

BLEEDING FRANCE WHITE

The Agony of Verdun

My friends, we must take Verdun. Before the end of February, the conquest must be complete. The Emperor will then arrive and hold a grand review on the Place d'Arms in Verdun and there we will sign the peace treaty.

—Crown Prince Wilhelm to his troops, February 1916

“WE have made Italy,” said Giuseppe Garibaldi shortly after Italian unification in the 1860s; “now we must make Italians.” A half century later, that process remained woefully incomplete. Localism remained powerful, and regional distinctions often overrode nationalist impulses. The concept of an Italian nation was still embryonic in 1914, and serious obstacles stood in the way of efforts to form a unified state. As in other multiethnic European states, the Italian elite envisioned using the army as a unifying force, to teach local men what it meant to be Italian and, more pragmatically, how to speak and read the national language instead of local dialect. In some regiments, this aim far superseded that of efficiency, leading to a gross imbalance in the quality of Italian units. In 1914, the social and cultural unification of Italy through a common military experience had yet to come to fruition. Most Italians, especially those in the south, continued look upon the new state with more suspicion than affection.

These internal divisions combined with budget problems to impair the modernization of the Italian military. Officers and men were poorly paid and were used mostly to break strikes and quell domestic unrest, a role that did little to increase either unit morale or national sentiment. Materially, the army was short of al-

most everything, possessing just 595 motor vehicles and 8 aircraft squadrons in 1914. Italian industry stood in no position to rectify these shortcomings. As late as May 1915 Italian factories produced 27,000 fewer artillery shells per month than the minimum number the army deemed necessary. Civil-military relations were among the worst in Europe, and the army suffered the unexpected blow of the death of its chief of staff on July 1, 1914, just as the continental crisis began to brew.

With the developing crisis in Europe, the Italian government decided to fill the void at the top of the army by naming Luigi Cadorna to be its commander. Cadorna was the son of the legendary Raffaele Cadorna, the general who occupied the Vatican States in 1870. Luigi was ready to retire when the unexpected vacancy at the top emerged. His father's name, his royal connections, and his Piedmontese pedigree seemed to offer stability and predictability. He was, however, a poor choice. He had never heard a shot fired in anger and had been severely criticized for simplistic tactics at the 1911 Italian war maneuvers. His writings reflected outdated and mediocre strategic thinking that stressed frontal charges and underplayed the role of firepower. Worse still, he believed that only the harshest discipline could make soldiers out of southern Italians, whom he considered little better than mules. Arrogant and paranoid, Cadorna proved to be one of the worst senior commanders of the twentieth century.

ITALY AND THE ISONZO

Italy had few compelling state interests affected by the July crisis, and it was not directly threatened by any of the Great Powers. It had been a signatory to the Triple Alliance, binding it by treaty to Germany and Austria-Hungary. Few European diplomats believed that Italy would honor those obligations. Since the 1882 signing of the alliance, which had been conceived as protection against France, tensions between Italy and Austria-Hungary had steadily

risen. Italian nationalists stirred up public ire against Austrian occupation of areas with significant Italian populations, most notably the strategic Tyrol area, the Isonzo River valley, and the port cities of Fiume and Trieste. Predictably, as the July crisis grew, Italy argued that because Austria-Hungary had been the aggressor against Serbia and the Triple Alliance was a defensive arrangement, Italy was not bound to enter the war. In public, Austrian and German officials expressed outrage at what they called Italian perfidy, but in private few of them expressed any great surprise or even any great disappointment.

Neutrality would have served the Italians best, but Cadorna and others saw the war as a chance to annex “Italian” territory and increase their influence in Albania. A victory of arms, they hoped, would propel their young nation into the ranks of Europe’s great powers and unite the Italian people. Because most of the territory they sought lay inside the Austro-Hungarian Empire, an alliance with Britain and France made the most sense. Italy’s long, exposed coastlines, moreover, made a war with Britain a particularly unpleasant option. Russia’s initial successes in the Carpathians weakened the Austrians, who, facing several fronts, appeared to be an easy target.

In March 1915 the Italians approached Britain with an offer to enter the war if the Allies would recognize Italian annexation of southern Tyrol, the Trentino, Gorizia, Gradisca, Trieste, Istria, Dalmatia, and the Albanian port of Valona. These conditions represented a considerable reach and undermined Italy’s own nationalist logic, but they cost the Allies nothing at all. Britain, anxious to see the Italian navy as an ally and not a threat to Mediterranean lines of communication, convinced Russia and France to accept the Italian conditions. In the resulting Treaty of London, signed in April, the Allies also agreed to protect the Italian coast and shipping lanes, continue Russian offensives against Austria-Hungary to prevent the latter from threatening Italy, increase Italy’s African empire by adding Eritrea and Ethiopia, and loan Italy £50

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Not all soldiers spent the war in trenches. These elite Italian ski troops on the Isonzo front were trained to infiltrate enemy lines and destroy communications and supplies. (United States Air Force Academy McDermott Library Special Collections)

million for military modernization. In the diplomatic realm, Italy had done quite well for itself.

In order to claim all of these promises, however, Italy would have to win on the battlefield. On paper, it held many advantages. The Italians could focus their 900,000-man army on a single enemy, Austria-Hungary, while the Austro-Hungarians were already engaged against Serbia and Russia. Conversely, the Italian front would of necessity have to be a secondary one for Austria, giving Italy numerical superiority. Enormous Austrian losses in the Carpathians in 1914, moreover, had destroyed much of its army's professional core. Cadorna confidently predicted an easy victory, claiming that he and his men would walk to Vienna.

The road to Vienna, however, went through the Isonzo River valley and the heights of the Julian Alps. It was ideal terrain for the defender and anything but a walk for the attackers. Austro-



The Italian front, 1915–1918

Hungarian troops, moreover, were outraged by Italy's entry into the war. They were reminded that Italy had used Austria's preoccupation with Prussia in the 1866 war to seize Venice and its surrounding areas. Italy soon became the enemy that all of the empire's many ethnic groups could rally to fight. Thus war against Italy became the one part of the war that Austro-Hungarians saw as "necessary and just." Such unity of purpose did not exist on the Serbian and Russian fronts.¹

To command the defense of the Isonzo, the Austrians assigned Svetozar Boroević, a talented Croatian general. He had been one

of the few Austro-Hungarian generals to lead well in the Carpathians in 1914, preventing a much larger Russian force from crossing the mountains and later turning back a Russian push toward Cracow. Conrad, with whom he had fallen out of favor, believed that Borojević's experiences in mountain warfare in 1914 would serve him well against the Italians at the Isonzo. He therefore decided to give Borojević another chance as commander of a new Fifth Army.

Low on manpower and ammunition, Borojević set out to make maximum use of the terrain. Cadorna decided to attack before Italian forces had fully mobilized. He hoped to rush through the Austro-Hungarian positions before Borojević could establish them. Still, the Austrians had more than 114,000 men and 230 heavy artillery pieces along the Italian front by late May. Cadorna's inexperienced and ill-equipped army had a large numerical superiority (there were 400,000 Italians in the region by June), but lacked wire cutters, heavy artillery, ammunition, reconnaissance aircraft, even steel helmets. The First Battle of the Isonzo lasted from June 23 to July 7. The Italians established some strategic positions, but lost 15,000 men and failed to break through. Cadorna's easy walk to Vienna had begun poorly.

Nevertheless, Cadorna tried again almost immediately. Italy's agreement with the Allies had stipulated that Russia would assist Italy by mounting continuous pressure against the Austrians. Instead, Russian setbacks at Gorlice-Tarnów forced the Italians to attack before they wanted to in order to relieve the beleaguered Russians. In the Second Battle of the Isonzo, the Italians succeeded in forcing Austria to transfer eight more divisions to the region by the end of the year, but this battle yielded nothing more than temporary gains. In October, Cadorna launched his third Isonzo offensive, again without adequate artillery. It, too, failed.

Cadorna tried one more attack before the year ended. In November, amid snow, food shortages, and an outbreak of cholera, the Italians pushed the Austrians back, but failed to take the key

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*The terrain on the Isonzo front presented tremendous problems.
This remote outpost in the Julian Alps offered little protection from
harsh mountain winters. (United States Air Force Academy
McDermott Library Special Collections)*

town of Gorizia. The first four battles on the Isonzo had cost Italy almost 230,000 dead and wounded. Cadorna had not been the only general to suffer enormous losses in 1915, but he was the only one who persisted in fighting on the same ground with essentially the same tactics four times. His offensives had bled Italy of its best prewar officers and soldiers as well as its enthusiastic early volunteers. In exchange, Cadorna had seized no important piece of ground and had made himself look foolish for his earlier promises of an easy war.

Cadorna reacted by blaming everyone around him, from journalists to junior officers to the “lazy” southern Italians who formed the bulk of the army. He instituted a brutal disciplinary system that convicted 170,000 men of various offenses, handed down 4,028 death sentences, and executed more men than were exe-

cuted in any other army. In some cases, the Italians resorted to the Roman Empire's practice of decimation, introduced into the Italian army by Cadorna in January 1916. Men were executed at random, either as a means of punishing a whole unit for substandard performance or for an individual crime when the perpetrator could not be found. As the war ground on and as men became increasingly dissatisfied with the performance of their generals, acts of indiscipline increased, leading to more and harsher punishment by military authorities.

The very randomness of the Italian disciplinary system worked against itself. In theory, random punishments were meant to scare men into behaving and fighting as Cadorna wished. Instead, men grew to hate their own officers so deeply that combat effectiveness broke down. Cadorna refused to consider any other method of improving morale, such as increased leave or the provision of better food. Even if one accepts the strategic necessity of his continuing the offensive, his unwillingness to listen to his soldiers' legitimate complaints reveals a man who did not want to learn. Harsh and unpredictable discipline remained his manner of dealing with his men.²

Cadorna was less apt to use decimation on his officers, but he turned his wrath on them as well. Men who challenged his judgment received demotions and transfers to other theaters and, in some extreme cases, were jailed for insubordination. Cadorna's headquarters remained a place where one did not question his outlook or strategy. He and his staff often quoted an old Piedmontese dictum that the "Superior is always right, especially when he is wrong."³ He replaced so many officers that units lost continuity in their leadership. Programs to commission new officers had to be shortened to replace both the men who had died and the men Cadorna had removed from command. As a result, the Italian Army suffered from a terrible shortage of qualified leaders.

By the beginning of 1916, then, Italy was no closer to realizing

any of its dreams then it had been when it had joined the Allies. Their own offensives had stalled and failed, with terrible human cost. Their British ally had failed in the Dardanelles and on the western front. Russia, from whom the Italians had expected help in occupying the Austria, had retreated from Poland and was in no shape to provide any meaningful assistance. As for France, it had survived the bloodletting of 1915, but in 1916 it was about to endure a trial of fire that no one could have imagined.

THE PLACE OF EXECUTION: VERDUN

General Erich von Falkenhayn spent the closing days of 1915 reassessing Germany's strategic position. On Christmas Day, he composed a memorandum for the kaiser in which he stated that the entry of Italy and the German failure to force Russia out of the war had given the Allies greater resources, which sooner or later they would bring to bear. By January 1916 the Allies would have 139 divisions in France and Belgium (including the divisions of the British New Armies) as opposed to 117 German divisions. Falkenhayn remained optimistic, however, because he believed that one of those Allies, namely France, was at the "limits of endurance." France, he believed, could be defeated in 1916 and, once France was defeated, Britain would have little choice but to sue for peace. "To achieve that object," he wrote, "the uncertain method of a mass breakthrough, in any case beyond our means, is unnecessary."⁴ Falkenhayn had other ideas.

His plan amounted to "bite and hold" on a theater level. He planned to attack the French Army at a place so critical to France that Joffre would have no choice but to fight to the last man to take it back. The Germans would then be in a position to take advantage of their more tactically powerful defensive position and destroy the French as they attacked. In this way, Falkenhayn wrote, the Germans could "bleed France white" and, in the process, knock "England's best sword" out of her hands. Falkenhayn

thus proposed to introduce attrition warfare on an enormous scale to the western front. He did not care about breaking enemy lines, capturing territory, or advancing on communication nodes. He sought instead to kill Frenchmen faster and more efficiently than they could kill Germans.⁵

Falkenhayn had a reputation for ruthlessness. He had introduced poison gas at Ypres, argued vehemently for unrestricted submarine warfare, and had sponsored a plan for random aerial bombardment of Allied cities. Casualties, including German casualties, bothered him even less than they did most of his colleagues. He held almost all of the German generals in contempt and admitted few of them into his confidence. This furtiveness later had important consequences. Falkenhayn flattered the kaiser (thereby improving the chances of his plan's being approved) by proposing to place the main attack under the kaiser's son, Crown Prince Wilhelm. Unwilling to tell the crown prince that the battle plan involved attrition and the spilling of blood on an entirely new scale, Falkenhayn instead led the crown prince to believe that his task would be nothing less than the honor of attaining the main objective. Thus the crown prince held a dangerously mistaken concept of Falkenhayn's plan. "Seldom in the history of war," wrote the battle's most famous historian, "can the commander of a great army have been so cynically deceived as was the German Crown Prince by Falkenhayn."⁶

The main objective, the crown prince believed, was to capture the city of Verdun. A fortified region since the time of the Romans, the very word Verdun meant "powerful fortress" in a pre-Roman Gallic dialect. The city was bisected by the Meuse River and guarded all communications from Metz to Reims and, 160 miles to the west, Paris. The great engineer and architect Vauban had built the city's first modern defenses for Louis XIV. After the Franco-Prussian War, France had reinvested in Verdun, building or improving 60 individual forts and outposts, along with miles of underground passageways and shelters. The largest single fortifica-

tion, Fort Douaumont, covered almost eight acres of land and could protect a garrison of 500 to 800 soldiers.

Verdun's true significance for Falkenhayn's purposes lay not in its strategic value, but in its symbolic value. At Verdun in 843 Charlemagne had divided his empire into three parts: two of those portions formed the core of the future states of France and Germany, while the third developed into the middle battleground that included Alsace and Lorraine. In 1792 and 1870 Verdun had heroically withstood German sieges before eventually falling. According to French national legend, the fort's commander in 1792 had committed suicide rather than surrender Verdun to France's hereditary enemy. Painted on the door of Douaumont's main entrance were the words "Better to be buried under the ruins of the fort than to surrender it."

In the early days of the war, Verdun had held its position once again. Verdun had been the easternmost French position during the Battle of the Marne. Without Maurice Sarrail's staunch defense there, the rest of the French Army's effort at the Marne might well have been for naught. His successful defense left Verdun at the center of a salient that bulged deeply into German lines. Vigorous combat occurred near Verdun in the first half of 1915 as both sides sought unsuccessfully to move the lines in their favor. By the end of that year, however, Verdun was not as strong as it appeared. In fact, it was more susceptible to enemy attack than anyone on the German side knew. Had Falkenhayn actually wanted it and planned for its capture, Verdun might have been his for the asking.

Verdun's vulnerability resulted from the intentional neglect of the fortresses from the very people charged with its defense. The rapid German destruction of the forts of Belgium in 1914 convinced many French generals that fortifications had outlived their utility in modern warfare. Other French generals saw how well Verdun had held the Germans in 1914 and 1915 and concluded that the pride of French fortresses was impregnable. Both argu-

ments implied that Verdun should not merit primary attention from French headquarters. The Germans had seemingly learned their lesson, moving their center of gravity north to Flanders in 1915. Verdun, French headquarters concluded, no longer figured into German plans.

Having decided that Verdun would remain a calm sector for the foreseeable future, Joffre removed many of the fortress's heavy artillery pieces. By doing so, he believed that he could compensate for the general lack of French heavy artillery and thereby give his 1915 Champagne offensive a better chance of succeeding. He also denuded the Verdun garrison of men, leaving just enough troops to form a single thin trench line to the north and east of the main fortifications. No true second line existed, just a series of poorly connected outposts and individual strongpoints. The French also had too few men to occupy the thick woods immediately opposite their position, thereby allowing the Germans to move and reinforce virtually undetected.

The vulnerability of the Verdun sector worried many of the officers charged with defending it, especially as evidence mounted of a German concentration there in late 1915. The commander of the Fortified Region of Verdun, an elderly artillery officer with the distinctly un-Gallic last name of Herr, had warned Joffre's staff about the weakness of his position. Fort Douaumont, once one of the most powerful forts in the world, had been reduced to just one gun larger than 75mm in caliber. Its 500-man garrison stood at just 60 reservists, most of whom were deemed too old for service in the trenches.⁷ When Joffre's staff rebuked him for his criticisms, Herr informed War Minister Joseph Gallieni of Joffre's unwillingness to see the urgency in the situation at Verdun. "At every demand I addressed them [Joffre's staff] for reinforcement in artillery, they replied with the withdrawal of two [artillery] batteries or two and a half batteries; 'you will not be attacked. Verdun is not the point of attack. The Germans do not know that Verdun has been disarmed.'"⁸

Joffre and his staff ignored the mounting danger at Verdun in part because of their obsession with plans for their own offensive in 1916 along the Somme River. Joffre seems to have assumed that the Germans would remain inactive through the first half of the year. He therefore made the critical mistake of guessing that his enemies would do what he wanted them to do. Joffre and his staff dismissed Herr's worries and hoped for relative quiet on the western front until the time when they could themselves take the offensive, planned for midsummer.

Herr's was not the only voice warning of impending disaster. Another challenge came from Lt. Col. Emil Driant, a battalion commander in the woods outside Verdun and a member of the French Chamber of Deputies. Driant wrote to his colleagues to warn them of the danger that France faced if, as he predicted, a German attack on Verdun materialized. He particularly criticized Joffre for not establishing a solid second line of defense and frankly told the Deputies that France lacked the strength to defeat a determined German assault on this sacred national shrine. Joffre exploded with anger at what he considered an insubordinate act by an officer under his command. He also refused to take the advice of Gallieni, telling him that the Minister of War had no right to question operational decisions made by the commander-in-chief.

"I ask only one thing," Joffre blithely told a committee of concerned Parliamentarians: "that the Germans should attack and should do so at Verdun. Tell the government so." Attack they did, in the opening phase of what Falkenhayn called Operation *Gericht* (Judgment). The assault opened on February 21, 1916, with the heaviest artillery concentration to date, employing over 1,600 artillery pieces. By one estimate, German guns fired 100,000 shells per hour along a narrow eight-mile front. The German heavy guns fired shells and gas at French artillery positions, rendering them ineffective in a process known as counter-battery fire. High-angle trench mortars struck the thin French first line, and howit-

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One of the war's most terrifying innovations, the flamethrower, was often as dangerous to use as it was to face. Most flamethrower crews were, ironically, made up of men who had been firefighters in their civilian lives. (National Archives)

zers hit the few outposts on the French second line. The near-total tactical surprise of the assault left the French positions vulnerable to this immense weight of shells.

Artillery, however, was only part of the plan. Special Assault Detachment soldiers, more commonly known as storm troops, formed an integral element as well. All the armies had been working on the idea of forming small groups of fast-moving elite

troops that could operate independently without waiting for orders from a higher unit. In October 1915 the Germans had experienced success with these formations in limited roles in the Vosges Mountains. At Verdun, the Special Assault Detachment worked with pioneer units to infiltrate French lines. Their mission was to cut French barbed wire and use a new invention, the flamethrower, to eliminate resistance from concrete machine gun outposts.¹⁰ More conventional infantry followed the pioneers and storm troops to hold the ground thus gained, while reinforcements brought up supplies and entrenching materials.

The plan worked too well. By the second day of the assault, the Germans had captured virtually all of their objectives. The French position had crumbled so quickly that General Herr ordered the forts still in French hands to be rigged for demolition. This success placed Falkenhayn in an unexpected position. If the Germans actually seized Verdun, the French might decide that it could not be retaken and therefore not fall for the bait in his attempt to draw the enemy into a struggle of attrition. Paradoxically, the Germans might well hold a victory march through Verdun, but leave Falkenhayn without the bloody triumph he had sought.

Fortunately for Falkenhayn, and tragically for hundreds of thousands of men on both sides, Joffre did take up the challenge. Verdun had already become a symbol in yet another war. On day one of the attack, Driant and his two battalions of men had been in the Bois de Caures, directly in the path of the oncoming German assault. They fought, badly outnumbered, and when their ammunition ran out, they fought with bayonets. Driant held his position, tending to his wounded men and burning his papers before he was struck by a shell and killed. His heroism had slowed the German assault and set the model for French service at Verdun. In the words of French historian Pierre Miquel, "the infantry now knew that it had just one responsibility: to die as Driant and his soldiers had. . . . The mechanism of sacrifice was in place."¹¹

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*French prisoners escorted away from Verdun. The tremendous blood-letting of the ten-month-long battle affected all of the subsequent events of the war and left scars that lasted well beyond 1918.
(Library of Congress)*

A second major blow to French pride and prestige came on February 25, when a small but audacious group of German soldiers entered Fort Douaumont via an unguarded passageway. The stunned garrison of 57 second-line territorials surrendered the fort without firing a shot in its defense. Reputed to be the strongest fort in the world, Douaumont had fallen into German hands with stunning ease. Its loss immediately placed the entire French line in jeopardy. It also became an important symbol in Germany, where church bells rang and children were dismissed from school to celebrate a victory that might open the road to Paris and end the war within a matter of weeks.

Joffre, so slow to see the danger at Verdun, now reacted quickly. On February 25, he sent his second-in-command, Edouard Noël de Castelnaud, to Verdun to assess the situation and recommend a

course of action. General Herr advocated abandoning the right (east) bank of the Meuse and focusing French defenses on the left bank. Castelnau disagreed and ordered that both sides of the Meuse would be defended inch by inch at whatever the cost. Sensing the urgency, he issued the appropriate orders without clearing them with Joffre. He also decided that General Herr should be removed from command at Verdun.

In Herr's place, Castelnau gave authority for both banks of the river to a perceptive but gloomy general named Henri-Philippe Pétain. Pétain began the war as a colonel out of favor with the French military hierarchy because he had been a firm advocate of defensive warfare. "Firepower kills" was his oft-quoted maxim. In the days prior to the war, his thinking ran against accepted French orthodoxy and as a result his career stagnated. His defensive mind-set, however, was much better suited to the actual war of 1914 and 1915 than Joffre's doctrine of *offensive à outrance* (offensive to the utmost). As such, Castelnau thought Pétain the perfect general to command the defense of Verdun. While Castelnau was reaching this conclusion, Pétain was in a Paris hotel with the woman whose father had forbidden her to marry him because he did not want an army officer in the family. One of Pétain's staff officers found him there at three o'clock in the morning and told of him of his promotion to commander of the Second Army.

Pétain understood the dire nature of Verdun's situation as well as anyone. He saw the need to rush reinforcements, food, and ammunition to the region as quickly as possible. For the moment his pessimism receded. His famous exhortation "They shall not pass" became the watchwords of Verdun. Because of its position in the salient, however, Verdun could only be resupplied from one direction, the southwest. The only secure railroad in the sector stopped at Bar-le-Duc, almost fifty miles away. From there, one seven-yard-wide road led into Verdun. If Verdun were to hold out, that road, soon named *La Voie Sacrée* (Sacred Way), would have to carry sufficient supplies into the sector.

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The French abandoned their reliance on the light 75mm field artillery piece. In its place came larger guns, such as this Schneider 155mm, which was introduced in the middle of the war. (United States Air Force Academy McDermott Library Special Collections)

To ensure a constant flow of men and materiel along *La Voie Sacrée*, Pétain enlisted the same *Service Automobile* that had rushed men to the front via taxicabs to the Battle of the Marne. Almost 9,000 men worked on the road day and night, adding stones to permit transport over winter and spring mud, building repair stations, and even operating hydraulic presses along the roadside to repair tires. In two weeks, *La Voie Sacrée* transported 190,000 men, 22,500 tons of munitions, and 2,500 tons of food and other supplies. By May 1, it had allowed Pétain to rotate 40 infantry divisions in and out of the Verdun sector. It was an amazing logistical feat, permitting the French to fire more than 5 million artillery shells in the battle's first seven weeks.¹²

This massive weight of shell and the dispatch of so many French soldiers turned Verdun into a gory slugging match between roughly equal armies. In May, the French began the bloody process of taking back all of the ground they had lost. Instead of at-

tacking with rifles and bayonets as they had in 1914, however, they attacked with enormous quantities of artillery. Although they did not always achieve their immediate goals, the millions of shells the French fired caused casualties on the German side that Falkenhayn had never imagined. The German commander had counted on killing French soldiers at a 5 to 2 ratio. By late June, the French had indeed suffered terribly, with 275,000 casualties. But the Germans had suffered almost as badly, taking 240,000 casualties.

The “sausage grinder” of Verdun wore down both armies. The intense fighting continued day after day with little respite. Reinforcements from both sides could see, hear, and smell the battle from miles away as they approached Verdun. Pétain’s policy of rotating men in and out of the sector kept men sane, but the knowledge that they would soon have to return contributed to a psychological malady that doctors soon termed “shell shock.” Men with no physical wounds grew senseless and numb from fatigue and the constant presence of death. “It was often better to speak of those men as the condemned to die,” recalled one French officer, “so many of their wits were shot and their faces yellowed. Thirst devoured them, they no longer had the strength to speak. I told them that tonight we would undoubtedly be relieved. The news left them indifferent, their only desire was for a liter of water.”¹³

In an attempt to retake Fort Douaumont, the French fired 14 million pounds of shells in one week over an area barely 150 acres in size. It amounted to at least 120,000 individual artillery shells. Still the fort held, its subterranean passages offering its defenders shelter. Robert Bruce points out the “tragic irony” that Douaumont’s powerful defenses, designed to protect the French, now sheltered the German army from French guns.¹⁴ Douaumont remained in German hands throughout the summer. It had become as much a symbol of German resistance as it had once been of French power.

Control of Douaumont notwithstanding, Falkenhayn’s grand plan had manifestly failed. The German army did not capture

Verdun, nor did it inflict the kinds of cheap casualties on the French that Falkenhayn had envisioned. As early as March, the crown prince had informed his father of his growing pessimism about the Verdun campaign, fueled, no doubt, by the realization that it was to be a battle of gory attrition, not glorious conquest. The crown prince grew increasingly frustrated and distant, spending more and more of his time chasing French women behind the lines while his men died by the thousands.

Frustrated with the course of the campaign, the kaiser relieved Falkenhayn in August, sending him east to fight the Romanians. In his place, the kaiser turned to the Hindenburg-Ludendorff team, now placed in charge of all German army operations. Hindenburg's head told him that the best course of action was the abandonment of German positions at Verdun and an end to the campaign. His heart told him that too many Germans had died there to withdraw voluntarily. The honor of Germany, he felt, was at stake even if the campaign had lost all strategic value. The killing at Verdun thus continued.

Pétain's ability to save Verdun in February led to his promotion to commander of Army Group Center in May. In his place at the head of Second Army (which was a part of Army Group Center) came the aggressive Robert Nivelle. Like Pétain, Nivelle had begun the war as a colonel. His deft use of artillery had contributed to the Allied victory at the Marne, leading to his rapid promotion. At Verdun, Nivelle perfected two complex artillery tactics that made him popular with his superiors and with Prime Minister Aristide Briand. The first, called a "deception" bombardment, halted shelling long enough to allow the Germans to return fire and thus reveal their positions, which Nivelle's heavy guns then silenced. The second, a "creeping barrage," involved laying down a curtain of fire that preceded the infantry by measured steps. If done correctly, a creeping barrage silenced the enemy's machine guns, allowing the infantry to advance to their targets.

Throughout the summer, Nivelle worked closely with Charles

“The Butcher” Mangin to develop a plan for the reconquest of Douaumont. Mangin’s nickname was well earned. Wounded three times before the war during colonial service in Africa, he was notoriously reckless with the lives of his men. His time in Africa had somehow convinced him that Africans had a higher threshold for pain than Europeans and, wherever possible, he used African soldiers in the first wave of an attack. It was said that after the war he was the only French general who could stand on a Paris street corner in full dress uniform and not be approached by a single veteran wanting to shake his hand. To his credit, Mangin did not ask anything of his men that he would not do himself. He led charges personally at the age of fifty and rarely attacked until he had meticulously prepared every detail.

By October, Mangin had the massive artillery support he needed to make another charge at Douaumont. France then had 300 artillery pieces heavier than 155mm and had introduced gigantic new 400mm guns. On October 24, Nivelle laid his best deception bombardment yet, destroying German artillery pieces opposite Mangin’s division. His creeping barrage protected Mangin’s troops as they advanced toward Douaumont. The months of artillery bombardment had converted the fort’s exterior works from one of the world’s strongest buildings to a pile of broken concrete and uprooted earth. Still, it remained an effective underground shelter and a tremendous symbol to both sides.

At approximately 4:30 that afternoon, French soldiers in the nearby fort of Souville watched as three soldiers in French uniforms rose to the top of the rubble that had been Douaumont and waved their arms in the air. The fort was French once again. Supporting troops moved the line almost two miles in France’s favor. One week later, they retook Fort Vaux, effectively reclaiming all of Germany’s gains since the summer.¹⁵ By the time the two armies finally wore themselves out in December, the lines sat almost exactly where they had been in February. An estimated 162,000 Frenchmen and 142,000 Germans were listed as dead or

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The peaceful village of Vaux sat along the front lines during several major offensives, including Verdun. The American Second Division finally captured the town for the Allies in July 1918. (United States Air Force Academy McDermott Library Special Collections)

missing. Most of the latter were victims of artillery so powerful that it became impossible to identify a man precisely enough to give him his own grave. The anonymous remains of an estimated 130,000 victims of Verdun now sit in a massive ossuary near Douaumont.

Verdun thus became the battle of attrition that Falkenhayn had envisioned. Contrary to his plan, however, the battle wore down both sides. The mammoth struggle shaped the destinies of the German and French armies through 1917 and 1918 and well be-

yond. It also led to the removal of Joffre, who was blamed for his inattention to Verdun in 1915 and held responsible for the massive casualties of 1916. To soothe the transition, the government resurrected the rank of marshal, which had been out of use since 1871, and named Joffre the Third Republic's first man to hold the rank. In his place came Robert Nivelle, who promised French and British politicians that he could repeat his successful Verdun formula across the western front.

The bloodletting at Verdun reached far beyond the two armies directly involved. Verdun had an important effect on the British, Russian, Italian, Austro-Hungarian, and Romanian armies as well. Verdun became synonymous with sacrifice, death, and battles that defied the traditional definitions of winning and losing. One French veteran's recollection of the battle accurately sums up the state of the French and German armies at the start of 1917: "We waited for the fatal moment in a sort of stupor . . . in the middle of a demented uproar. The entire French army had passed through this trial."¹⁶ Whether that army could survive 1917 remained an open question in the minds of many on both sides.

WAR IN THE THIRD DIMENSION

Among its other notable characteristics, Verdun gave birth to the modern notion of air warfare. At the outbreak of the war, several generals belittled airplanes as little more than playthings for Europe's upper classes. The many lucrative speed and endurance contests in the years before the war contributed to such an impression. Nevertheless, as cavalry lost its traditional reconnaissance role on the battlefield, airplanes became the logical replacement. Their contribution in locating Kluck's turn to the south before the Battle of the Marne helped supporters make the case that airplanes might prove to be a deciding factor in the war. In the open spaces of the eastern front they quickly became critical tools.

Ludendorff and Joffre became two of the most important early converts.

The importance of aviation led to massive increases in spending to improve both the quantity and quality of aircraft. The war's belligerents had fewer than 800 airplanes among them in 1914. During the war, however, they built nearly 150,000 airplanes. Engines grew more powerful, and air frames became larger and more durable. To service these planes the great powers trained thousands of pilots, mechanics, spotters, and other support personnel. Enormous growth in aviation occurred in all of the belligerent nations. Britain's Royal Flying Corps grew from 2,000 personnel in 1914 to 291,000 in 1918, by which time it had become the world's first independent air force.

Aviation soon became sufficiently complex to merit specialization into three areas: observation, pursuit, and bombardment. Observers not only spotted and reported on enemy movements, but also helped to target artillery fire. By developing communication systems with gunners, aviators could correct inaccuracies. They thus enabled more systematic use of "indirect fire," wherein gunners did not actually see their targets. By using airborne observers as their eyes, gunners could conceal themselves and therefore protect their batteries from the enemy's own artillery.

Such a system depended on mastery of the skies. Pursuit (or fighter) aircraft were soon developed, with the specialized mission of ridding the skies of enemy observation planes and clearing the way for one's own observers. Dutch aircraft designer Anthony Fokker's invention of an interrupter gear for the Germans allowed for synchronization between an airplane's engine and its machine guns. For the first time, a pilot could fire "through" his propeller blade, allowing him to fly and keep his guns targeted at the same time. Until the Allies perfected a similar system, the "Fokker scourge" gave the Germans a critical advantage in the air.

By 1915, airplanes had grown strong enough to enable a third

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the print version of this title.]

Aviation was used at the beginning of the war as a means to spot artillery and observe enemy movements. By 1916 modern fighter tactics had evolved. By 1918 airmen had envisioned or practiced all of the roles of modern air forces except in-flight refueling. (Courtesy of Andrew and Herbert William Rolfe)

mission: aerial bombardment. In May, British planes targeted a German poison gas factory, dropping 87 bombs on it, with mixed results. By the end of the war, aerial bombardments of both military and civilian targets had become commonplace. Germany's Gotha bombers had the range to reach London and the capacity to carry 1,000 pounds of bombs. Raids by bombers and airships (zeppelins) killed 1,400 British civilians during the war. Although introduced too late to see action, Great Britain's Handley Page V/1500 had a range of 600 miles and a bomb load of 7,500 pounds. Had the war continued into 1919, Britain would have had 36 V/1500s ready for combat, with more on the way.

Verdun witnessed the first concerted efforts to link the success

of air forces to the fate of ground troops. German aerial reconnaissance planes, protected by pursuit planes, photographed every foot of the Verdun salient before the attack. Once the battle began, German bombers supplemented the artillery by striking bridges, marshalling areas, and enemy gun batteries. Notably, they did not target *La Voie Sacrée* because Falkenhayn did not want to destroy the means by which France could continue to feed men into his slaughterhouse. The French responded to the German aerial threat by creating pursuit squadrons that worked in tandem, concentrating firepower and forcing German airplanes away from the battlefield. These squadrons included an American volunteer unit, the Lafayette Escadrille, whose impressive combat record added to the publicity value of Americans fighting alongside the French.¹⁷

By March 1916, France had won the air war over Verdun. The introduction of the Nieuport 11 aircraft, an agile plane with a top speed of nearly 100 miles per hour, gave French pilots a significant technological edge until the German introduction of the Albatross III in early 1917. Technological advances notwithstanding, aviation remained a branch for only the most daring. A pilot's life expectancy was even shorter than a machine gunner's. France lost 2,000 pilots in training accidents alone. Those who could master the new technology became folk heroes. Men like France's Georges Guynemer (54 kills), Germany's Oswald Boelcke (40 kills) and Baron von Richthofen (16 kills), and Britain's Albert Ball (44 kills) all innovated the art of air warfare; all four died in combat before the war's end.

By 1917 air power had become critical to the triumph of any operation. At the beginning of that year, Pétain told new War Minister Paul Painlevé, "Aviation has assumed a critical importance; it has become one of the indispensable factors of success. . . . It is necessary to be master of the air."¹⁸ The general did not need to convince Painlevé. A gifted mathematician and scien-

tist, Painlevé had already become one of the world's great experts on aviation. As Wilbur Wright's first European passenger, he had set an endurance record of one hour, ten minutes. He then went on to teach France's first course in aeronautical engineering. Under his direction, France sat at the forefront of military aviation, a critical component to eventual Allied triumph.