who built the tanks and the soldiers who maintained them were underpaid and unskilled. It didn't matter that a Soviet T-26 was a better tank than a German T-I; what mattered was that generally only 80 percent of the tanks of a Soviet mechanized corps were operational at any given time, and the troops constantly had to deal with breakdowns.  


---

87 Ibid, 982.
88 Ibid, 978-982.
By June 1941 neither the forward military districts nor the five reserve armies had completed deploying in accordance with the official mobilization and deployment plans. As in so many other respects, the German attack on 22 June caught the Soviets in transition. “Soviet war planners had fundamentally misjudged the situation, not only by concentrating their forces so far forward, but also by expecting the main enemy thrust to occur south of the Pripyat Marshes.” As a result, the Soviets were caught off-balance and concentrated in the southwest while the primary German force advanced further north toward the center of the Soviet lines.\(^89\) Initially the Germans held the advantage and everything looked upbeat for their success, but that would change in time.

Regardless of the shortcomings of the Red Army and Air Force, from 1939-1941 it had made steady and needed improvements to modernization, strength, size, doctrine and leadership. The Soviets were marginally stronger in these areas in 1940 than they had been in 1939; significantly stronger in 1941 than in 1940. By 1942 the momentum had swung fully in favor of the Soviets. The best opportunity for the Wehrmacht was in 1940, probably by delaying an operation in the west and focusing on Russia. Nevertheless, possibly the largest-scale train movement in Russian history was under way, much of it unnoticed by German reconnaissance, all of it moving westward.\(^90\)

---


CHAPTER IV
AN ALTERNATE BARBAROSSA?

With the ability of hindsight, perhaps the Germans would have been more successful had they tried a different approach to Operation Barbarossa- one that would have more easily screened their shortcomings in logistics, the challenge of distance and the Soviet ability to mass more men and material at a given location than the Germans.

The Germans tried to use the principle of mass early in the war with Blitzkrieg tactics, but for Barbarossa they advanced on a wide front across all of the Soviet Union. Advancing on such a wide front, with objectives so deep in your enemy territory causes potential problems: 1) supply and resupply; 2) the ability to mass troops at certain points; 3) the ability to provide air support (based upon a wide front and the depth); and 4) your enemy can trade space for time and choose to fight on his ground. All of these became problems for the Wehrmacht in the east. They eventually ran out of steam before their major objectives- Moscow, Leningrad and Stalingrad (although many more reasons for that here), while the Russians simultaneously gained the advantage in manpower, supply and terrain. It is possible that had they focused on two mutually exclusive and supporting fronts, like the Center and South, it would have cut the logistics, width and air support issues by 1/3. They also would have had a two pronged offensive, with greater strength in number of troops and would have been better able to support them. A smaller third element would have been needed to essentially block any Soviet counteroffensive from the north, but at the time the Soviets were not in any condition to go on the offensive.

As Historian David Glantz wrote: “Army Group South was one of the three army groups in which the German forces were organized. It was assigned the task of seizing the Ukraine. Its principal objective was to seize the Ukraine and its capital Kiev.” He went on to later say that “the end
objective for Army Group Center in Barbarossa was the Volga. It was to engage as much of the Red Army as possible so that Army Group North and Center could take Leningrad and Moscow.”  

I think a plan that explored a two prong attack focusing on Army Group’s South and Center, and with a blocking campaign to the north in lieu of a third prong would have been prudent if the invasion was still conducted in 1941. If that thrust was successful, then a follow on operation to move north and seize Leningrad would have been feasible. A two prong operation would have been much easier to support logistically and, considering the confusion by the Red Army in the initial month of the attack in 1941, it is doubtful they would have been able to mobilize rapidly enough to counter this approach.

Hitler's military plans in the east were strategically flawed in that they could only succeed if the Red Army collapsed from internal stress. He did not expect to defeat the Russians by superior tactics or might or even brute force instead he incorrectly assumed that the Russian army would collapse and disintegrate after the initial battles, that those battles would be the knockout blow. He counted on that course of action. There were a number of other violations of the Principles of War during the Barbarossa operation.

The Germans planned, incorporated and employed some of the principles of war such as surprise and maneuver very successfully. In tactics and leadership they were superior to the Red Army. In other areas, such as supply and their reserve capability, they were at a distinct disadvantage as mentioned in other chapters. The nine Principles of War, as defined in the Army Field Manual FM-3 Military Operations are listed in Table 4-1.

---

91 Glantz, Barbarossa Derailed, 534.
93 Snively, 294-296.
<table>
<thead>
<tr>
<th>PRINCIPLE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass</td>
<td>Concentrate combat power at the decisive place and time</td>
</tr>
<tr>
<td>Objective</td>
<td>Direct every military operation towards a clearly defined, decisive, and</td>
</tr>
<tr>
<td></td>
<td>attainable objective</td>
</tr>
<tr>
<td>Offensive</td>
<td>Seize, retain, and exploit the initiative</td>
</tr>
<tr>
<td>Surprise</td>
<td>Strike the enemy at a time, at a place, or in a manner for which he is</td>
</tr>
<tr>
<td></td>
<td>unprepared</td>
</tr>
<tr>
<td>Economy of</td>
<td>Allocate minimum essential combat power to secondary efforts</td>
</tr>
<tr>
<td>force</td>
<td></td>
</tr>
<tr>
<td>Maneuver</td>
<td>Place the enemy in a position of disadvantage through the flexible</td>
</tr>
<tr>
<td></td>
<td>application of combat power</td>
</tr>
<tr>
<td>Unity of</td>
<td>For every objective, ensure unity of effort under one responsible</td>
</tr>
<tr>
<td>command</td>
<td>commander</td>
</tr>
<tr>
<td>Security</td>
<td>Never permit the enemy to acquire an unexpected advantage</td>
</tr>
<tr>
<td>Simplicity</td>
<td>Prepare clear, uncomplicated plans and clear, concise orders to ensure</td>
</tr>
<tr>
<td></td>
<td>thorough understanding</td>
</tr>
</tbody>
</table>

Source: Army Field Manual FM-3 Military Operations
Historian Adam Tooze noted that:

The attack launched by the Wehrmacht on 22 June 1941 was the largest single military operation in recorded history. A force numbering no less than 3,050,000 men was involved in the assault, organized into three gigantic Army Groups operating simultaneously on three fronts, over a front line in excess of 1,000 kilometers. Barbarossa can legitimately claim to be the end point of a European tradition of operational warfare that stretches back at least to the eighteenth century. In preparation for this immense campaign the Third Reich was not idle. The army was expanded between May 1940 and June 1941 from 143 to 180 divisions. Of course, not all of the new divisions could be used in Russia. Significant forces had to be diverted to the defense of Germany’s new empire in the West. The occupation of Yugoslavia and Greece in the spring of 1941 and the campaigns in North Africa added further distractions. On the other hand, the military booty of 1940 was more than enough to equip the Wehrmacht divisions stationed in the quieter zones of Hitler’s empire.

With this approach the principle of mass was not possible, especially given the massive land mass the Wehrmacht was trying to conquer. In a two pronged offensive, they would have been better able to mass forces, and perhaps move faster- resulting in more success. In June 1941, much of the German Eastern Army’s 3,350 panzers and 600,000 vehicles had organized mainly into Motorized Divisions. These were the elite formations of the German Army and they were meant to punch through the enemy’s first line of defense creating the blitzkrieg tactics. The German armies at the time were compared to a lance—“a piercing, hard, short point on a long wooden shaft. With a relatively small arsenal of modern weapons— that is, armored vehicles of all sorts, motorized artillery, rocket launchers, modern radio and permanent air support- the Wehrmacht was able to produce the local superiority that swung battles— rapid raids independent of the infantry’s marching speed. But this potential was soon exhausted, actually as soon as autumn 1941.”

---

94 Tooze, 7908-7912.
95 Ibid, 7904-7908.
96 Hartmann, 27.
and it had served the Germans effectively in Poland and France, in fact it had become legend. Blitzkrieg on such a wide scale would not work in Russia. The front was too wide and the required penetrations too deep to be supportable and effective. Advancing on a wide front wasn’t going to work, that would have been a repeat of the failed tactics of the First World War. They needed to lean on their strength- blitzkrieg. In order to make it work in Russia they needed less initial objectives, ones they where they c ould employ these tactics quickly and move on to second order objectives. Their plan was a violation, in this sense of both Mass and Objective. They were overconfident, however, and felt that the Soviets would roll over.

The Germans intended to take advantage of Russia’s “lack of decent roads and railroads laterally across the front and into the depths to prevent the mass of Soviet troops from regrouping from one sector to another or withdrawing eastward before they were surrounded.” The mistake was that their intelligence believed that far more Red Army elements were forward deployed than they were, believing that there were practically no Soviet reserves. In spite of the many Red Army troops that were forward, there was still a vast amount of troops in depth, deployed east of the Dnepr River. Once the border had been crossed and secured, the German plan required the three German army groups to advance along diverging axes, Army Group North towards Leningrad, Army Group Centre toward Moscow and Army Group South toward Kiev. As a result, from the very start Barbarossa planners knew that almost all the available German resources would be used in order to seize all of Hitler’s objectives simultaneously. This was an inflexible plan that violated the Principle of Simplicity. Franz Halder, German Chief of Staff, wanted to focus on Moscow as the primary line of advance because most of the Russian forces would be staged or later directed in this line of advance in order to protect Moscow. If that were the case, most of the Soviet forces would

97 Glantz, Operation Barbarossa, 201-207.
be destroyed along that axis of advance. Hitler agreed with him about the importance of
destroying the enemy's main forces by an early battle of encirclement, so any decision about
selecting follow on objectives was put on hold until the first phase of the invasion was
finished. 98 There were too many loose threads and unplanned options in the Barbarossa plan, a
more basic plan with achievable objectives would have been more prudent. The deployment of
three army groups resulted in the creation of three separate, distinct operational axis of advance. It
created huge difficulties with regard to synchronization.99 Who should move first, how fast and who
is the one person coordinating three Army Groups? That is an operational impossibility, two may be
possible- but three is nearly impossible, to say nothing of who is the priority for resupply.

One of the roadblocks that affected the German capability to execute a successful operation
during Barbarossa was the lack of Unity of Command, another Principle of War. Upon the final
decision to invade Russia, the combined leadership within the OKW and the OKH could not agree on
too many issues and options. The end result was unclear decisions regarding a desired sequence of
events in order to achieve their strategic goals.100 The principle states that for every objective, ensure
unity of effort under one responsible commander. This was violated as commanders in both
organizations, as well as planners, often pushed different ideas because of various beliefs or personal
agendas. This is another place where the faulty intelligence had a great impact on the overall
outcome of the campaign and the war. With bad intelligence, or in some cases, ignored intelligence-
commanders and planners were not able to agree on how to proceed.

98 Hart, 240.
99 Snively, 254-257.
100 Ibid, 249-252.
Barbarossa suffered from a liability common to other Wehrmacht operations: the absence of a unifying strategic objective. Historian Robert Kirchubel in his book “Operation Barbarossa: The German Invasion of Soviet Russia” summed up the situation:

The entire plan appears to be a combination of operational-level solutions to a war with the USSR; strategy was relegated to the realm of wishful thinking. Traditionally directed at enemy forces rather than geographic objectives, the German forces therefore chased a moving target with mission accomplishment accordingly hard to judge. This “strategy,” undermined by weaknesses in the vaunted German general staff system, lop-sided emphasis on operations over personnel, intelligence, and logistical concerns, tweaking war game results until they fit pre-conceived notions, and relegating bad news to the category of “inconvenient truths” met its match in the USSR.101

This calls into question, what was the decisive center of gravity; Leningrad, the Ukraine, the Red Army, the Soviet people or Moscow itself? Even Hitler changed his mind several times during the execution phase, something that often confused his generals.102 How were they to decide on what was the priority if Hitler himself couldn’t make up his mind. The German overconfidence was akin to the modern baseball team so overconfident and sure of their success that for a particular game, they feel all they need to do is roll the ball out on the field in order to win. German leaders and planners didn’t seem to be bothered by details in Barbarossa.

101 Kirchubel, 732-737.
102 Snively, 243-245.
Perhaps Hitler's greatest strategic mistake was his refusal to concentrate on a single, decisive goal. He wanted to secure all the objectives at once: Leningrad, the birthplace of Russian Communism; the Ukraine and the Caucasus because of its food stores, more than half of the Soviet industry, and most of the Soviet Union's oil; and finally Moscow, because it was the capital of the Soviet Union and the command and control center.  

Hitler wanted them all. The reality was that the Wehrmacht did not have the strength to secure all three of these objectives in a single campaign. At best, it had the strength to achieve one the first year. Therefore, a two pronged attack might have made more sense. There is no way that these objectives could have been coordinated based on the sheer size of the Soviet Union. Leningrad is 940 airline miles from Odessa on the Black Sea. In order to secure all of their objectives each army group would be required to conduct a separate campaign, with no one Army Group mutually supporting another. In this scenario the limited resources needed to be divided equally among the three, with none of the three getting enough resources to fully accomplish all of its goals. The result was, as is usually the case in these types of scenarios, chaos. The Luftwaffe didn’t have enough planes to support all of the movements simultaneously and land supply lines were no effective.

The Principle of Objective was clearly one of the biggest problems which contributed to the defeat of Germany. Objective is defined as directing every military operation towards a clearly defined, decisive, and attainable objective. At the very beginning all the way through to the end of the campaign, this operation was rife with a lack of agreement in this area, from the planning to the

103 Bevin, 83.
104 Ibid.
execution.\textsuperscript{105} Only after Leningrad was seized, did Hitler direct that “further offensive operations to be initiated with the objective of occupying the important center of communications and of armaments manufacture, Moscow.”

Army Group North never had the strength it needed to seize Leningrad. This was a story complete with bad luck on top of lack of coordination. It started with panzers that were diverted elsewhere. When the panzers got back on the road to Moscow, the rainy season had set in, followed by the Russian winter. An extension of this failure was that the advance on Moscow failed as well. With insufficient armor remaining in the south, the effort to seize all of Ukraine and open a path to the oil of the Caucasus also collapsed.\textsuperscript{106}

There were Economy of Force issues associated with Barbarossa. Economy of Force is described as allocating minimum essential combat power to secondary efforts. Even early plans divided the forces into at least two groups. As the process matured, the indecision regarding objectives made the issue more complex.\textsuperscript{107} At one point Hitler spoke of two operational thrusts, one through the south towards Kiev and the other striking north through the Baltic states and then on towards Moscow.\textsuperscript{108} Following that, both operational groups would combine for a follow on drive to the oil fields at Baku. After the defeat of France there was a reduction in the size of the German army to 120 divisions. The demands of a major new campaign against Russia influenced Hitler to “reverse his earlier decision by directing an increase in the size of the army to a new total of 180 divisions.” This earmarked 120 divisions for use in the east with the remainder on occupation duties in France.

\textsuperscript{105} Snively, 239-242.
\textsuperscript{106} Bevin, 86-87.
\textsuperscript{107} Snively, 264.
(50), Norway (7), Belgium and Holland (3).\textsuperscript{109} It was discussed in an earlier chapter that the Germans were already relatively short on manpower compared to the Soviets with a more shallow pool to draw from. Reducing the army after the campaign with France only exacerbated the situation.

The German army and economy could support a drive on Moscow. Even though Moscow sat 560 miles east of the border, it possessed excellent road networks which were interconnected by a paved highway and railroads. The problem was that the Germans were not simply trying to capture the flag at Moscow, they were trying to capture Moscow, the Ukraine and Leningrad. The Soviets had the advantage of time, space and eventually weather.

The Russians, not knowing which objective the Germans had chosen, were forced to defend all three which was difficult for them.\textsuperscript{110} Additionally, the ratio of force to space was so low in Russia that “German mechanized forces could always find openings for indirect local advances into the Soviet rear.” Concurrently, the cities where roads and railways converged offered the Germans alternative targets.\textsuperscript{111} Eventually, however, the Russians were able to mass at points of their own choosing. That hindered the German advance and only tied the noose more tightly around their own necks.

At the start of Operation Barbarossa, the Germans were able to successfully exploit the indirect approach very successfully. This was helped by the terrain on the frontier; it was an 1800 mile wide front. What also helped the Wehrmacht was a lack of natural or manmade obstacles. As the German columns drove deeper into the Soviet Union, the front got smaller-

\textsuperscript{109} Ibid, 1057-1061.
\textsuperscript{110} Bevin, 84.
\textsuperscript{111} Ibid, 82.
giving the advantage to the Red Army. Despite this and the tremendous size of the Red Army, the ratio of force to space was extremely low- to the point that the German mechanized forces could easily find enough gaps in the perimeters to gain maneuverability to the Red Army rear areas. \(^{112}\) Eventually, however, the Germans were not able to find areas to penetrate and maneuver because of the shrinking maneuver box as they drove deeper in Soviet territory.

The resources of the Soviet Union's were exponential compared to the ones Germany possesses. Its tremendous size required a large dispersal of German military strength throughout the theater. The population of the Soviet Union was double that of Germany's. The Soviet Union had nearly unlimited quantities of oil, minerals, and other natural resources and Soviet war production would outdistance German production as time progressed. The Soviet Union had access to resources from so many other countries, especially the United States, partly because the Allies controlled the sea lanes and could deliver resources through Iran. \(^{113}\) By contrast, while the Soviet Union seemed to have unlimited resources in men and material, the Germans had a finite amount of resources. As an example, Table 4-2 illustrates the degradation of German personnel resources throughout the war that could not be replenished.

\(^{112}\) Hart, 240.
\(^{113}\) Bevin, 88.
Table 4-2: Wehrmacht Troop Degradation 1939-1945

<table>
<thead>
<tr>
<th>Year</th>
<th>Troop Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1939</td>
<td>4,722,000+</td>
</tr>
<tr>
<td>1940</td>
<td>6,600,000+</td>
</tr>
<tr>
<td>1941</td>
<td>8,154,000+</td>
</tr>
<tr>
<td>1942</td>
<td>9,580,000+</td>
</tr>
<tr>
<td>1943</td>
<td>11,280,000+</td>
</tr>
<tr>
<td>1944</td>
<td>12,070,000+</td>
</tr>
<tr>
<td>1945</td>
<td>9,701,000+</td>
</tr>
</tbody>
</table>

Source: http://www.feldgrau.com/stats.html

In summary, the Germans made inaccurate assumptions in their plan for Barbarossa. Because of these inaccurate assumptions, their plan was faulty- too overconfident with reserves and no leeway if anything went wrong. There were, obviously, other factors that came into play such as commands and other organizations not on the same sheet of music, but the real reason for German failure was their belief in their own invincibility and their lack of respect for Soviet capabilities. This is an “example of how inherent beliefs and assumptions can affect the thought processes of military planners.” The German failure to effectively apply the Principles of War, was their undoing and it was because of inaccurate assumptions.\(^\text{114}\) Better use of their resources toward planning, the enemy situation, variables and flexibility based on Soviet responses and actions would have minimized the damage in this situation.

\(^{114}\) Snively, 329-335.
CHAPTER V

CONCLUSION

Invading and conquering the Soviet Union was going to be a difficult task for Germany no matter when they attempted invasion and Operation Barbarossa changed everything. The German army, which had “previously been partly demobilized to provide much-needed workers for the arms industry, was now mobilized again and committed in bulk to the east, allowing very little flexibility for German strategic planning until the conclusion of the fighting.” The operation was thought to be so limited in opposition that it would be similar to the unopposed ‘railway advance’ during World War I, thereby only requiring a minimum of resources, combat troops and occupation forces. 115 The biggest danger was that the mobility, firepower, and strength of the panzer groups had dwindled by the time of the invasion in 1941 that it would be nearly impossible to finish the campaign in one year. 116

Its successes in the west hid the fact that Germany had no clear economic or technical superiority over its vanquished enemies (Poland, France and Belgium). German rearmament during the 1930s enabled the Germans to offset the damage done by the Treaty of Versailles and the Great Depression of the early 1930s. 117 The danger with this tactic to the Germans was that while they had quickly rearmed, it was not sustainable. Their future enemies, namely the United States and the Soviet Union would lap German production once they mobilized their industry; further these two had, by comparison, unlimited natural resources compared to Germany.

115 Stahel, Kiev, 1941, 1169-1176.
116 Ibid, 1166-1169.
117 Fritz, 9710-9713.
It was evident that by 1941 there would be troubles invading deep into the Soviet Union this late in the war. Therefore, it would seem logical that an operation against the Soviet Union in 1940, rather than against France would have been more prudent. True, France was a natural enemy to Germany and a bordering country- but the situation in France was even more hectic than in the Soviet Union, and we know now that France wanted to do everything to avoid war. By avoiding a war with France and invading the Soviet Union, Hitler would have had a true advantage over Stalin that he didn’t in 1941. If he so chose, Hitler could have attacked France after the end of the Russian campaign.

Hitler’s invasion of the Soviet Union was a disaster mainly because he never fully mobilized the German economy in order to provide the German armed forces with the resources it needed to achieve victory against Stalin and the Red Army. The lack of mobilization was based on the German desire to not affect the civilians on the home front, as well as overconfidence that Germany would easily destroy its opponents. 118 This strategy failed miserably and when full mobilization did occur in Germany it was far too late in the war to make a measurable impact.

Britain and France enjoyed a superior economic position at the start of World War II. Hitler maneuvered to offset the impact of the economic imbalance. This was executed with short military campaigns to eliminate possible military threats, but also to temporarily aid expansion of his war effort by securing short term resources, factories and manpower. 119 Most of these early operations provided Germany with large stockpiles of materiel needed for the war effort (although a good deal of it was obsolete on the modern battlefield) and proved relatively light in casualties. In spite of this, Germany's success was limited to land warfare. “In the sea and air battles against Britain, Germany

118 Tooze, 7842-7845.
119 Stahel, Kiev, 1941, 1155-1160.
was already engaged in two bitter wars of attrition, and after February 1941 the North African campaign proved a constant, albeit minor, drain on the army too.” 120 The Germans, in their attempt to secure more resources, were actually making a lot of enemies that would total too many for Germany to fight in the end.

The Soviet Union, by contrast, with its tremendous ability to produce war materials, its nearly unlimited pool of manpower and “its perspicacious decision to mobilize for total war in the summer of 1941,” had the ability to survive the German onslaught, but it would be an even more formidable and dangerous foe by 1942. During Barbarossa, the summer of 1941 was the only time that Germans were able to “advance along the entire length of the front with rapid movement and swift conquest.” 121 Once Germany lost its operational edge, their position was fatally altered and hope for victory dwindled almost by the day. 122

What Hitler didn’t understand, or chose to ignore, was that the Soviet Union was already well on its way to recovery. It had started to undo the damage of the purges by developing quality officers, it was beginning to mobilize its economy and was developing better equipment. By comparison, Germany now had expanded its territory in the west which required troops to man that territory and still had an, albeit weakened, enemy alive in Britain. Further, German resources were more drained after the battles in France, over the skies of Britain, and eventually in the Balkans and Africa. Germany didn’t realize it yet, but the playing field with the Red Army was beginning to become more level by June 1941.

The Soviets had been mobilizing, training, equipping and staging troops faster than the Germans noticed or cared to understand. While they were not yet ready for war in 1941, a

120 Ibid, 1153-1155.
121 Ibid, 1183-1184.
122 Ibid, 1176-1183.
case can be made that from economical, industrial and manpower capability standpoints the Soviets were becoming healthy while the Germans had already reached the peak of their potential; as a result a natural shift in the paradigm of power was about to occur. The Germans chose to ignore it because they were riding a euphoric high after their victories in the west and they were convinced of Slavic inferiority. It’s possible that the Russians themselves didn’t even see the possibility of what they could accomplish. The ability to, later in the war, add Siberian troops to the mix only compounded the massive ability of the Red Army to outnumber and mass troops against the Wehrmacht. For now the Soviet Army was getting healthy and assuming the role of a sleeping giant.

Hitler and his senior leaders mistake in Barbarossa was timing and overconfidence. Rather than invading Poland in 1939 and France in 1940, they should have invaded the Soviet Union in 1941, then turned its attention to the west. Germany lacked the troops, equipment, manpower, logistics and industry to fight the Soviet Union when they did. Had they struck in 1940, they would have caught the Red Army at its weakest point and secured the resources they needed at this point. France and England were no more ready for war in 1940 than they were in 1936, postponing the war in the west for a year would have had a marginal impact on those campaigns- especially since those two nations had not mobilized their industry.

The Soviet Union should have been the priority. When it was invaded in 1941, they had learned lessons from their own war with Finland, had mobilized their industry, and the German economy, industry, resources and troop levels had been lowered. Further, by their actions over the previous year, the Eastern Front became a third front for the Germans- now that they were also involved in Africa and the Balkans. The Germans were overstretched, and
when they invaded Russia it was a year too late and in violation of many of the Principles of War.
LIST OF TERMS

**Abteilung**: Depending on its usage this term could mean detachment, department or battalion. The vast majority of the time *Abteilung* meant battalion. *Abteilung* was used for battalion-sized units in the *Panzer, Kavallerie* and *Artillerie* branches.

**Heer**: Army. The regular German Army. Began formation in 1933, announced to the world in 1935, disbanded in August of 1946 by the Allies.

**Kavallerie**: Cavalry

**Kompanie**: Company. A *Kompanie* consisted of a number of smaller units and made up the basis for *Abteilungnen*. They served at the tactical level and would consist of between 100 and 200 men.

**Kriegsmarine**: The German navy.

**Luftwaffe**: The German airforce.

**Osttruppen**: Eastern Troops. Initially the Germans refused to arm Soviet citizens who volunteered to fight the Soviet regime after the initial German invasion in 1941. Later in the war as German casualties continued to soar the official German stand changed Eastern Troop units were formed en masse. Eastern Troop technically is not a unit type (although there were infantry and cavalry Eastern
Troop units), but in effect it was used as such. An *Ost Bataillon* meant an infantry battalion of Eastern Troops.

**Panzer:** Armor or armored. Refers to German tanks and tank units. When used in combination with other unit types (except for anti-tank units), signifies that the unit was at least motorized and equipped to operate with the armored units troops, examples include *Panzer-Artillerie, Panzer-Pionier,* etc.

**Panzergrenadier:** Armored Infantry. *Panzergrenadier* units were not necessarily armored - most used trucks as German industry was incapable of producing sufficient half-tracks for all units. *Panzergrenadier* were assigned to *Panzer-Division*.

**Reserve:** Reserve. Units in reserve were on standby behind the lines prepared for reinforcement as needed or to exploit battlefield advances or counter enemy breakthroughs. Often times training and replacement units that could handle security duties and combat duties in emergencies were named reserve units.

**Schutzstaffel:** Literally Protection Force or Defense Squad. This complex organization was at the heart of the German political and social revolution and later attempts to control nearly all aspects of German (and later European) life. The well-known image of this organization was its abbreviation, the double SS.

**Standarte:** Term for a Regiment initially used by the SA and SS. The National Socialists eschewed using the standard unit size names for their political troops below division level even when they
actually followed standard unit organizations. A *Standarte* was for intents and purposes a *Regiment.*

In 1940 the *Waffen-SS* adopted the standard unit size designations used by the rest of the Wehrmacht.

**Waffen-SS:** Armed Schutzstaffel. Units of the political organization of the SS, the German Schutzstaffel. The Waffen-SS is often mistaken for the SS itself, and although a part of the larger structure of the political SS, the Waffen-SS was a frontline fighting organization that would grow to well over 500,000 members by the end of WWII. Not immune to committing crimes of war, most units of the Waffen-SS fought with a fierce bitterness against the Allies, but they were not directly responsible for the holocaust as is often misinterpreted.

**Wehrmacht:** Armed forces. The three major groupings of the German military, the *Heer, Luftwaffe* and *Kriegsmarine*, as well the Waffen-SS which was tactically a part of the Wehrmacht as well.

Bibliography


