

subsequent Sicily and Italian campaigns knocked Italian forces out of the war although they did not eliminate Italy as a theatre of war. The Allies may have differed on how strategic bombing was to be implemented, but they persevered through heavy losses and questionable efficacy throughout the war. The US did go on the offensive in the Pacific, but really only after their economy had been fully mobilized for war production and they had won the essentially defensive Battle of Midway.

Even before the entry of the United States in the war in December of 1941, it was clear that a key component of the Allied strategy would be to outproduce their enemy. The **Lend-Lease policy** was a part of this strategy as was the Soviet decision to dismantle over 1,500 industrial factories ahead of the German onslaught and reassemble them in the relative safety of the Ural Mountains. This strategy played a vital role in all the Allied victories, especially once the United States entered the war in December 1941. Liberty ships were produced at a rate far in excess of the German U-boats' ability to sink them. The exchange ratio during the Battle of Britain favoured the RAF. The Red Army may have lost more tanks than the Germans in the Battle of Kursk, but they could afford to do so. The Soviet Union would produce more than 54 000 tanks to Germany's 20 000. This gap was made even wider given that for much of the war Germany had to distribute this tank production over multiple fronts, while the Soviets could concentrate all their production on one front.

Lend-Lease policy

The Lend-Lease Act set up a scheme through which the US sent aid to the Allies during the Second World War. Immediate payment was not required as the US was "lending" the materials to the Allies. The programme also provided US warships (destroyers) to Britain in exchange for the lease of a number of military bases in the Caribbean. The US had Lend-Lease agreements with a number of Allied countries.

Tank production		
Tank	Country	Number Produced
Sherman	USA	49 300
T-34	USSR	57 000
Panzer IV	Germany	8500
Crusader	Great Britain	5400
Tiger I and Tiger II	Germany	1850
Churchill	Great Britain	7300
Pershing	USA	2200

6.4 Operations

Conceptual understanding

Key questions

- What factors led to the early success of the Axis forces?
- To what extent did each side integrate land, air and sea power?
- To what extent did the Allies outproduce the Axis Powers?
- Why did the Allies win the war?

Key concepts

- Cause
- Consequence
- Significance

Poland

Poland would be the first trial of *Blitzkrieg*. On the surface, Poland seemed the ideal terrain for the innovative tactics. Large, open plains allowed for unrestricted movement of large tank formations. The relative lack of cover would give the screaming Stuka dive bombers unobstructed sightlines to their targets, allowing Germany's air power to be fully integrated with its ground operations, an essential element of *Blitzkrieg*. While the topography of Poland theoretically would allow the Polish army a fairly easy path of withdrawal, after which it might regroup in the east, the secret codicils of the Molotov-Ribbentrop Pact made that prospect an illusion. The Polish army would instead be driven mercilessly east only to come up hard against the anvil of the Soviet Red Army, claiming its portion of the spoils.

Just before 5 am on 1 September 1939, the Luftwaffe launched massive air raids against Polish air force facilities, eradicating it by the end of the day. Those Polish planes which managed to get off the ground were destroyed. The air raids also targeted those infrastructure elements essential for a modern army to function: roads, rail lines and communication centres. Terror was a deliberate aspect of the air raids and as such these raids also targeted Polish cities and towns. The resulting civilian panic would clog the roads with fleeing refugees and thus hamper the operation of both civilian authorities and the Polish military.

The 1.5 million German soldiers that crossed the frontier into Poland on 1 September were divided into two army groups. One went north and then quickly east, driving behind Polish lines. The main attack would drive toward Warsaw, avoiding large Polish formations, preferring instead to get to the capital while at the same time encircling and isolating those same formations. This is, in fact what transpired. Some of

the Polish forces managed to disengage and withdraw to Warsaw where they would set up a defensive perimeter around their capital.



▲ German soldiers break down a barrier on the German–Polish border, 1 September 1939

Schutzstaffel (SS)

Originally Hitler's personal bodyguard, the SS grew into a massive organization within the Nazi Party. Broadly tasked with party and state security, the SS managed domestic and foreign intelligence gathering, the Gestapo, policing and racial policies including the concentration camp system. The *Waffen SS* was the military branch of the SS, which fought throughout Europe alongside and in coordination with the German army, the *Wehrmacht*.

Class discussion

Frederick the Great of Prussia once said "he who defends everything, defends nothing". To what extent does this apply to the Polish army in September of 1939?

Following the main force were units of the *Schutzstaffel (SS)*, the Death's Head Regiments. Hitler's orders to these units were to rid Poland of the "enemies of Nazism"—a long list. These regiments rounded up Jews, communists, socialists and any local leaders deemed to be a threat. Whole villages and towns were burned to the ground. Civilians were a deliberate target in this war from the very beginning.

The siege of Warsaw began on 17 September. The Luftwaffe pounded the city for ten days. Although the city was defended by 140 000 Polish soldiers the suffering that the terror bombing created persuaded the Polish authorities to surrender the city on the 27 September.

True to their pledge, the British and French declared war on Germany on 3 September. By 10 September, Canada, Australia, New Zealand and South Africa had followed suit. But this meant very little in terms of practical aid to the beleaguered Poles. On 4 September British bombers attacked German ships at their births in Wilhelmshaven resulting in limited damage. French army units made tentative advances across the frontier with Germany.

Thinking skills

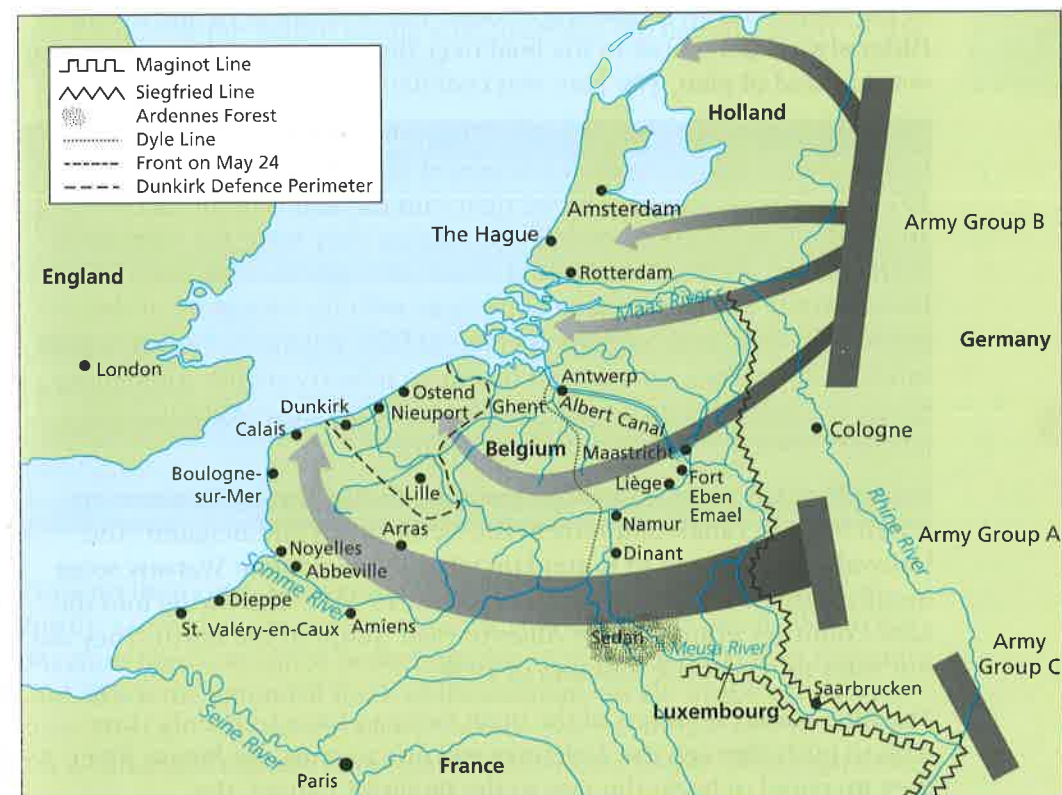
- What lessons might the French and British allies have taken from the brief Polish campaigns that may have better prepared them to face the German army?
- What challenges would a campaign in western Europe pose for the German army that it had not encountered in Poland?

Casualties: Polish campaign

	Dead/missing	Wounded	Captured
Poland	70 000	133 000	700 000 in German hands 217 000 in Russian hands
Germany	13 900	30 000	
Civilians	25 000		

Battle for western Europe

Hitler had hoped that his army could be quickly turned west to conquer what he believed to be a hesitant and weak France. His generals were far more cautious. They argued for more time to better prepare for what they believed to be a more formidable enemy, one bolstered by a growing British army. It became evident, however, that the German advance in the west would have to wait until the spring of 1940. The interim, known as the Phoney War or to some of the British and Canadian soldiers waiting in Britain "the *Sitskrieg*", provided an opportunity for the British to raise 15–20 divisions, the French to mobilize reserves and reinforce the Maginot Line and the Germans to correct the deficiencies that became apparent in the Polish campaign and transfer their forces to the western front.



▲ Hitler's plan for the invasion of western Europe. Compare and contrast this plan with the Schlieffen Plan of 1914.

The war in the west did not open with a German drive into western Europe, but rather with an attack on Norway. Although officially neutral, Norway would provide the German navy with an important base of operation. Its occupation would also help secure the resources Germany obtained from Sweden. In March 1940 German mountain troops landed at Narvik in the north supported by German paratroopers. Stiff resistance from the Norwegians, reinforced by French and British troops and strong support from the Royal Navy, slowed the German advance. By the end of April, however, the British and French high command had decided that the prospects of success were slim and in any event, the expected thrust into France could not be far off.

That thrust was an object of some debate among German generals and their Führer. In the end, Hitler opted for the bolder plan that would send a smaller force to attack Belgium and the Netherlands – in a seeming repeat of 1914 – in hope of pulling French and British forces north. The vast majority of the German armour would then push through the forests of the Ardennes thought to be impenetrable by large forces, especially with tanks, separating the bulk of the Allied forces from the bulk of France. A third force would attack the Maginot Line. The plan, devised by the ambitious General Eric von Manstein, was daring and fraught with danger. What if the Ardennes proved to be as impenetrable as the French hoped? What if the garrison manning the Maginot Line emerged from its fortress and attacked the exposed flank of the main force as it plodded through the Ardennes? In any event, Hitler always gravitated to the bold over the cautious and therefore, this was his kind of plan. The plan was codenamed “Sickle Stroke”.

The French plan was to rely on the Maginot Line and deploy their mobile troops, including their reserves in the north. Once again, as in 1914, the French strategy played right into the hands of the Germans. To call the French troops mobile is not to say they were the equivalent of the panzer divisions that would smash through the Ardennes. The French army, like its German counterpart with the exception of the panzer divisions, was road-bound and on foot, relying on horses to pull much of its artillery. On a forced march an infantry soldier could move about 31 kilometres on a road in a day. In Poland, the Wehrmacht’s panzers covered 35 kilometres a day off road.

On 10 May Germany launched Operation Sickle Stroke. Paratroopers seized bridges, canals and forts in the Netherlands and Belgium. The Luftwaffe began to do to Rotterdam what it had done to Warsaw some months earlier. The Dutch surrendered on 19 May. This swing into the Low Countries prompted the Allies to rush troops to the north. They did not want to repeat the mistakes of 1914.

The nine panzer divisions of the main German force took only three days to push through the Ardennes and one to cross the Meuse River. As they prepared to begin the race to the English Channel, the Anglo-French forces still believed that the main attack would come down from the north. As the folly of this view became evident, the Allies began to panic. Some units of the British Expeditionary Force (BEF) dug in around their positions and prepared for a prolonged fight. Those French units that managed counter-attacks did so with little coordination and even these fell off as the German advance gained momentum.

Class discussion

How did operation Sickle Stroke differ from the Schlieffen Plan?



This momentum actually concerned Hitler and some of his commanders. The panzer divisions were outstripping their infantry support and Hitler worried about his tanks getting mired in the wet lowland areas of coastal Belgium and France. With the British army trapped against the coast and the French forces in disarray, Hitler ordered his panzers to stop – a controversial decision. The best German intelligence report put the number of British soldiers trapped within the Dunkirk perimeter at 100 000. The prospects of a sea evacuation, by German estimates, were negligible. The head of the Luftwaffe, Hermann Goering himself, assured Hitler that his aircrew could prevent any such rescue.

Close to 400 000 British, French and Belgian troops were trapped in the Dunkirk pocket. The plan to get them home was code named Operation Dynamo and consisted of some 222 Royal Navy vessels as well as 665 civilian boats – British, Belgian and Dutch – of all shapes and sizes, from commercial fishing trawlers to luxurious private sailing yachts. The key to the success of Dynamo is twofold. First the halt of the panzers bought the British time. Second, the RAF was able to keep the skies over the exposed beaches of Dunkirk and its approaches relatively clear of German aircraft.

By 4 June, over 337 000 Allied soldiers had been taken off the beaches. Of these 110 000 were French soldiers who quickly returned to France through secure ports. Although the “Miracle of Dunkirk” was proclaimed by the British media and preserved the fighting ability of the British army, it had come at a cost.

The Battle of Dunkirk: British losses

Dead/missing	11 000
Captured	40 000
Tanks	475
Vehicles	38 000
Motorcycles	12 000
Anti-tank guns	4 000
Heavy artillery	1 000
Bren guns	8 000
Rifles	90 000

Now on their own, the remnants of the French military attempted to fortify a line of encampments running east to west perpendicular to the Maginot Line – so-called hedgehogs that could form pockets of resistance and attack the extended flank of the German “sickle stroke”. It was too little, too late. Morale was nearly broken and the infrastructure required for a concerted military effort was close to non-existent. Although there was continued resistance in the Alps and along the Maginot Line, the French government, under Marshal Pétain from 17 June, signed the terms of surrender. The terms included:

- 60% of France, including Paris, the Atlantic coast and the industrial north, would be a zone of German occupation

- 40% of France and her colonies would be controlled by Pétain's puppet government with its capital at Vichy
- the French army would be reduced to 100 000 men
- French prisoners of war, over 1.5 million men, would be kept in captivity with no guarantee of their release
- the French would have to pay "occupation costs"
- the French navy was to be turned over to Germany.

Technology and war: Enigma and codebreaking

Enigma was an encoding machine used by the German military throughout the war. Enigma had a keyboard attached to three rotors. Each keystroke turned the rotors encrypting the message. An associated code key was required to decipher the message at the receiving end. By 1939 with the help of Polish mathematicians, the Allies were beginning to decipher German military code keys. The British mathematician Alan Turing developed a mechanized deciphering machine, which accelerated the process considerably. When the Germans created a four-rotor Enigma machine, the British modified their machine to decipher these codes as well. There were, however, hundreds of Axis code systems that were used and changed with varying degrees of regularity, making the task of the codebreakers vastly more complicated.

The program which deciphered and analysed the intelligence derived from Turing's machines was known as Ultra and at its height was deciphering over 2,000 messages a day. In a way the success of the program posed its own problems. Ensuring that the 2,000 decoded messages were analysed for their military importance and sent to the units to which the information was the most use in a timely fashion was an enormously complex undertaking. Allied leaders had to be careful which intelligence they acted on and how they did so for fear of tipping off the enemy who could then change the encryption system. The Allied militaries



▲ The Enigma machine. What were the challenges presented by this technology for both sides?

each had their own cryptographic systems and shared intelligence regularly. It was Ultra intelligence on Japanese intentions in northern China, released to the Soviets on Churchill's orders, which persuaded Stalin to allow his Siberian divisions to be transferred to the west. These divisions played a major role in the counteroffensive of December 1941 that threw the Germans back from the outskirts of Moscow.

Barbarossa to Stalingrad

While the autumn of 1940 was seemingly consumed with the vicious fighting in the skies, Hitler's attention was increasingly focused on the east – Germany's invasion of the Soviet Union. To an extent unknown in modern history, this was to be an ideological war, not simply a war of territorial conquest. Hitler had long envisioned the destruction of the communist edifice and the enslavement of the people who lived under it. It was to be a massive undertaking even by the standards of the Second World War. Three million men were to attack in three army groups along a 3,200-kilometre front supported by close to 1 million men from her allies. This force which included 3,350 tanks would be supported by

7,000 artillery pieces and 2,000 aircraft. To outfit such a formidable invasion the Germans were forced to use tanks and equipment from all over Europe including tanks from Czechoslovakia, artillery from Norway and trucks from France.

Opposing the Germans was a Red Army still reeling from the comprehensive purge of its officers in 1937–1938 and its humiliating performance against the Finns in 1940. Nevertheless, the Red Army numbered some 3.2 million infantry, 50 tank divisions (about 24 000 tanks in total) and 25 mechanized divisions.

Stalin's purge of the Red Army

Rank	Executed or imprisoned
Marshall	60%
Army Commander	87%
Divisional Commander	56%
Brigadier	46%
Deputy Commissar of Defence	100%
Total officers purged	36 671



▲ German dispatch riders take a break during Operation Barbarossa. What role did communications play in Blitzkrieg tactics?



▲ Operation Barbarossa

