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FORGOTTEN AXIS: ROMANIA, 1941-42



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Strategy & Tactics

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This issue we lead off with the next installment in *S&T*'s **Forgotten Axis** series, this time marching eastwards with the Romanian Army in 1941-42. Veteran wargame designer Dr. Michael Bennighof pens the lead on an overlooked chapter of World War Two, one which has some real surprises for East Front aficionados. Then we head off to the Far East for another forgotten war, as Brad Martin tells the tale of the Sino-Japanese conflict of 1894-95. Coley E. Cowan marches along with the 1814 campaign in France. Napoleon lost this one, but he showed some of his old brilliance nonetheless. We close out with an analysis of strategic deployment in the Indian Ocean, as US air and naval power are pitted against the land armies of the South Asian continent.

The War in the Air

There have been many approaches to simulating airpower in wargames. Here are some thoughts on them. For the sake of simplicity, I am discussing only games which deal with airpower in relation to land campaigns. There are three general approaches:

Airpower as modified land power. In this model, air units are deployed on airbases printed on the map and fly to target hexes as if they were moving across land but without the extra terrain costs. When they reach their target, air units resolve interception, attack ground units or installations, and then return to their bases. Air unit capabilities are rated according to a scheme similar to that of land units, with combat and movement factors. Some examples include *TAHGC's Blitzkrieg*, *GDW's Europa* series, and *DG's Indo-Pakistani War* (*S&T* 174).

Airpower as mission packages. In this model, air "points" represent not so much units *per se* but rather "x" number of sorties. Air units are held off map until actually employed for combat. While this system may seem to be abstract, it does model the unique nature of airpower. Air units are not maneuver formations but rather the vector to deliver combat power throughout a theater of operations. Some examples include *SPI's War in the East/War in Europe* and the more recent *Taipei* (*S&T* 202). In the latter game, each air counter is rated for various capabilities (air superiority, strike, EW) but *de facto* these units work as mission packages and not T/O&E units.

Airpower as a function of basing. In this system, players must deploy their airbases and then launch air units from them. Application of airpower depends on where and how far forward a player can position his airbases. A player can destroy an enemy's ability to operate airpower by attacking bases (as opposed to shooting down aircraft). *SPI* used this system in several World War II era operational level games, such as *France 1940* and its original *Kursk*. One interesting variant was in *SPI's Barbarossa* (their army level East Front game). In this game, the Germans have several *Luftflotte* units which can project combat power up to several hexes away. Aircraft units are not even used in *Barbarossa*. Among other things, this last model shows how airpower depends heavily on its support system for arming and maintaining aircraft and, obviously, for landing fields. Most of the people in an air force do not fly in airplanes (or, today, fire missiles). Instead, they provide the logistics, intelligence and command control necessary to make the aircraft function effectively. Logistics are also critical for land forces. But an armored division can fight independently of its basing system to some degree. Air units can not.

So what does this all mean? Projecting airpower is not just a matter of how far aircraft can fly but of how efficiently an air force can deploy its support infrastructure. It's another thing to think about when designing wargames—and fighting wars.

Next Issue

War of 1812, the United States versus Great Britain, 1812-15. At stake is the fate of North America. In future issues look for articles on Patton, Bonnie Prince Charlie, and the US plan to win the war in Vietnam.

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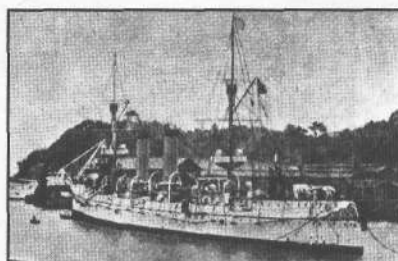


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*On the cover: Scenes from the Eastern Front,
World War II.*

Romania on the Offensive

The Eastern Front, 1941-42

by Mike Bennighof, Ph.D.



Slipping over the Soviet border into occupied Bukovina in the pre-dawn darkness of 22 June 1941, Romanian cavalry Lt. Ion Emilian and his small patrol had clear orders: destroy a nearby Soviet artillery observation post before the early-morning invasion of the Soviet Union began.

His regimental commander, Lt. Col. Ioan Christea, had made his instructions explicit: under no circumstances could the infiltrators commit any hostile act before 0345. The handful of Romanian troopers slipped through the woods and approached the post, a platform rigged high in a large tree. Emilian and a machine gun team covered the post as a demolition team set to work. As sapper Cpl. Paul Smarandake and his five engineers quietly rigged explosives around the tree's base, a squad of NKVD border guards came through the woods on a direct path for the platform.

"Merda," whispered a young trooper named Moldovanu. "That's it! There are the border guards!"

Emilian checked his watch. 0342. As he pondered what to do, rifle fire erupted from the southwest and bullets began impacting around Emilian and his light machine gun team.

"Devil take them!" cursed Ikonaru, another trooper. "They knew we were coming!"

"Fire!" ordered Emilian, as the Soviet post exploded into flames. After spraying the nearby areas, Emilian and his men grabbed their machine gun and fled on foot. Overhead, waves of German bombers streaked past, on their way to attack the nearby Soviet airfields at Cernauti.

"Where's Smarandake?" Emilian demanded as the sappers caught up to the cavalrymen.

"Dead," one panted.

"How?"

"Shot in the head. He was dead on the spot."



Close to half a million more Romanian soldiers would join Paul Smarandake on the roster of those killed in action during the Second World War as Romania fought first alongside Germany, and then with the Allies to overthrow the Nazi regime. Romania fielded the second-largest actively-engaged army among the European Axis powers, exceeded only by Germany.

Background

After centuries of Turkish domination, the modern Romanian state emerged in 1859 as an offshoot of its army. During that summer the Wallachian and Moldavian militias held a joint training camp at Floresti, named a joint prince, and refused to disband afterwards. The first government organ formed by the new state was a Ministry of War; civilian agencies followed later. Ottoman Turkey had held suzerainty over the principalities since the 15th century, but this had become purely nominal after the Napoleonic Wars. After brief rule by Prince Alexander Cuza, in 1866 the Romanian throne was offered to a Prussian prince, Karl von Hohenzollern, known as Carol in his new realm. Carol energetically sought modern arms and training for his army, and within a decade had built a well-armed force of 50,000 front-line

troops with an equal number of reserves.

Carol's intervention in the Russo-Turkish War of 1877-78 swung the balance of power toward the Russians and was a key to their victory. Romania emerged from the war with complete independence and a very high military reputation. But as mass armies became the norm over the following decades, Romania's agricultural economy could not sustain the heavy military spending. Every *lei* spent on arms was one not invested in infrastructure improvements such as railroads, causing Romania to fall even farther behind. Romania did possess Europe's only significant known oil reserves. Much of the income from these fields went to military spending.

Romania signed a secret alliance with Germany and Austria-Hungary in 1883, but when the First World War broke out Carol could find no support for intervention among his ministers. So he declined to enter the war, at least in 1914. In 1916, sensing that General Alexei Brusilov's Russian offensive had broken the Austro-Hungarian Empire's ability to resist, Romania joined the Allied side.

On paper, the Romanian Army looked very impressive—23 infantry and two cavalry divisions, almost 400,000



Romanian cavalry troopers in the Crimea, 1942.

front-line troops. But the steady decline in Romania's relative economic position made it impossible to properly arm these troops, and many of them went to war with the same weapons their grandfathers carried against the Turks in 1878. A Romanian military mission attempting to buy ammunition in Britain and France found the models carried by many troops long out of production. Though the peacetime regular army had a good reputation, the dilution of its good qualities by badly-trained conscripts and, reserve officers turned it into a massive liability for the Allies. Early on, the Romanian War Ministry had to issue strict orders that officers below the rank of colonel were not to wear makeup in combat zones. Austrian, Turkish, German, and Bulgarian armies quickly crushed Romanian resistance and occupied most of the country. Romania agreed to a peace treaty in May 1918, but King Ferdinand I, who succeeded Carol in late 1916, avoided signing it. On 10 November 1918 Romania again declared war on Germany and Austria-Hungary, demanding a seat at the post-war conferences and declaring itself among the victors.

Despite the massive defeat, Romania emerged from the war with the greatest proportionate territorial gains of any participant. Alarmed at the outbreak of Bolshevism in Russia, French leaders sought to establish strong states in Eastern Europe as a "sanitary cordon" against further export of revolution, and Romania benefited greatly. Austria yielded up Transylvania and Bukovina, Bulgaria gave up Dobruja, and in the chaos following the war Romanian troops seized Bessarabia from Russia. Romania became a multi-national state, with significant German-, Hungarian- and Ukrainian-speaking minorities.

Romania looked to France for foreign policy leadership and joined the French-sponsored "Little Entente" of Eastern European nations. Like many European nations, economic difficulties in the early 1930s helped spark a home-grown fascist movement, known as the Iron Guard. Religious fanaticism tinged the Iron Guard's ideology, and the Guard openly advocated the violent destruction of the royal state. Mimicking the electoral strategies of its German and Italian counterparts, the Iron Guard won several seats in Parliament but contin-

ued a campaign of terror that finally pushed King Carol II into declaring a royal dictatorship in 1938. The Guard stepped up its terrorist attacks, and Carol ordered the arrest of its leader, Corneliu Codreanu, and soon afterwards had him murdered. This infuriated Codreanu's patron, Adolf Hitler, who became determined to punish Carol and Romania.

When Germany threatened war with Czechoslovakia in 1938, Romania made clear its intention to fight alongside the Czechs. The failure of Britain and France to do the same pushed Romania toward Germany. German firms began to dominate the Romanian economy just as Britain and France refused to formally guarantee Romania's territory. Germany's share of Romania's imports rose from 28 percent in 1937 to 51 percent in 1940 and finally to 88 percent in 1941. Germany in turn depended on Romanian oil to power its panzers. However, Romanian production of this finite resource peaked in 1936 and declined steadily afterwards despite attempts to boost output.

Having lost faith in the West, Carol refused to honor his treaty obligation to fight alongside Poland in September, 1939. Without Western aid, Carol could do nothing to prevent the Soviet Union from occupying Bessarabia and Bukovina in June 1940. A month later, the Germans forced Carol to accept Hungarian occupation of Transylvania. In September, the Germans backed Bulgarian claims to southern Dobruja. In all, Romania lost 6.3 million inhabitants and had to accept a massive German military presence as well.

The humiliation unraveled the royal dictatorship. Carol abdicated in favor of his son Mihai, while the Pro-Western General Ion Antonescu became *Conducator*, or military dictator. Pro-Western in his outlook, Antonescu had commanded a cavalry regiment in World War I. Knowledgeable Romanian officers credited his staff work with their handful of 1917 victories over the Germans and the successful 1919 war with the Hungarian Communists. Antonescu commanded the cavalry school and twice led the staff college and was considered the most capable Romanian general. A firm nationalist, Antonescu spent the summer of 1940 in prison for his heated protests over Romania's failure to resist the loss of Bessarabia and Transylvania.

In November, the Iron Guard tried to overthrow Antonescu, who responded with savage repression that broke the fascists' political power. Though the Germans did nothing to help their ideological fellow travelers, they gave sanctuary to leading members including Codreanu's successor, Horia Sima, and Artur Phelps, an ethnic German who commanded Romania's crack mountain troops. Sima and Phelps became high-ranking officers in the German Waffen SS, and their presence in Germany maintained a ready-made puppet regime should Antonescu fail to carry out Hitler's directives. Despite having destroyed the Iron Guard, Antonescu had become dependent on German eco-

conomic and military power. For better or worse, Romania's future was tied to Germany.

Across the Prut—June 1941

Though Romania did not formally participate in planning for Operation Barbarossa, obvious German preparations for war with the Soviet Union led Antonescu to take his own steps in that direction. In January, 1941, some Romanian divisions began mobilizing, and more followed in April and May. As German divisions began moving into Romania, Romanian intelligence informed Antonescu that the Soviets were preparing for a German attack.

Formal German notification came in early June, and Antonescu gave Hitler Romania's full support for the attack during a meeting on the 11th and 12th. However, he did not extend such support beyond Romania's pre-war boundaries, limiting it to the recovery of Bukovina and Bessarabia. To avoid tipping off the Soviets, Romania delayed formal mobilization until after the scheduled 22 June attack but heightened other preparations. To emphasize Romanian participation, the Germans formed "Army Group Antonescu" on the southern end of the front, with the *Conducator* in charge but subordinate to Army Group South. Antonescu led three armies, the German Eleventh and the Romanian Third and Fourth. The Romanian 1st Army also mobilized, but to stand guard against a Hungarian sneak attack. In hopes that German attacks further north would draw off some of the half-million Soviet troops facing Romania, the Romanian general offensive was scheduled for the night of 2-3 July, though some local operations (like Emilian's) would begin immediately.

Antonescu broadcast a speech declaring a "holy war" against the Soviet Union as soon as the German attack began, calling on his soldiers to destroy Bolshevism, liberate their oppressed brethren, and "make sacrifices worthy of Stephen the Great." The first Romanian offensive began 10 days later, with four main axes of advance.

In the north, the Romanian Third Army had three mountain brigades, one infantry division and Emilian's 8th Cavalry Brigade. It was assigned to clear the Soviet occupation forces from Bukovina. In northern Bessarabia, two German corps from 11th Army would cross the Prut with Mogilev in Ukraine as their ultimate goal. The Romanian Cavalry Corps of two brigades (5th and 6th) would accompany them into Bessarabia along with the Royal Armored Division. Four Romanian infantry divisions would also provide support.

The Romanian Fourth Army had Bessarabia's capital of Kishinev (Chisinau in Romanian) as its target. One German corps from 11th Army would provide support on its northern flank, while the Romanians established two bridgeheads over the Prut as the first steps toward drives on Kishinev and Tighina, an important bridgehead over the Dnestr River on the border between Bessarabia and the Ukraine.

Two Soviet armies faced the Romanians, the 18th on the northern part of the front and the 9th on the south.

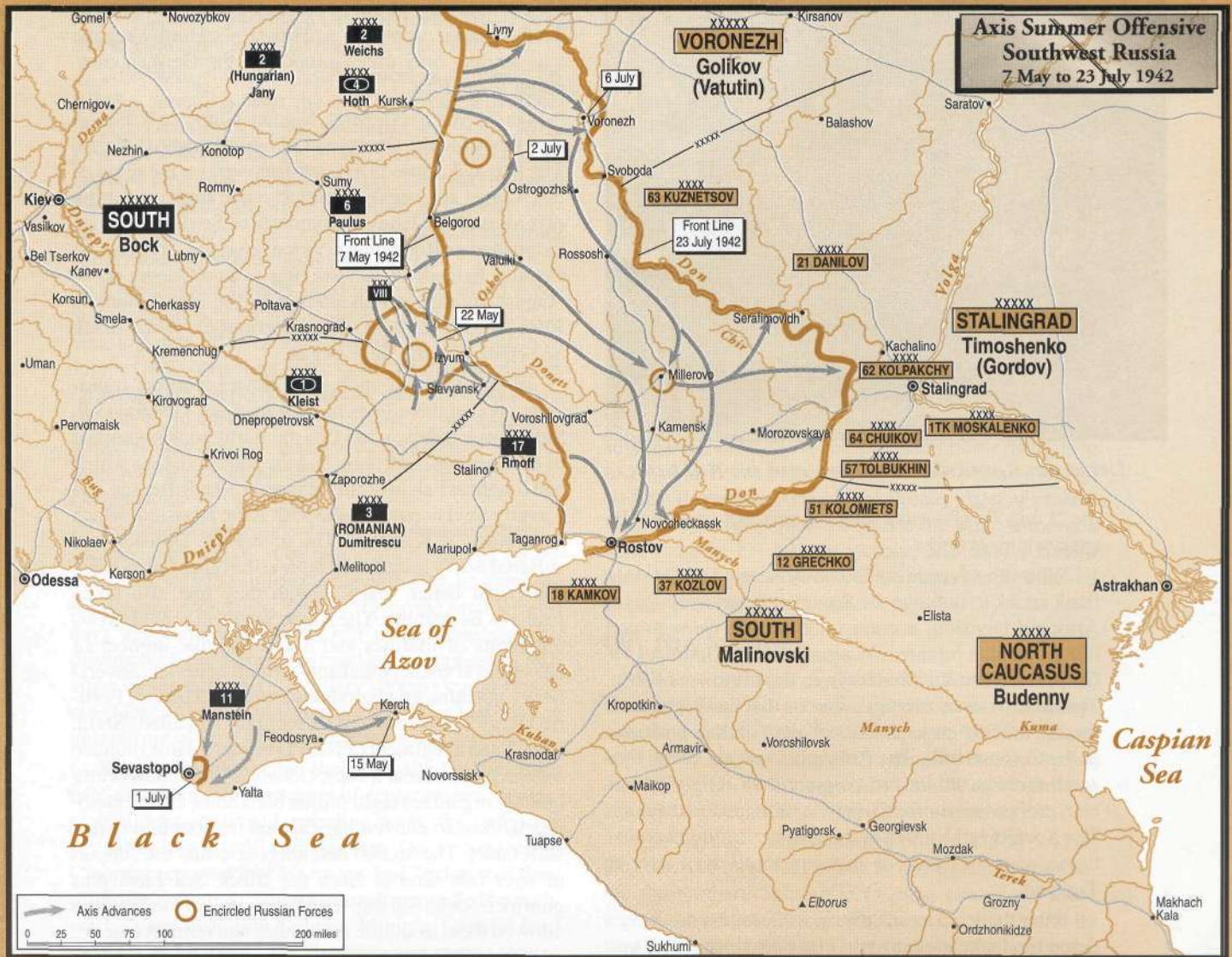
Collectively they outnumbered the Romanians, and they had far greater tank and artillery support than Antonescu's troops. The Soviets numbered 13 rifle, four tank, two mechanized, and three cavalry divisions. The 1940 Soviet reorganization of its mobile forces into divisions had been missed by Romanian intelligence (though Romanian assessment were usually more accurate than the ridiculous assertions of the German Foreign Armies East department), and the tank and mechanized units, while correctly located on Romanian situation maps, were listed as much smaller brigades.

While the Romanian Third and German Eleventh Armies made easy progress in the first days of the offensive, the Soviet Ninth Army chose to confront Fourth Army right on the riverbank. With the Prut in flood, the high waters and stout resistance made for slow going. The raging Prut also kept Romania's powerful flotilla of river monitors from offering fire support. The Romanian V Corps crossed the Prut at Falcu with the Royal Guard and the well-equipped 21st Infantry Division, which immediately came under attack by three Soviet rifle divisions. The Romanians could not clear a bridgehead free of Soviet artillery fire, and both divisions suffered severe casualties while pinned down along the river bank. Unwilling to yield even an inch of Bessarabian soil, Romanian generals continued to fling men across the river and hundreds of Romanian soldiers died for no purpose.

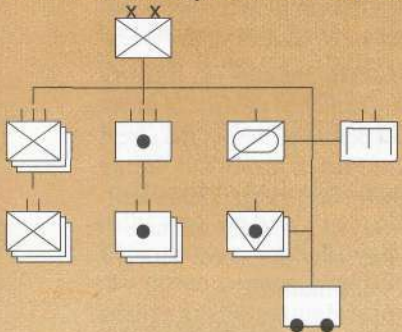
Farther north the III Corps had better luck crossing the river, and began to advance into the highlands known as the Cornesti Massif. Antonescu therefore re-directed the reserves meant for Falcu into this advance, and 7th Cavalry Brigade and the crack Frontier Division joined the advance, along with a regiment of infantry support tanks. Once in the high ground, however, Soviet resistance stiffened, especially from the II Cavalry Corps. The Soviet horsemen counterattacked on 8 July, smashing the badly trained and poorly equipped Romanian 35th Reserve Division.

While 35th Reserve could not stand up to the Soviets, the Frontier Division was composed of long-service professional border guards. An elite formation, its infantry outfought the Soviets and made some headway into the Cornesti Massif. However, its artillery regiments had only World War I-era 75mm field guns and the batteries relied on easily-disrupted telephone lines for communications with the front rather than radios. Soviet 122mm and 152mm batteries badly outranged these guns, and flung a much heavier weight of metal. The short range of the 75mm guns (4,000 meters at best) meant that any effective infantry attack soon outpaced the range of artillery support and bogged down.

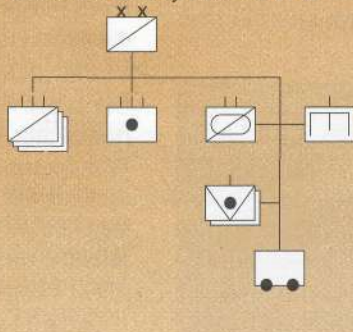
Other Romanian divisions had some more effective batteries, mostly Czech-made 100mm howitzers, but the massive Soviet superiority in artillery greatly hampered the Romanian divisions. The single battalion of modern heavy artillery available to III Corps—truck-drawn French-made 155mm rifles, the model known to the Americans as



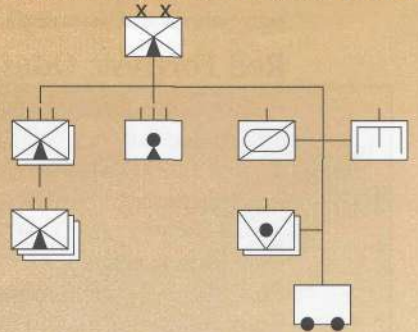
Rumanian Infantry Division 1941-42



Rumanian Cavalry Division 1942



Rumanian Mountain Division 1942-44





Drive on: Romanian tankers and an R-2 tank.

the "Long Tom"—gave vital support, but could not be everywhere at once.

With the advance stalled, Antonescu decided on a flank attack to unhinge the Soviet defenses. The Royal Armored Division, accompanied by one German and one Romanian infantry division from the German LIV Corps, attacked the Soviets from the north on 14 July. The two Soviet cavalry divisions on that flank retreated, forcing the Soviets to abandon the rest of their positions in the Cornesti hills. The Romanian tankers, aided by a small German motorized column, then fought a brief battle for possession of the provincial capital on 16 July. The Soviets fell back over the Dnestr, fighting another battle with the armored division three days later at Tighana.

After the Romanian victory at Kishinev, the Soviet defenders in the southern part of the province pulled out, relaxing the pressure on the III Corps, still packed into the bridgehead at Falcui. At a cost of almost 22,000 casualties, Romania had regained the territories lost to the Soviet Union the previous year and achieved its war aims. For most Romanians, including the bulk of the army, the war was over and they had won.

Red Fortress: Odessa

Romanian artillerymen aided the German assault across the Dnestr from Bessarabia into the Ukraine during 23-27 July, but neither the Germans nor the Romanians had envisioned a Romanian invasion of the Soviet Union proper. This changed as operations proved that German intelligence estimates of Soviet military capabilities had been wildly inaccurate. On 27 July the Germans formally requested that the Romanians capture Odessa, a major commercial port about 40 kilometers from the border with Bessarabia.

In response, Antonescu pledged Romania's unconditional cooperation in the war against the Soviet Union. Though Romania had achieved its goals, the recaptured territories could not be held if the Soviets defeated the Germans. In addition, Antonescu hoped that loyalty to

his German ally would be rewarded with the return of Transylvania, especially as Hungary's Horthy regime was lending only token support to the German campaign in the East.

On 3 August General Nicolai Ciuperca's Fourth Army crossed the Dnestr and advanced toward Odessa. The Royal Armored Division followed on the night of 5-6 August and began a rapid advance aimed at cutting off Odessa from land communication. Soviet resistance toughened as Romanian armor neared the city. The 1st Cavalry Brigade closed the ring around Odessa on 14 August, fighting off an attempt by the 30th Mountain Rifle Division to hold open a corridor along the Black Sea coast, and the siege began.

Within the city, mobilized Soviet workers frantically erected three lines of fortifications. General G.P. Safronov's Independent Coastal Army took command of the garrison. Safronov had the four divisions which had fought at Falcui (25th, 51st and 150th Rifle, and 2nd Cavalry Divisions) plus the 95th Rifle Division, which had fought at Kishinev. The 95th Rifle Division had suffered heavy losses at Kishinev; the other four were in somewhat better shape though they had also taken losses in Bessarabia. The Black Sea Fleet provided two regiments of marines and a considerable number of heavy naval artillery and anti-aircraft batteries. Several heavy machine gun battalions from the Tiraspol Fortified Region (the southern sector of the so-called "Stalin Line") and a regiment of NKVD border guards rounded out the professional troops. Odessa's Communist Party quickly organized eight militia battalions, and its factories worked to convert agricultural tractors into makeshift tanks. The 86,000 defenders also had the support of over 600 aircraft from the Black Sea Fleet plus gunfire from its warships. Soviet control of the sea lanes allowed them to shuttle in supplies and reinforcements.

Fourth Army opened the siege with eight infantry divisions (including several badly depleted units from Falcui and Kishinev), the armored division, and two cavalry brigades. The Royal Romanian Air Force (FARR) could only supply about 350 combat aircraft for the siege, and with little German help forthcoming, the attackers usually did not have control of the skies.

On 12 August the Romanian 3rd and 7th Infantry Divisions, aided by 12 tanks, launched the first of many frontal attacks on the Soviet defenses. Using the Great War doctrine taught by their French instructors during the interwar period, with their short-range 75mm artillery unable to silence the Soviet guns, the Romanian infantry died in waves. The two divisions suffered 3,000 casualties in a matter of minutes.

Attacks continued over the next several days, and made several penetrations of the Soviet lines thanks purely to the overextended state of the defenders and the insane bravery of the Romanian infantry. On the morning of the 17th, the Soviet attempted an attack of their own, but could make no progress in the face of 7th Infantry Division's fierce resistance. A prompt counter-attack by the Frontier Division crushed the attacking

force, and the Royal Guard Division took advantage of Soviet confusion to seize Odessa's water reservoir.

Attempting to follow up this success, Ciuperca ordered a general assault the next day. The Royal Armored Division's tanks shattered the 95th Rifle Division's front, but the infantry from 3rd and 7th Infantry Divisions did not keep up. The tankers found themselves alone and lost 35 vehicles. Repeatedly during the campaign, a lack of training in infantry-armor cooperation foiled Romanian efforts.

Ciuperca desperately needed supplies of all types and replacements for his depleted battalions, but German logistics officers monopolized all road traffic to support their own units to the north. Romanian officers railed against the petty tyranny of their arrogant allies. On the night of the 18th, Antonescu complained to Hitler, demanding professional behavior from the German rear-area commanders and modern artillery to challenge the Soviet batteries.

Local attacks continued as the Romanians prepared another mass assault. German artillery arrived on the 23rd, and, with the ability to silence the Soviet guns, the Romanians found new energy. Over the next several days the Romanian attacks had much more success, driving back the Soviet lines and inflicting heavy casualties on the defenders. Artillery spotters could finally see Odessa's harbor and interfere with what had been an uninterrupted flow of reinforcements and supplies.

Despite this threat, the Soviets rushed in two fresh rifle divisions and thousands of replacements. Romanian attacks continued, grinding away the defensive perimeter at a fearful cost in lives. On 11 September Ciuperca reported that his troops had "exhausted their offensive potential," and Antonescu responded by sacking him and installing Defense Minister General Iosif Iacobici in his place. He also obtained more German artillery plus some assault pioneers and a regiment of infantry.

Fresh assaults began the next day, spearheaded by the Germans. Despite better artillery support than any Romanian operation had received, the Germans fell back with heavy losses, sparking pointed exchanges between Romanian staffers and patronizing German liaison officers. Romanian attacks continued to make some headway, while the Soviets planned an offensive of their own.

Hoping to drive the Romanian artillery out of range of the port, the Soviets attacked in the eastern sector on 22 September, sending two divisions by land, dropping two dozen paratroopers behind Romanian lines, and landing a fresh marine brigade straight from Sevastopol. The Soviets achieved surprise and drove the 15th Infantry Division back almost 10 kilometers.

The Soviet attack convinced Antonescu that his troops needed rest and above all a real commitment of German artillery and logistic support. Anti-German resentment also neared dangerous levels in the Romanian officer corps, who wanted to see the haughty Wehrmacht bear some of the heavy losses. Accord-

ingly, a German infantry corps was detached to join the siege, and heavy artillery called in from all over Europe. A renewed assault was postponed until 20 October.

Not knowing of this respite, the Soviets had already decided to abandon Odessa. A series of local attacks helped cover the evacuation, with the last convoy leaving on the night of 15-16 October. Though Soviet propagandists made much of their skillful evacuation (as did postwar Germanophile writers), the Romanians captured 7,000 prisoners and large amounts of weapons and equipment abandoned in the port area.

Odessa cost the Romanians almost 100,000 casualties, while the Soviets suffered about 60,000. Five Romanian divisions, including the two best formations (Royal Guard and Frontier) were shattered and did not see action again until 1944. Seven others had suffered severe losses and had to return to their home districts to recover. Officer casualties had been especially heavy, and the Romanian Army were already short of professional junior officers at the start of the war. Antonescu took pride in his bloody victory, and Italy's Benito Mussolini raged that the *Conducator* had achieved greater prestige than *Il Duce*.

On the Steppes

While the Fourth Army bled in front of Odessa, General Mihai Racovita's Cavalry Corps rode alongside the German 11th Army deep into Ukraine. Eleventh Army also included the crack Mountain Corps of three brigades, but it lagged behind the swift-moving advance and did not see significant action at first.

The Cavalry Corps had three brigades (5th, 6th and 8th), each of three regiments. In these brigades, unlike the three others fighting at Odessa, one of the three regiments was motorized. Racovita's corps fought its way across the Dnestr on 17 July and with the help of the mountain troops broke through the Stalin Line after a bitter fight. The Soviet 169th Rifle Division and the garrison troops assigned to the fortifications put up tremendous resistance, and the lightweight 75mm artillery of the cavalry and mountain troops did not even dent the concrete and steel bunkers. One by one, the



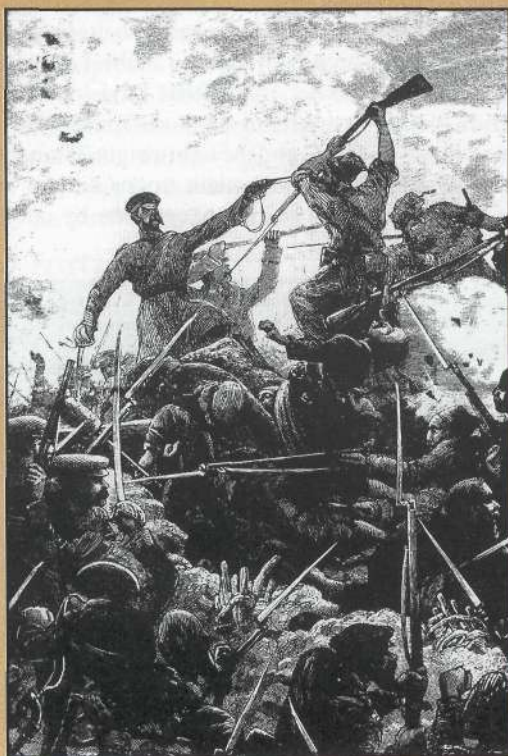
Winter counterattack: Soviets in the snows.

Romania's War Machine

Romania entered World War II with a militaristic legacy, thanks to its first modern king. Young men underwent several years of "pre-military" training before their actual induction. While Romania, like most European nations, enforced universal conscription, national spirit was very high, and volunteers manned all cavalry, horse artillery, and motorcycle units. Unlike her major European allies, Romania had no political troops like the Waffen SS or the Italian Blackshirts.

Thanks to her oil income, Romania could afford to make large arms purchases despite her otherwise backward agricultural economy. But shorn of military and economic ties to the Allies, only Germany (and by extension, German-occupied Czechoslovakia) could provide modern arms. The Germans were reluctant to sell useful equipment, and most Romanian purchases were of obsolete or captured weaponry. A classic "dependent state," Romania could do little to upgrade her military power despite both the will and the money to do so.

During the interwar period Romania tried to industrialize, but the Great Depression ruined these plans. Romanian factories made aircraft and some small arms, but could not expand without machine tools available only in Germany and later in German-occupied Europe. Between the demands of the German armed forces and Germany's desire to appease Romania's Hungarian rival, Romania received few of these vital tools. Romanian industry did a remarkable job turning out mortars and eventually artillery pieces, including an excellent 75mm anti-tank gun.



As the war went on, the Romanian Army called up huge numbers of young men, crippling agriculture and industry. Factories found it difficult to staff even one shift; only the Resita works (an artillery manufacturer) managed 24-hour production. Romania's nationalist outlook did not allow for the German solution of impressing unwilling citizens of occupied territory as slave laborers.

Nazi ideology's irrational nature, its fascist-derived links to German big business, and Adolf Hitler's dislike for the Romanians arising from the Codreanu murder, all combined to deprive Romania of useful German economic cooperation. Seeking to protect post-war business advantages, the German delayed supplying their allies with modern designs for tanks, aircraft and engines or the tools to build them. German efforts to keep Romania an undeveloped marketplace and supplier of oil even extended to interfering with Romanian purchases of machine tools in neutral Sweden and Switzerland. Romanian leaders, fighting a nationalist war, could not understand the seemingly insane actions of their German allies, who were fighting an ideological war.

Romanian military expansion in 1939 yielded an army of 23 infantry divisions (including one Royal Guard and one Frontier Guard), one armored division, six cavalry brigades, and four mountain brigades. After the territorial losses of 1940, the army disbanded three infantry divisions but moved the recruiting centers of the others to the remaining national territory, further increasing the manpower burden on Romanian society.

With Germany replacing France as Romania's military mentor, the Romanian Army (*Armata Romana*) adopted a more modern three-regiment organization for its infantry divisions. Abandoning the old four-regiment "square" alignment allowed Romania to keep most of her divisions intact despite the loss of fully one-third of her 1939 population. German troops trained three of the Romanian infantry divisions and the armored division in 1940 and 1941. The infantry divisions each had two small artillery regiments, one with archaic French-made 75mm field guns and the other with a varying collection of Czech-made 100mm and 105mm howitzers. Some divisions fielded only the lightweight guns.

Despite her booming oil industry, Romania could not provide her army with motorized transport and the Germans would not sell any sizable number of trucks. Romanian divisions relied on horse-drawn transport to an even greater extent than the Germans, slowing them greatly in advances or retreats and making quick deployments very difficult.

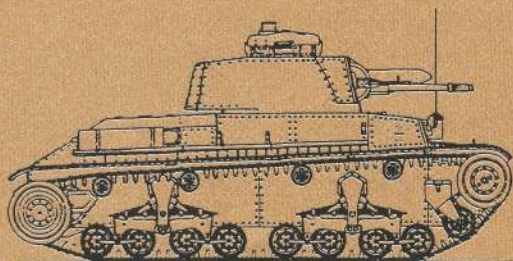
Each cavalry brigade had three small regiments plus a small regiment of 75mm artillery. The cavalry regiments were known as either *Rosiori* ("Red Hussars") or

Calarasi ("Black Hussars"). The mountain brigades had four battalions in peacetime, expanded to six on mobilization, plus a dozen 75mm mountain guns and eight 100mm howitzers. In 1942 the *Armata Romana* strengthened the cavalry and mountain brigades with added artillery, mortars and automatic weapons. As they were already the size of the Italian and Hungarian divisions fighting on the Eastern Front, the brigades were re-designated as divisions but kept their old numbers.

Romanian troops carried small arms not far inferior to those of their German allies. First-line units had the Czech-made ZB24 rifle, a licensed version of the German Mauser, and second-line units had leftover Austrian, French, and Russian rifles re-chambered to take the Mauser's 7.92mm round. Romanian industry and Czech purchases provided ZB30 light machine guns in sufficient quantity, but the Germans refused to provide the machine tools to make the Czech ZB37 heavy machine gun. Later in the war, Romania produced a very good locally-designed submachine gun.

Romania's armored division had two tank regiments, one of Czech-made R-2s (very similar to the LT-35, used by the Germans as the PzKfw 35t) and the other with French-made R-35s. Romania tried repeatedly to upgrade her armored forces. A plan to build a tank factory to assemble R-35s fell apart when the French withheld machine tools for their own armament program. Pleased with the R-2, the *Armata Romana* placed a second order for three more regiments' worth, allowing the formation of another armored division. The Germans canceled this order when they took over Czechoslovakia and refused Romania a license to build the R-2 or the Czech T-21, an improved R-2 with a 47mm gun (but did allow Hungary to produce the tank as the "Turan").

The *Armata Romana* recognized the need for an anti-tank gun, and each division had a company of 12 French-, Austrian- or Italian-made 47mm pieces. Romanian factories also made this weapon. The Germans also sold Romania several hundred ex-Polish 37mm anti-tank guns. Judging by German experience in France, the 47mm gun should have been perfectly adequate, and indeed somewhat superior to the German 37mm standard weapon. Instead, the Romanians would soon face Soviet T-34 and KV tanks that shrugged off hits by these "door knockers."



Romanians took these bunkers, eventually knocking out 182 Soviet fortifications. The mounted pioneer squadrons of the brigades had few flamethrowers, the only really effective weapon in this sort of attack, and instead the troopers relied on grenades and bayonets.

In one famous incident, pre-war rugby star Niku Tanoviceanu, a reservist lieutenant in the 8th Cavalry Brigade, seized a flamethrower from a reluctant pioneer private, slung a sack of grenades over his shoulder and went on a rampage. While the amazed troopers looked on, Tanoviceanu destroyed five bunkers in a matter of minutes, incinerating hundreds of Soviets and setting off massive secondary explosions. Tanoviceanu walked back to his platoon unscathed, cast aside the empty flamethrower and called for his horse, "Satan." Tanoviceanu was one of only 25 soldiers to be awarded the "Order of Michael the Brave," Romania's highest medal for valor. His brigade commander promptly put him in charge of the unit's engineer company.

To exploit the breakthrough, Racovita formed a mechanized detachment led by Colonel Radu Korne, with Korne's 6th Motorized Rosiori Regiment, three mechanized squadrons, some motorized engineers and artillery, and a small detachment of German tanks. Though an Iron Guard supporter who had done prison time shortly before the war, Korne was the *Armata Romana*'s leading proponent of mechanized warfare. For the next month, Korne proved his expertise as his detachment moved rapidly into the Soviet rear areas, helping to surround the Red Twelfth Army in the Uman Pocket and almost coming to blows with the Hungarian contingent. The detachment then took up positions on the Dnepr River and waited for the rest of Eleventh Army to catch up.

Romanian troops had now entered enemy territory, something few of them expected when the war began. "Looking back at the heights on the Bessarabian bank," Emilian wrote of the Dnestr crossing, "it seemed that we now trod on foreign soil." The enthusiasm of the early days, liberating occupied territory, now gave way to a sense of foreboding, relieved somewhat by a string of victories.

Romanian engineers built about one-third of the bridge over the Dnepr at Berislav, the longest ever constructed under enemy fire. On 17 September two Romanian corps crossed the bridge and moved onto the Nogai Steppe, the open plains between the Dnepr and the Sea of Azov. While the rest of the 11th Army broke into the Crimean Peninsula, the Romanian corps and a pair of German infantry divisions would protect its flank.

Soviet troops counterattacked on 26 September, inflicting heavy losses on 4th Mountain Brigade. At Jakimivka along the Sea of Azov, the Soviets struck the Cavalry Corps with four rifle divisions, a depleted tank division and naval support. Though the Soviet formations had fought hard in Bessarabia, they had lost much of their pre-war trained manpower and replaced their losses with raw conscripts. As a result they relied on mass attacks, which the Romanians repulsed while inflicting horrendous casualties.

Fifth Cavalry Brigade suffered a serious breakthrough despite the primitive Soviet tactics. Korne's mobile force, serving as the Cavalry Corps' fire brigade, sealed the breach with a counterattack but could not restore the Romanian lines. Help arrived in the form of the German 1st SS Motorized Division, a unit lavishly equipped with vehicles and modern weapons. With the help of this unit the Romanians went over to the offensive. In a one-week campaign the Romanians captured Melitopol and surrounded the remnants of the Soviet 9th and 18th Armies. They and the Germans took almost 70,000 prisoners. Among them, Emilian and his comrades found to their surprise and amusement, was a Red Army chaplain. Suspecting they had found a commissar (an indication that Romanian units were following the notorious German *kommissarbefehl* ordering the murder of such prisoners), the Romanian troopers made him perform an Orthodox mass for the piles of nearby dead. Satisfied, they secured a clerical collar and mantle for him and sent him to minister to the other Soviet prisoners.

Avramescu in the Crimea

In late September 1941, the German 11th Army and its new commander, General Erich von Manstein, prepared to invade the Crimean Peninsula. The Crimea, which juts into the Black Sea south of the Ukraine, held the important Soviet naval base of Sevastopol and its airfields which threatened the southern flank of the advancing Axis armies. Manstein had only six infantry divisions and personally appealed to Antonescu for help. The *Conducator* offered General Georghe Avramescu's Mountain Corps of one cavalry and two mountain brigades plus Korne's motorized detachment. Antonescu specified that they be used only for coastal defense and rear-area security. When the Germans broke through the Soviet defenses into the peninsula, the Romanians followed behind, mopping up isolated and demoralized Soviet units.

Despite Manstein's promise, 1st Mountain Brigade took part in the first full-scale attack on the fortress of Sevastopol in mid-December. The mountain troops fought well and captured several Soviet positions. But the attack had to be called off when Soviet troops landed on the Kerch Peninsula on the eastern end of the Crimea. The German 46th Infantry Division, a unit recruited among ethnic Germans of the Sudetenland, panicked and fled, abandoning much of its artillery and other heavy equipment. Fourth Mountain Brigade force-marched 120 kilometers in 48 hours to rescue the Germans, but it and 8th Cavalry Brigade could not destroy the Soviet beachhead. Showing the grace typical of German commanders, Manstein blamed the Romanians for the 46th's collapse and interspersed German battalions with Romanian ones to "stiffen" their resistance. Emilian and his fellow junior officers traded bitter jokes about just who was stiffening whom.

At Manstein's request, Antonescu sent the 18th Infantry Division to help hold the Kerch Peninsula. In its first combat experience, the division suffered badly

and some of its troops panicked. In early April, again at Manstein's request, two more Romanian infantry divisions headed to the Crimea. Meanwhile the Romanian mountain and cavalry brigades received their upgrades to division status, greatly increasing their combat power.

With the Romanian reinforcements, Manstein launched an attack on the Kerch Peninsula in early May 1942. Eighth Cavalry Brigade and the Korne Detachment raced through a gap the Germans forced in the Soviet lines, taking over 30,000 prisoners. With the Soviet threat eliminated, 11th Army could return to the assault on Sevastopol. The fighting raged for almost a month, with the Mountain Corps in particular in the thick of it. The Romanian mountaineers took the fortified hill known as the "Sugar Loaf" from the 25th Rifle Division and 79th Marine Brigade. Fourth Mountain Division took Balaclava, while 1st Mountain Division captured the key batteries on Cape Fiolent. A final German assault cleared the last Soviet positions on 9 July.

Once again, the last-minute addition of Romanian troops played a decisive role in a successful Axis campaign. When the German high command could provide no reinforcements, again and again Manstein went to Antonescu for help. Though German divisions provided the striking power, without his Romanian allies Manstein could not have captured the Crimea.

Gateway to Asia-1942

As part of the Operation Blue offensive, the Romanian Cavalry Corps of three divisions launched a deep penetration strike on 5 August 1942. Starting from Rostov at the head of the Sea of Azov, the Romanian horsemen quickly occupied several ports along the coast. Inland, a motorized detachment drawn from several formations raced 100 kilometers in four days to seize the communications center of Krasnoarmeiska.

Fifth Cavalry Division and the motorized detachment then attacked units from the Soviet 216th Rifle Division along the Kuban River, securing a bridgehead and fending off a furious counterattack on the 13th. While the 5th Cavalry held the Kuban line, the other two divisions (6th and 9th Cavalry) attacked the Soviet-held port of Temryuk on the Sea of Azov.

Temryuk was the key to the Taman Peninsula, the land bridge jutting westwards from the Caucasus toward the Crimean Peninsula. Soviet marines from the Azov Flotilla held the town, fighting furiously for each house. With no reserves, the flotilla culled a reinforcement battalion from its gunboat crews and brought its vessels close in-shore to support the marines and the 40th Artillery Battalion fighting for the town.

To the south of Temryuk, the Romanian 6th Cavalry Division tried to force its way into the Taman Peninsula past the marshes held by the 103rd Infantry Brigade supported by the Azov Flotilla's famous armored train, "Death to the Hitlerite Invaders." While the Soviets fought with fanatic intensity, the Romanian horsemen also showed great enthusiasm in their efforts to conquer

the peninsula, as Catherine the Great had settled many ethnic Romanians there in the late 18th century. For a few brief weeks, some of the incentive of the Bessarabian campaign returned to the *Armata Romana*.

Slowly, the Romanians drove back the defenders of the peninsula. The Soviet flotilla's gunboats proved especially effective in the many streams and marshes, often giving point-blank support to the marines. But meanwhile the Romanian motorized detachment had unhinged the Soviet position to the east, breaking through the Soviet defenses outside Anapa. The Romanians captured two batteries of six-inch coastal artillery on the heights over the strategic port, which they then turned on its defenders. With the land connection broken, the Soviet command decided to evacuate the isolated peninsula.

Romanian advances caused Taman's Soviet defenders to weaken their coastal defenses, moving troops to the front to try to block the cavalry attacks. Exploiting this, the Romanian Third Army planned the largest amphibious assault undertaken by the European Axis powers during World War II, known as Operation Blücher II. Using a large number of ferries built at the occupied port of Nikolayev in the Ukraine, the German and Romanian navies carried the German 46th Infantry Division and Romanian 3rd Mountain Division across the Kerch Strait to land on the peninsula. The assault parties hit the beaches on 1 September, landing on the northern and western sides of the peninsula. The Romanian 19th Infantry Division later crossed as well. Feroocious air battles raged over the peninsula as the German, Romanian, and Soviet air forces struggled to cover their own naval forces and attack enemy convoys.

A squadron of Soviet motor torpedo boats (known as "torpedo cutters" in Soviet naval parlance) managed to break through the protective cordon and attack one of the troop convoys. However, their torpedoes were set to attack standard merchant or warships and passed harmlessly under the flat-bottomed, shallow-draft ferries.

One day after the Romanian and German landings began, the Soviets began their withdrawal over the beaches on the southern shore of the peninsula. The marines fought furious delaying actions, and the coastal artillery gunners resisted until their batteries were overrun. The Azov Flotilla and the merchant shipping it had gathered from Azov ports exited the Kerch Strait only after the Axis landings began and suffered terrible losses from Axis air and artillery attacks and from German and Italian motor torpedo boats.

Torpedo boats and minesweepers from the Soviet Black Sea Fleet plus a number of requisitioned fishing boats carried the troops off the beaches, while the 305th Naval Infantry Battalion fought to hold off the advancing Romanian 6th Cavalry Division. In all 5,500 Soviet troops, most of them Azov Flotilla marines, escaped the Taman Peninsula. After landing in Novorossisk they formed four infantry battalions which the Soviets immediately threw into the fight for that port city. The Romanians reported taking just over 1,000 prisoners.

While 6th Cavalry Division mopped up the peninsula, 5th Cavalry joined the attack on Novorossisk. All three cavalry divisions then advanced into the foothills of the Caucasus range before the campaign came to a close. Fifth Cavalry Division went to Stalingrad, while the other two formations helped hold the front in the Caucasus.

Romania on the Offensive: Conclusions

Post-war autobiographies of German generals often shifted the blame for their own failures in the East onto their Romanian allies. This was not so different from the procedure a generation earlier, when the Austrians and Turks were labeled as hapless incompetents despite their very real battlefield successes. In the Romanian case, however, the post-war Communist regimes of Dej and Ceausescu refused to even admit that Romania had fought for the fascist cause. Historians had no access to Romanian veterans or records, and the accounts of the German generals and their apologists often stood unchallenged. Some historians even picked up the German spelling of "Rumania," emphasizing the German outlook.

Antonescu took Romania into Operation Barbarossa for reasons of nationalism rather than ideology. This meant that once Bessarabia had been secured, Romanians had no reason to fight. Romanian units lacked the pervasive Nazi ideology of the Wehrmacht. Romanian units did not have the cohesion brought by the political fanaticism of the Nazis and Soviets. By failing to buy into Hitler's twisted philosophy, Romanians did not receive "Aryan" status from the Nazis, and thus were fair game for racist charges of incompetence and cowardice. As the Romanians were not "Hitlerites," despite Soviet propaganda to the contrary, they also suffered from Hitler's vendetta against King Carol.

It appears that no one on the Axis side intended Romanian troops to do much fighting after the liberation of Bessarabia. Even as Soviet armies fell back in disarray, bitter resistance had the Germans desperate for help. And so the *Armata Romana* began an offensive "on the fly," while lacking the planning, training, or equipment for such operations. Despite massive casualties, the Romanians captured Odessa and made possible the capture of Sevastopol and the Crimea, helped overrun the Ukraine, and penetrated deep into the Caucasus. Without Romanian aid, the Germans could not have penetrated nearly as far into the Soviet Union and their defeat would have come much sooner.

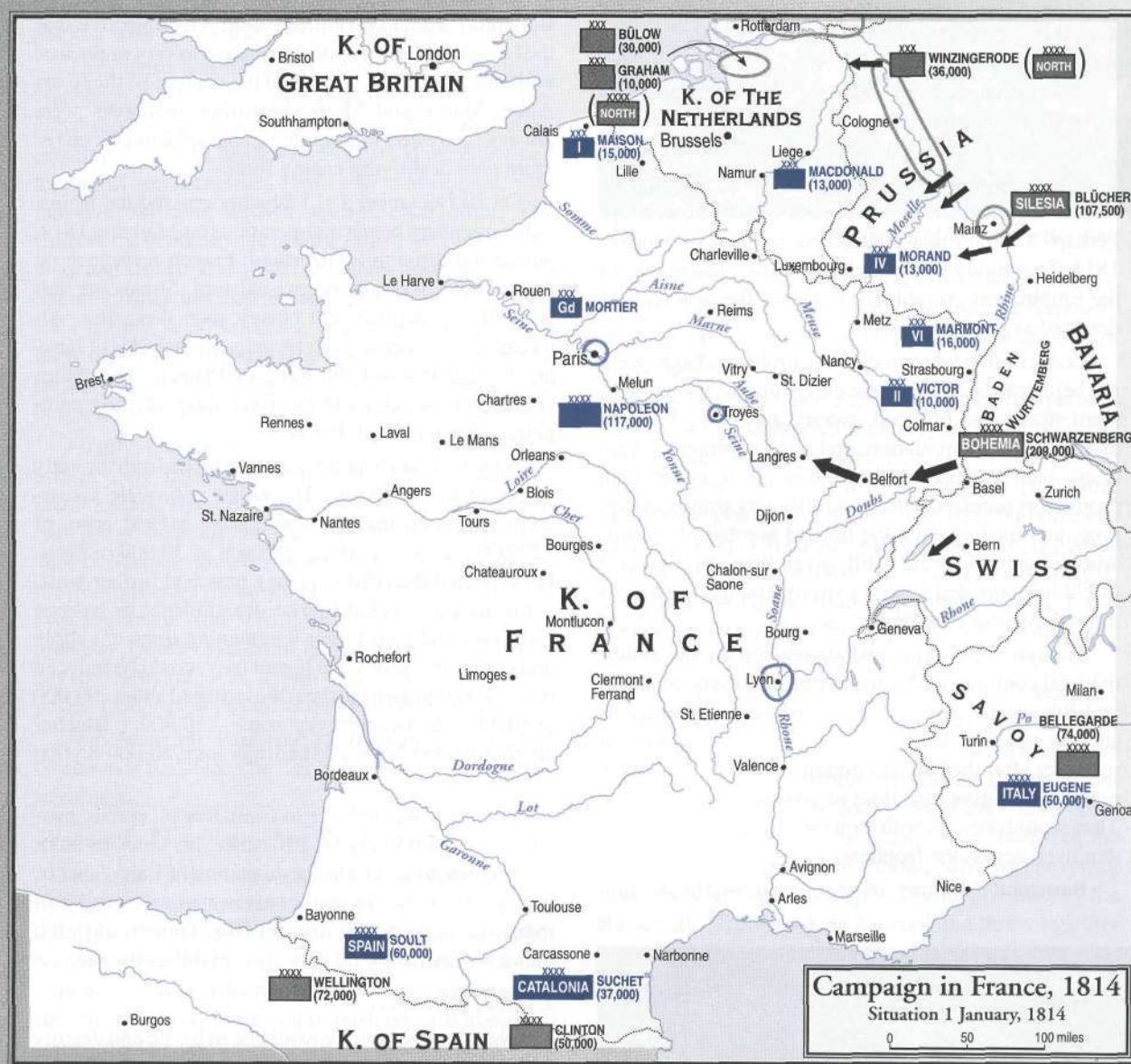
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Still fighting: Romanian officers in 1944.

1814: Napoleon Fights for Survival

by Coley E. Cowan



One of Napoleon's more interesting campaigns was, ironically enough, his 1814 defense of France. While Napoleon lost in the end, the campaign remains a fascinating study of an army fighting in the face of enemy numerical superiority.

As the year 1814 dawned, Napoleon Bonaparte's French Empire was on the verge of collapse. The massive losses of recent campaigns—1812's failed invasion of Russia, and the no less disastrous Saxon campaign of 1813—had depleted the once proud *Grande Armee*. At the end of 1813, the French army limped back to France with only 70,000 combatants. Another 40,000 stragglers, mostly unfit for action, trailed. The Emperor's domains, which had once stretched from the Tagus in Portugal to the Vistula in Poland (and, indeed, to Moscow itself, briefly), had shrunk to France's natural frontiers of the Rhine, the Pyrenees and Alps, plus whatever territory in northern Italy Napoleon's son-in-law Eugene Beauharnais still held.

Opening Moves

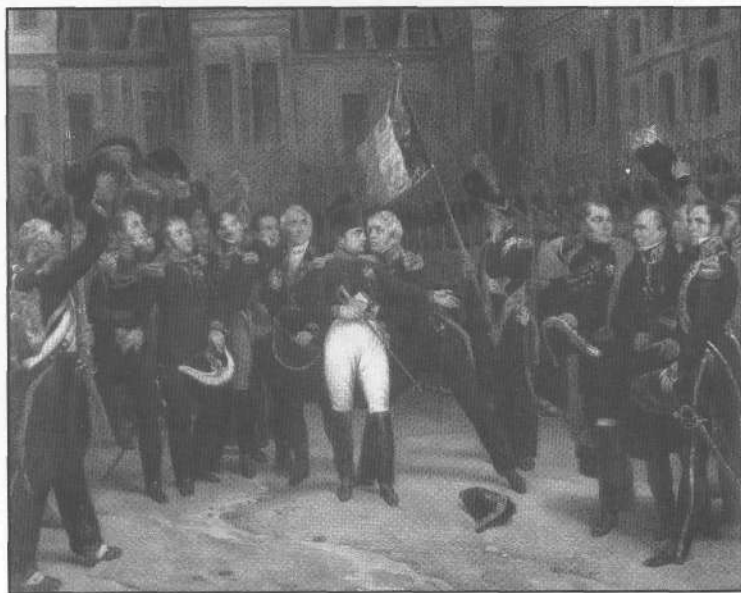
While the situation looked gloomy for France, Napoleon was far from giving up. He had created an army from scratch to fight in 1813. Perhaps he could do so again. As in 1813, he tapped every source of manpower available: 120,000 men from the classes of 1808-1814 were called up, as well as policemen, forest rangers, and customs officers—even 160,000 men were conscripted early from the class of 1815. Estimates of those recruited go as high as 936,000.

These are impressive numbers, but unfortunately for Napoleon, most of these recruits never showed up! Perhaps 125,000 materialized by the end of January 1814. The highly praised administrative machinery of the Empire was crumbling as most of the new recruits deserted as soon as possible.

Conscription was not the only problem. Taxes were not being paid, salaries were cut by up to 25%, government stocks had dropped, money was being hoarded and kept out of circulation, and army contractors were being paid in sinking fund bonds little better than promissory notes. Napoleon had difficulty arming, equipping, and feeding even the limited number of recruits who did come forward. Still, given time, the Emperor might have created an army strong enough to face his more numerous enemies.

Though there remained dissension in the multinational coalition of Austria, Prussia, Russia, Sweden, and Britain, they did agree to push on into France as soon as possible. They had seen Napoleon's powers of recovery after the Russian disaster in 1812. They were not about to give him time to produce another army. They would press on with their own tired forces. So they deployed across the frontiers.

Bernadotte's Army of the North would be split



Still popular, Napoleon is hailed by his officers.

between besieging Hamburg, watching the Danes, and advancing through the Low Countries. Blucher's 100,000 strong Army of Silesia would advance through the central regions of the Rhine. Schwarzenberg, still commanding the main Allied army (the Army of Bohemia) would be furthest south. His objective was the Langres plateau. Schwarzenberg was very impressed with this location. It contained the sources of the rivers Aube, Marne and Meuse. Austrian strategists were always interested in pursuing geographical objectives more than destroying enemy forces.

On 29 December 1813 Blucher crossed the Rhine. Schwarzenberg began his operations on 1 January 1814, advancing through Switzerland. French resistance on the frontiers was nearly non-existent. Strasbourg fell without any defense and Nancy soon thereafter. Although Schwarzenberg advanced cautiously, by 17 January he had reached the Langres Plateau. The Allies could now contemplate the final stage of their campaign—the march on Paris.

Napoleon had hoped for a better result from the early stages of the campaign. His rather optimistic assessment had been that he would have a field army of 120,000 men and a strong garrison of 30,000 in Paris. He expected the Allies, as they marched further westward, to leave behind large detachments to besiege fortresses and guard their lengthening lines of supply and communications. He hoped they would be reduced below 100,000 men but the Allies still had about 200,000 available—Schwarzenberg some 150,000, Blucher another 50,000. Napoleon had only some 80,000-85,000 men.

Napoleon would have to capitalize on enemy mistakes. He supposedly told Berthier, his chief-of-staff, "Come, we must refight the campaign of Italy;" that is, use rapid marches to exploit enemy mistakes and outmaneuver numerically stronger foes. Time would tell if the new version would be as successful as the old.

Plans, plans...

Napoleon's strategy would be to locate and destroy isolated Allied forces. There were three major factors affecting the campaign. The first was the nature of leadership. Fortunately for Napoleon, the personalities of the Allied commanders played right into his strategy. Blucher, ever the headstrong general, tended to advance precipitously. Schwarzenberg proceeded more cautiously. Their divergence would present Napoleon with most of his opportunities.

The second factor affecting the campaign was geography. Central France was divided by several rivers running south to north—the Seine, Aube, Marne and Aisne. Though it was winter, the rivers still were significant obstacles. Control of bridges would be important factors in the coming campaign for pursuit and escape.

Paris, the ultimate Allied objective, was the central geographical feature to consider. The city was also a

strategic factor. Paris is very much the key to France, population-wise, politically, and administratively. The city was both inadequately garrisoned and fortified. The Emperor had also left brother Joseph as the city's governor. But Joseph, though loyal, was not up to dealing with the capital's political intrigues.

Then there was the nature of the armies involved. Napoleon's 1809-13 campaigns are sometimes criticized (and frequently justly) as unsophisticated bludgeoning. The huge armies of this period were difficult to control and maneuver. Battles were attritional, with massive columns thrown against each other. The Emperor's subordinates would fail in secondary theaters and fronts. The 1814 campaign, however, would feature smaller, more mobile armies. Marmont's "corps," for example, was seldom above 12,000 troops, little more than an oversized division. A smaller army meant greater responsiveness to Napoleon's commands and hence the opportunity for sharp maneuvers.

Finally, there is the question of tactics. Both sides' armies were filled with conscripts. Neither side had much tactical finesse. Napoleon's army was younger, had fewer veterans, and was probably slightly less skilled. Morale, however, was excellent (at least among the troops present for duty). The Emperor's cavalry was also improved from 1813, and numbers were not a problem. Quality was a bit better as well. The Guard cavalry saw frequent action and veteran regiments pulled from Spain provided much needed punch.

Napoleon left Paris on 25 January and reached Chalons on the 26th. The campaign was about to begin in earnest.

Phase I: Brienne, La Rothiere

Napoleon's first intended victim was Blucher. Intelligence put the Prussians at St. Dizier, substantially ahead of Schwarzenberg who was at Bar-sur-Aube. Napoleon marched for St. Dizier. However, he found only a rearguard. Blucher had advanced westward to Brienne. Napoleon resolved to push on, still hoping to catch Blucher unawares. This might well have been successful since Blucher ignored the action at St. Dizier as merely an outpost affair. But on 29 January Cossacks brought Blucher some captured orders, warning him of Napoleon's advance. Blucher hastily concentrated some of his scattered troops and decided to stand and fight at Brienne.

On the French side, Napoleon had Victor's and Ney's corps, plus Grouchy's cavalry. Blucher had Russians mostly under Olsuffiev, Sacken, and Pahlen. The ensuing battle was a back and forth affair with the French finally taking the village after nightfall. Blucher had a narrow escape, hastily leaving a chateau courtyard by one gate as French troops broke through at the opposite end. The results of the action were inconclusive. The French lost perhaps 3,000 men, the Allies some 4,000. Blucher broke contact cleanly. Two intel-



The sharp end, opposing battle lines engage.

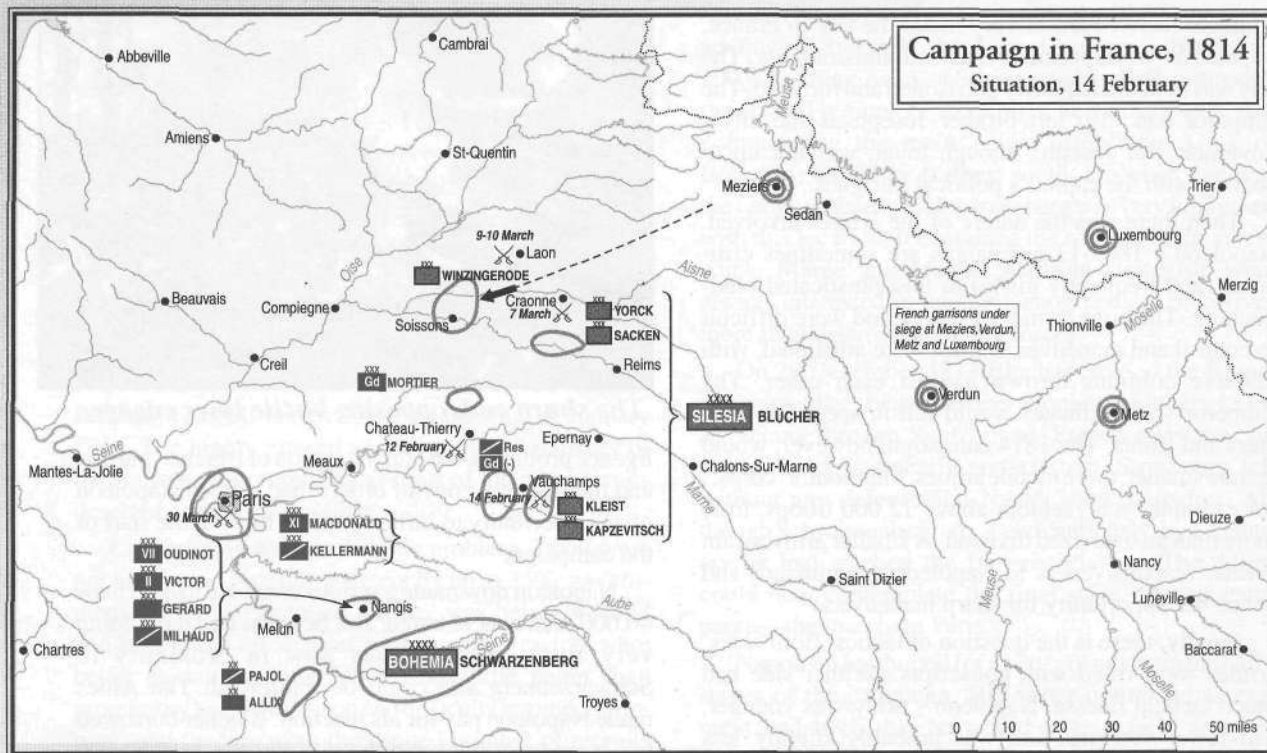
ligence problems, the faulty location of Blucher's army, and the loss of a copy of orders, had robbed Napoleon of an opportunity to inflict a telling blow at the start of the campaign.

Napoleon now made a serious error. He had perhaps 40,000 men concentrated. But he spent two days doing very little. Blucher was now in proximity to Schwarzenberg and could be reinforced. The Allies made Napoleon pay for his inaction. Blucher borrowed two corps from Schwarzenberg, giving him over 50,000 men. He also had a promise of support from Barclay de Tolly and from a Bavarian corps under Wrede. These reinforcements totaled 50,000 more men, though as it turned out not all of these saw action.

The Emperor was planning a retreat on 1 February but was interrupted by gunfire. Blucher's attack began at 1:00 p.m. Parts of the ensuing battle were fought in a snowstorm, making visibility a problem. Things did not go well at first—twenty-four guns of the Guard horse artillery were captured, the French lost control of the village of Rothiere, and Marmont, who was covering the French left, was in danger of being driven in by the Bavarians. Napoleon kept his cool and threw together some units for local counterattacks. Covered by growing darkness and the snowfall (two groups of Allied cavalry mistook each other for French troopers and clashed briefly) the French withdrew. Napoleon left behind 6,000 killed and wounded and 50 guns.

Although the Allies had suffered similar casualties, LaRothiere was a definite French setback. The Emperor was forced to withdraw, and his brief offensive was over. Given the French numerical inferiority Napoleon could not afford to trade casualties with the Allies. The loss of 9,000 men in three days was significant, about 20% of Napoleon's striking force. The Allies had lost 10,000 but could replace them more easily. Napoleon retreated to Troyes, losing several thousand more men to desertion as French morale plummeted. Napoleon was forced to wait upon events, and events would see a radical turn of affairs.

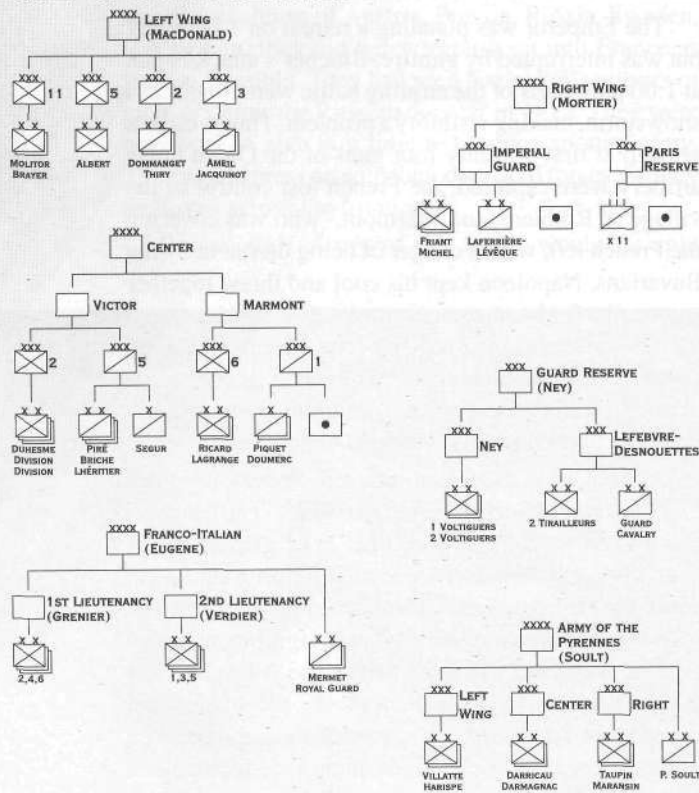
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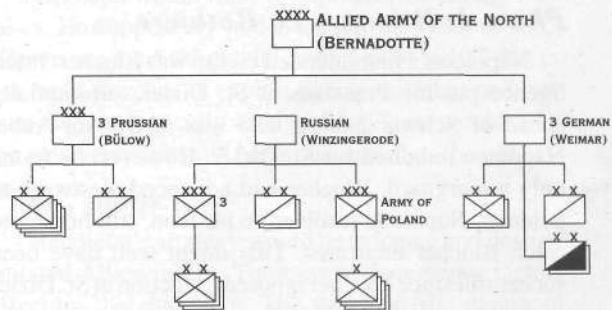
FRENCH ARMY, JANUARY 1814

COMMANDER IN CHIEF: NAPOLEON

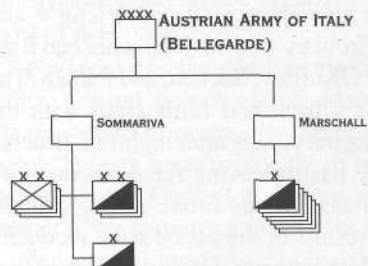
CHIEF OF STAFF: BERTHIER



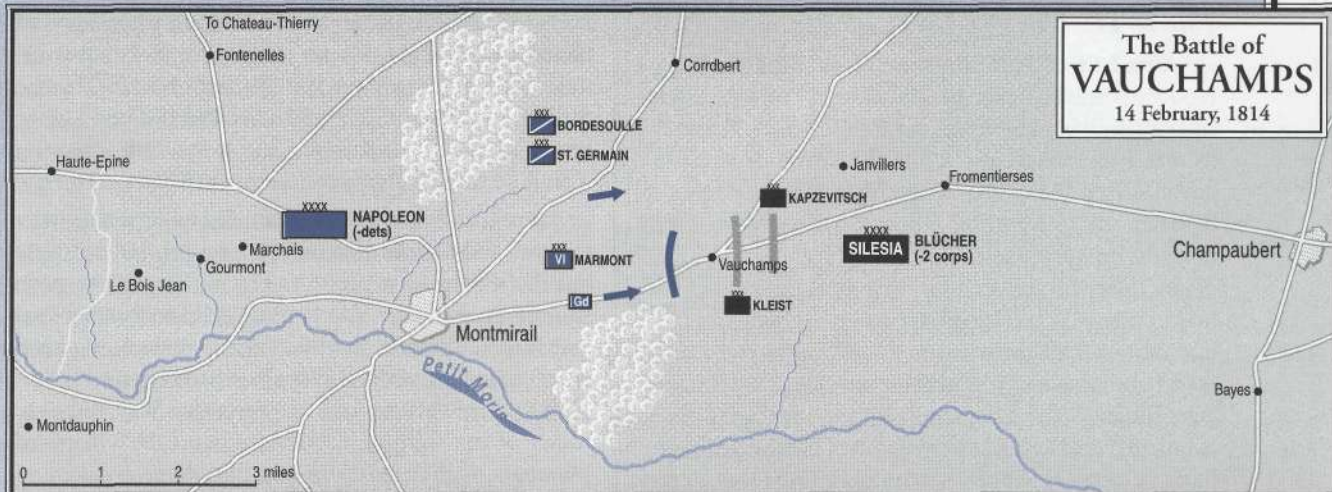
ALLIED ARMY OF THE NORTH



AUSTRIAN ARMY OF ITALY



The Battle of VAUCHAMPS 14 February, 1814



The Battle of Vauchamps, 14 Feb. 1814

The Battle of Vauchamps was a significant victory by Napoleon over Field Marshal Blücher, a fitting climax to the "six days" campaign. But perhaps more importantly, Vauchamps shows how French victories were won not by superior tactical finesse (at this stage of the Napoleonic Wars neither side had much), but instead by superior grand tactics or larger scale movements of units of corps or division size.

Napoleon was not really expecting to fight Blücher on 14 February. His pursuit of Yorck and Sacken had failed to provide decisive results. He was of the opinion that Blücher would be retreating, a reasonable assumption, and Marmont was left watching this front. Blücher's plans are harder to fathom, but he may have believed that the French were already on the way to the Seine River to deal with Schwarzenberg's Army of Bohemia. He felt he could deal Marmont a blow, then turn on the French communications as they turned south. Blücher was, as it turned out, dead wrong.

Marmont had only a little over 4,000 men with which to delay Blücher's advance. This he did with some skill throughout the 13th. He also got word to Napoleon at 3 a.m. on the 14th that Blücher was advancing. Napoleon put aside his plans and turned towards Blücher, who had slightly over 20,000 men in two corps, plus Olsufiev's survivors from Champaubert. Blücher was moving at a leisurely pace and did not get moving until 6:30 a.m. He launched no serious attacks against Marmont until 10:00 a.m. These made little progress, and by then Napoleon and reinforcements were coming up. The tables were turned.

With French reinforcements (the Imperial Guard and Grouchy's cavalry) now on the field, Allied numerical superiority evaporated. Grouchy's cavalry was sent to threaten the Allied right and the Guard cavalry to the Allied left. These two moves proved to be critical. Blücher, seeing his defensive line compromised resolved to retreat. His artillery was sent along the road, the infantry forming square and marching parallel with it on the muddy ground.

The mud may have been the only thing that saved the Allies from annihilation. Grouchy had found a parallel road and emerged behind the Allied line of march. He launched several charges and shattered several Allied formations. But the mud kept his horse artillery from keeping up with the Allies escaped complete destruction. Blücher began his retreat by 2:00 p.m. and continued through what must have been a very long afternoon. The day was a series of disasters as the Allies tried to hold off the marauding French cavalry. The final disaster came after nightfall when the French surprised a lax Russian rearguard, taking about 800 prisoners, including General Urusov. Estimates vary, but Allied losses were at least 6,000 and possibly 7,000 men and included many prisoners and 16 guns. The French lost perhaps 600 men.

Having dealt Blücher another strong blow, Napoleon could now head for Schwarzenberg and his Army of Bohemia. Napoleon's superior speed in moving had taken Blücher quite by surprise. Grouchy, frequently a target of criticism in Napoleonic literature, also did an excellent job. Vauchamps was a major, though not decisive, French victory.



Phase II: The Six Days of Glory

After La Rothiere, The Allies concluded that Napoleon was finished and the advance to Paris would be little more than a triumphal march. Blucher's army was to march up the Marne while the Army of Bohemia advanced up the Seine. This left a considerable gap between the two forces, covered only by a group of irregular cavalry (Cossacks) and Wittgenstein's small corps. Schwarzenberg, worried as usual, called Wittgenstein's corps in more toward his own army. He also moved the Cossacks southward, possibly in error. By 6 February there was nothing covering this yawning gap. Blucher was advancing pell-mell trying to force action on MacDonald, the only force between him and Paris. Blucher managed to string out his forces over a distance of forty-four miles. Yorck and Sacken were in the lead, with Yorck on a more northerly route, so that even these two corps were not really in supporting distance of each other. Further back were Olsuffiev, and then Kleist and Kapzevitch. Blucher was offering Napoleon a perfect opportunity.

Oddly enough, Napoleon was not at first tempted. He was more interested in fighting Schwarzenberg, but Blucher's advance forces were now threatening Paris. Per a letter to Joseph: "I am very annoyed by these moves, for I wanted to attack Bar-sur-Seine and defeat the Emperor Alexander [*of Russia. ed.*], whom I believe to have made some false dispositions. But I sacrifice everything to the need to cover Paris." Unusual comments for one headed to his greatest triumphs of the campaign.

The decision made, Napoleon gathered his striking force of some 30,000 men, consisting of Marmont's corps, Ney with the Young Guard, Mortier's Old Guard, and some cavalry. Victor and Oudinot would watch Schwarzenberg. French intelligence sources were finally revealing just how much Blucher had scattered his army. On 9 February Napoleon marched through Sezanne towards Olsuffiev at Champaubert.

On 10 February Olsuffiev's force of 5,000 men and 24 guns was slaughtered. Nobody really knows why he decided to stand and fight, since he was horribly outnumbered. Olsuffiev had been criticized for leading his troops badly at both Brienne and LaRothiere. If he decided to fight to restore his reputation it did not work out very well. He was captured, and only 1,000 of his men escaped.

Napoleon was now in the middle of Blucher's army, blocking the only good east-west road. He could turn on either of the two enemy wings, defeat it and then finish the other one afterward. Not surprisingly, he headed west towards Yorck and Sacken, since Blucher had an open line of retreat. This time, Napoleon did not hesitate. By 7:00 pm on the 10th his cavalry was already headed west. By 3:00 am on the 11th the rest of his army was moving as well.

The next two intended victims were Sacken (Rus-

sians) and Yorck (Prussians). Each corps consisted of about 18,000 men. These units were not, however, united. Yorck was to the northwest near Chateau-Thierry, Sacken due west, though Blucher had ordered him to return eastward. Sacken did so on the 11th, ignoring Yorck's request that they concentrate at Chateau-Thierry.

Napoleon had to detach Marmont to keep an eye on the east and Blucher's remaining forces. He had little but the Guard formations and some cavalry to push against Sacken and Yorck. With Sacken headed east and Napoleon west, the two forces crashed into each other west of Montmirail. Napoleon had perhaps 11,000-13,000 men. Sacken tried to force his way through. Much of the fighting centered around the village of Marchais. Sacken fed troops into the village, weakening himself elsewhere. By 3:00 p.m. a French assault led by Ney was threatening Sacken's force with destruction. But Yorck had resolved to come to Sacken's aid. The leading elements of the Prussian corps arrived by 3:30 pm. The Prussians managed to cover the Allied retreat as he headed north to Chateau-Thierry. Sacken and Yorck together lost about 4,000 men and 13 guns. Napoleon lost perhaps 2,000.

The Emperor hoped to pursue on the next day. If MacDonald had seized Chateau-Thierry and destroyed the bridge over the Marne there, he could catch the Allied forces with their back to the river and annihilate them. But MacDonald had been unable to advance that far (MacDonald had blown a bridge on his own when Sacken was pursuing him and had to repair it before he could advance). Napoleon pursued anyway, but covered by their heavy artillery on the far bank of the Marne, the Allies escaped across the bridge. They did lose nearly another 3,000 men and nine more guns. The French lost some 600 troops.

Sacken and Yorck made a clean break by blowing the bridge behind them. French engineers repaired the damage, but by the time they were done, Yorck and Sacken were gone. Napoleon spent the day reviewing the situation elsewhere, monitoring Schwarzenberg's advance. He had expected Blucher to retreat but word arrived late in the day that Marmont was under pressure. Perhaps there was still a chance to hit Blucher one last time.

The resulting battle of Vauchamps is covered in the module (see Page 21). Suffice it to say that Blucher lost another 6,000 men and 16 guns. Napoleon lost about 600 men. Still, Napoleon had to halt since Schwarzenberg was now threatening Paris. Napoleon turned south and by 17 February Schwarzenberg was in full retreat on Troyes. The second Allied advance had been halted.

The "Six Days" is generally considered the high point of the 1814 campaign for the French. Napoleon's army had, in the victories at Champaubert, Montmirail, Chateau-Thierry, and Vauchamps, inflicted nearly 20,000 in casualties on Blucher, while losing only 4,000 of their own. Blucher had been dealt a serious blow, and

Schwarzenberg was in full retreat. But he had failed to destroy Sacken's and Yorck's corps. He had also not had time to finish Blucher since Schwarzenberg was again threatening Paris. With rest, reinforcements, and replacements, Blucher was soon ready to renew the advance on Paris.

Blucher is much criticized for the position in which he had placed his army. In his defense it should be noted that Schwarzenberg removed the cavalry screening Blucher's southern flank without telling him. Blucher thought he would get more warning of a French attack. Nonetheless, his dispositions show that he was viewing the campaign as a promenade. Blucher was wrong, and his men paid the price.

Phase III: Laon, Craonne, and Areis

The third and final phase of the campaign began with a pause for regrouping and refitting. Schwarzenberg had been so panicked by Napoleon's latest round of attacks that he nearly retreated all the way back to Langres. Blucher's army desperately needed replacements before he could renew the advance. The Allies contented themselves with making diplomatic moves while recasting their strategy.

Two important military decisions were made by the Allies during this period. First, Austrian troops were sent to watch an army that Augereau was forming at Lyons. Schwarzenberg had a veritable phobia about this force, always viewing it as a major threat to his communications. Schwarzenberg's detachment, though it weakened the Army of Bohemia by over 35,000 men, gave the Allies more confidence in renewing the march on Paris. Second, over Bernadotte's protests, two corps (Bulow's Prussians and Winzingerode's Russians, totaling over 40,000 men) were called south from the Low Countries to provide additional manpower to Blucher's army. When and if they joined together, Blucher would have around 100,000 men in his Army of Silesia.

But first the Allies had to concentrate. And that was not going to be easy. Blucher, his army rebuilt to around 50,000 men, was renewing the advance on Paris by 24 February. Napoleon did not react until the 27th. Napoleon—with some justification—did not believe an army as battered as Blucher's could renew operations so quickly. But Blucher was once again advancing up the Marne, away from Schwarzenberg's Bohemian Army.

Since Blucher was advancing by the same old route, Napoleon tried to repeat his earlier maneuvers to defeat him. Leaving covering forces under MacDonald and Oudinot to watch Schwarzenberg, he gathered a striking force to try to cut Blucher's communications and force him to battle. Blucher was not to be caught again. He received timely warning this time and got all of his troops north of the Marne. Napoleon's blow struck nothing. His lack of a bridging train cost him dearly here. Sixteen hours were lost getting a damaged span at LaFerte rebuilt. Napoleon did not begin his new pursuit until 3 March.

continued on page 25

War and Politics, 1814

The political and diplomatic side of the 1814 campaign has been the subject of much study, including several full length books. A recent work, **Britain and the Defeat of Napoleon 1807-1815**, gives a thorough look at the complex maneuvering involved.

The Allies were very far from being united in their goals. After the war's conclusion, the former Allies came fairly close to hostilities among themselves at the peace congress in Vienna. Nor did they know what type of government should be given to, or imposed upon, France at the war's end. Bernadotte, Crown Prince of Sweden and former French marshal, hoped that he would get the call. That is one reason he never entered France proper, since he did not want to appear too eager to fight his former countrymen, or his future subjects.

The Austrians were inclined to a regency government for Napoleon's young son. Since his mother was a Hapsburg and the likely regent, Austria might gain influence in French policy. The King of Prussia would follow Tsar Alexander of Russia. Alexander was undecided about the options—a restoration of the Bourbon monarchy or keeping a supposedly chastened and humbled Napoleon on the throne. The British, the most inveterate of Napoleon's foes, were also undecided. Until their Foreign Minister Castlereagh arrived on the scene, the British had no strong voice in Allied counsels.

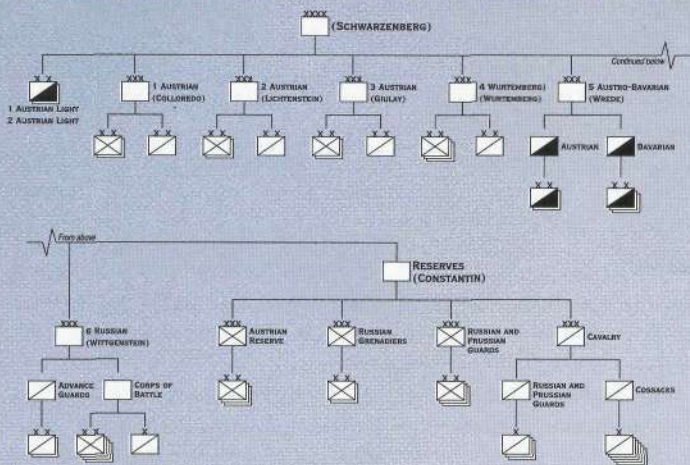
Napoleon could have profited by all of this divided opinion, but he failed to take advantage of the situation. Partly, the Allied decision as to what form of government to install in Paris depended on the French themselves. Popular resistance to the Allies, including partisan warfare, would make them more inclined to settle with Napoleon. The actual record is decidedly mixed. There is anecdotal evidence of French civilian resistance. For example, local citizens helped Napoleon get his guns through the mud as he began the "six days" campaign. There were instances of partisan warfare where the Allied armies marched. The Prussians in particular were known for pillage wherever they passed. The French reacted with some guerrilla activity (to be fair the Allies were doing nothing the French hadn't done for the past twenty years). But resistance was sporadic, Allied reprisals were harsh, and where no Allied armies passed, the French were quiet and somewhat apathetic after twenty years of war.

Napoleon's own attitude did not help either. Negotiations continued throughout much of the campaign. But Napoleon tended to change his negotiating position based on recent military results. The Allies began by offering the "natural frontier" of France (Rhine, Alps, Pyrenees), then the frontier of 1792, then that of 1791. If Napoleon had grabbed one of these offers he might well have survived. But military success always got him to up the ante. After a victory, he would want to demand the next level. If the Allies were offering the 1792 frontier, he would want the natural frontier. This stubbornness probably cost him his throne. By subordinating the political to the military and not the reverse he lost any chance of survival.

If Areis was the military end of the campaign, the Treaty of Chaumont (9 March 1814) may well have been the political end. The Allies, who received substantial subsidies from Britain, bound themselves together and vowed to continue the war until certain goals were achieved (the restoration of the King of Spain, the "freedom" of Holland, Italy, and Switzerland). With a now unified Allied front, Napoleon's chances for pulling out a favorable diplomatic settlement dwindled to a new low.

When the Allies entered Paris, Alexander might still have kept Napoleon on the throne. But lack of support for Napoleon in Paris, Talleyrand's skilled maneuvering for the Bourbons, and lack of unity in the French army doomed Napoleon. Napoleon did not follow Clausewitz's famous dictum that "war is the continuation of policy by other means" (of course it had not been written yet). He lost sight of any realistic political goal, concentrated purely on the military aspects of the campaign, and thus lost his throne.

ALLIED ARMY OF BOHEMIA



Meanwhile...

While the army under Napoleon gets most of the attention in the 1814 campaign, there were significant armies fighting elsewhere. The following briefly covers these other theaters.

The Fortresses: The French had major garrisons in fortresses stretching from the Vistula to the Rhine. The fortunes of these garrisons varied greatly, some surrendering early, others holding down Allied troops throughout the war. Some examples:

Danzig: This city at the mouth of the Vistula was held by a multinational garrison of French, German, Polish, Italian, Spanish and Dutch troops under the command of General Rapp. The Danzig garrison had been created soon after the 1812 Russian campaign, and many of the 35,000 men were invalids recovering from their ordeal in the East. Rapp claims to have had only 8-10,000 fit fighting men when the siege started. Food was always a greater problem than Allied attacks. By late November 1813 Rapp was down to 6,000 men and no food. He surrendered on 2 December 1813. Initially granted honors of war, Tsar Alexander refused to ratify the terms. The garrison became prisoners of war.

Dresden: Napoleon had left two corps here (St. Cyr's and Lobau's) rather than abandon the capital of his Saxon ally. The city was unprepared for a lengthy siege and the troops could have been better used at Leipzig. St. Cyr was forced to capitulate on 11 November 1813. Like Rapp's command it ended as prisoners of war after the Allies refused to honor the original terms to return the men to France.

Hamburg: This north German port was held by a garrison of perhaps 40,000 men (though the sick list started at 8,000 and grew over time). Marshal Davout commanded here, the most loyal and tenacious of Napoleon's subordinates. He held the city against a multi-national force which included troops from Bernadotte's Army of the North and Bennigsen's Russian Army of Poland (Bennigsen commanded the Allied force which numbered up to 60,000 men). Davout resisted stoutly, and his actions included expelling 25,000

civilians from the city to save the trouble of feeding them. Davout held until after Napoleon's abdication in 1814. He refused to believe the Allies and surrendered only when a French general confirmed the news. On 27 May 1814 he evacuated the city.

These three cities were garrisoned by upwards of 100,000 French and French allied troops, and at least a matching force of Allies was required to watch them. Some were veterans who could have been useful. However, it remains debatable whether Napoleon would have been better off to have had them with his main army.

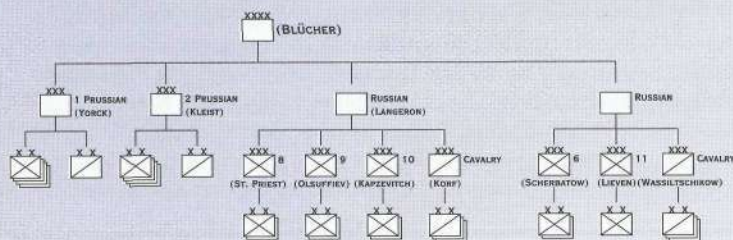
Italy: This was the traditional secondary theater of war when Napoleon was fighting the Austrians. Napoleon sent his stepson, Eugene, to command here. As viceroy of Italy Eugene had extensive experience and had fought a reasonably creditable campaign in 1809 on the same ground. Eugene had some 50,000 men in 1814. He was faced by Bellegarde with about 70,000 Austrians. The theater was not active. Eugene defended several river lines against the Austrians, most importantly, the Adige and Mincio, retreating as he became threatened. The situation was complicated when Murat, King of Naples and Napoleon's once loyal marshal, went over to the Allies and brought an additional 30,000 troops into the field. Luckily, Murat was more interested in having his position as king confirmed by the Allies than fighting and did very little in the field. Eugene held his ground after Napoleon's abdication, fighting an action on the Mincio on 8 April.

The Low Countries: This theater received attention from the British, who always wanted the Low Country ports in hands other than those of the French. Much of Bernadotte's Army of the North also campaigned there, though Bernadotte had launched a preliminary campaign against Denmark. He had been promised that kingdom's province of Norway for Sweden in compensation for Finland, which had been seized by the Russians back in 1808. The British also sent troops under Sir Thomas Graham to the theater. The Dutch revolted against French rule, and the British sent the Prince of Orange to lead a new government. There were no real set piece battles here. The Allies tried to take various fortresses from the French, the most important being Antwerp and Bergen-Op-Zoom. Both cities remained in French hands throughout the war. A night attack by the British on Bergen-Op-Zoom on 8 March 1814 was a particular disaster with losses to the British of over 3,000 men, including 2,000 prisoners. The Allies failed to take their objectives here and wasted considerable manpower, though Bulow and Winzingerade did eventually reinforce Blucher.

Spain: Napoleon sent Marshal Soult to take over this front after the French disaster at the Battle of Vitoria in June 1813. Soult did a creditable job, restoring some stability to the collapsing French army in Spain. Many of his veterans were sent to bolster Napoleon's conscripts back in France. Another army under Suchet guarded the eastern Pyrenees, nearly half of it in fortress garrisons. By spring of 1814 Soult had only a little over 40,000 in his field army. Wellington had a substantial numerical superiority and pushed Soult back repeatedly, crossing the Adour, winning the battle of Orthez, and fighting a final battle at Toulouse after Napoleon's abdication. At Toulouse, Soult held his own as best he could but had to give ground in the face of a numerically superior opponent on 10 April 1814.

As can be seen, Allied fortunes on the other fronts varied considerably. Some successes were gained, and everywhere the French were fighting defensive campaigns in the face of superior foes. The one real opportunity for a decisive campaign was in France, and there military and political factors combined to give the Allies the victory.

ALLIED ARMY OF SILESIA



Blucher had no definite word on Bulow's and Winzingerode's location. He had some indication that Bulow was or had been at Laon, so he headed in that direction. This would also put him across another river, the Aisne, that might again slow Napoleon's pursuit. It was a near run thing. The French garrison at Soissons capitulated and did not destroy the bridge. Blucher now linked up with Winzingerode and Bulow. He decided to defend the Aisne crossing at Soissons. But Napoleon's cavalry found Berry undefended and the Emperor crossed there instead. Napoleon still did not know that Blucher had been joined by Bulow, but only that Winzingerode was now in the vicinity. Napoleon headed northwest, trying to cut off Blucher from Laon.

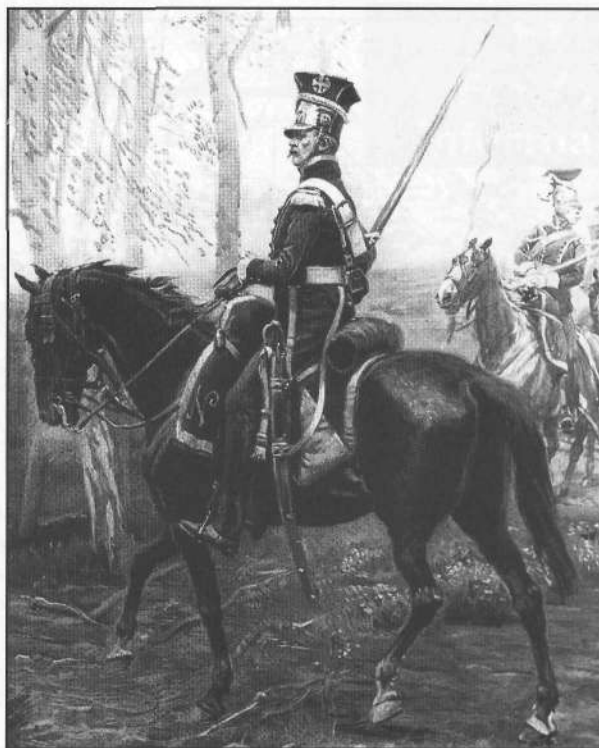
The battle of Craonne on 7 March was a comedy of errors. Blucher hoped to hold Napoleon with a strong defense and then attack his right rear with a detached force. He managed the defensive part of the battle well enough but his attack never materialized. Napoleon believed he was facing a rearguard only and his attacks were unsuccessful. Ney, attacking before a massed battery of 72 guns suffered heavy losses. The result of all this was at least 5,000 casualties on each side.

Napoleon was still convinced that he was facing only a rearguard and determined to try and deal it a heavy blow before returning to face Schwarzenberg, who had again begun a ponderous advance on Paris. But, Blucher had massed over 85,000 men and placed them on a very steep ridge at Laon. Napoleon, who had only 37,000 men, was headed for serious trouble. Worse yet, he had detached Marmont with 10,000 more to the east to cut off Blucher's non-existent retreat.

The battle of Laon was fought on 9-10 March. Many of Blucher's troops were hidden by reverse-slope positions. Though it was apparent that more than a rearguard was present, Blucher's full strength was unknown. On 9 March Napoleon launched several pinning frontal attacks. He may have been hoping that Marmont would come up and contribute to the attack. Blucher, finding it hard to believe that Napoleon did not have more troops somewhere, held his ground and bided his time.

Marmont did come up in the late afternoon on Blucher's left or eastern flank. He made limited progress and took almost no security precautions. Blucher's reconnaissance revealed Marmont's weakness. A strong Allied attack early on the 10th sent Marmont's corps flying in retreat. Only the escort of a supply train (which happened to be Old Guard infantry) managed to intervene and save Marmont from destruction. The French lost 6,000 men, the Allies some 4,000. At this point, Blucher fell ill and the Silesian army made no real pursuit.

With this unsuccessful foray concluded, Napoleon spent some time reorganizing and restoring his battered forces. He lashed out at an isolated Prussian corps (St. Priest) at Rheims on March 31. The Allied force was smashed, losing some 7,000 men to a French loss of



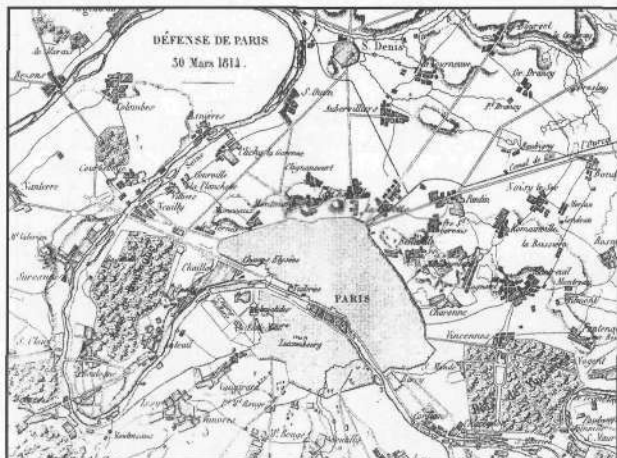
Point men—Lancers on patrol.

600. The Emperor, his confidence restored, considered his next move.

Napoleon toyed with the idea of heading eastward to raise the French fortress garrisons in the Allied rear, but finally decided Schwarzenberg must be dealt with first. The Austrian commander had been maneuvered into retreat before; perhaps he could be outfoxed again. The Allies were spread out over as much as 80 miles, making an easy target. Things started well for Napoleon, as the Army of Bohemia did indeed begin a precipitous retreat. The French made one final advance to Arcis-sur-Aube. Schwarzenberg, however, was done retreating. He managed to concentrate nearly 80,000 men in the vicinity of Arcis. A sharp struggle occurred there on 20 March 1814. Napoleon's army took the bridge over the Aube and inflicted over 2,500 casualties on the Allies. He intended to advance against what he thought was a rearguard the next day.

It was definitely no rearguard! Napoleon's army (slightly under 30,000 men) advanced over the next ridgeline and discovered most of Schwarzenberg's army arrayed against them. This shocking sight (French reconnaissance and intelligence had failed horribly) stopped Napoleon cold. Surprisingly, the Austrians made little attempt to attack. The Allies were worried that Napoleon had something up his sleeve. Little more than a clash of advance guards followed, with the French getting back across the bridges they had seized the day before. Napoleon had escaped, intact.

Still, in many ways Arcis sealed the Allied victory. Schwarzenberg and the Allied monarchs who followed in his wake were gaining confidence. With each army



Paris—the prize.

facing Napoleon numbering around 100,000 (Schwarzenberg a bit more, Blucher a bit less), Napoleon had only 70,000-75,000 men. Leaving 30,000 or so to screen one force, Napoleon would have at most 40,-45,000 in a striking force. This was too few men to gain decisive victories.

Abdication and Conclusions

Napoleon decided to try one last desperate gamble. He would march east, gather up the fortress garrisons, and try to tear up the Allied communications. But once again an Allied intelligence coup proved decisive. Letters from Napoleon to Marie-Louise (his young Austrian bride) and from Paris officials to Napoleon revealed:

- 1) Napoleon's planned movements.
- 2) The state of agitation and fear of Paris' populace.

Reassured by these letters, the Allied commanders decided to advance on Paris intending to join (finally!) their two armies. The rest of the campaign concluded quickly as the Allies pushed back the weak Mortier and Marmont corps covering the capital. The French made a stand on 30 March at Paris. Joseph Bonaparte, never known for being cool in a crisis, fled the city with Marie-Louise on that day. This left Talleyrand in Paris to greet the Tsar. The French army evacuated the city at 2:00 am on 31 March. Napoleon rushed back, arriving at Essonnes 11 miles south of Paris. He got word there that Paris had surrendered. He was just a few hours late.

The political maneuvers of the next few days were quite complex. Suffice it to say that on 4 April 1814 Napoleon abdicated his throne. On 20 April he headed for the island of Elba, his new "empire" in exile.

The campaign of 1814 is often considered to be one of Napoleon's finest. Those of 1812 and 1813 are considered slugfests with the Emperor showing a lack of energy. 1814 is viewed as a "comeback" of sorts. If looked at from a purely military standpoint, there is some truth to this. Napoleon was indeed more active. He led from the front and rallied his conscripts when

needed. At Areis a howitzer shell exploded under his horse, killing it, but leaving Napoleon unscathed. At Brienne the Emperor had a close call, nearly being captured by Cossacks. He led an assault shortly thereafter.

The campaign also showed Napoleon's strategic ability. One must admit that the Allied advance was horribly shot through with errors—two armies advancing without supporting each other, weak forces covering the gaps, and units often strung out over 60-80 miles. Napoleon capitalized on Allied errors, which is what great generals do. The "six days" is indeed a near masterpiece. The caveats, that Blucher was badly served by Schwarzenberg who withdrew his cavalry screen, and the fact that Napoleon really did not know just how vulnerable Blucher was, have been mentioned. Napoleon took advantage of these opportunities to the fullest. Given another few days he might have finished Blucher entirely.

But of course, the Emperor did not have those few days. 1814 shows him repeatedly having to shuttle about dealing with the latest threat to Paris. The theater of war did not have enough depth for Napoleon's strategy to work. Or to be more blunt, the Allies were too close to Paris for it to be successful. Once Blucher was reinforced, the Allied armies were too strong for Napoleon, and the inevitable happened. The French Empire was bankrupt of money, men and material.

Was 1814 the final blaze of glory of history's finest general? Or was it the last gasp of a monarch too blind to see reality? There are elements of both interpretations here.

S&T

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DID YOU KNOW

- The annual cost of maintaining the English Army garrison in Norwich, England in 1156 AD was 57 pounds sterling.
- The first colony to achieve independence in the Americas after the United States was Haiti.
- Sitting Bull, the famous Hunkpapa Sioux Chief, was known as Tatonka Eyo Tonka to his fellow Indians.
- The standard British Army field gun of the First World War was the 18 pounder. It had a maximum range of 6,525 yards.
- In 1936, the British returned treasure looted from the Ethiopian Emperor Theodore, 68 years earlier, to Haile Selassie.
- At the end of the Spanish Civil War the Luftwaffe had fifteen light and eight heavy fighter groups. The light groups were equipped with Me-109s while the heavy groups were scheduled to get Me-110s.
- Shortly before the start of World War II the Soviets asked the Italians to design and build a battleship for them. The resulting design, UP41, was similar to the Italian *Littorio* class battleship. However, the plans were scrapped after Hitler invaded the Soviet Union.
- In 1940 the British Coldstream Guards named their tanks after famous colonels of the Regiment.
- Between May and October 1941 the German Army converted 174 captured Renault 35R tanks to replace the Panzerjager I self-propelled antitank gun.
- The last production batch of 42 U.S. F-8E Vought Corsair jets were built for the French Navy. These aircraft served aboard the French Aircraft Carrier *Clemenceau*.
- Night Light was the U.S. Code Name for the operation which lent the Israeli government two sophisticated RF-4C Phantom Reconnaissance jets in 1970.

- In 1991 a team from the British Special Boat Service recaptured the British Embassy in Kuwait City.
- The top suppliers of arms to developing nations are France, Russia and the United States. These three nations account for \$10.2 billion in sales.
- Mongolia still celebrates Genghis Khan's birthday as a national holiday, even though it is frowned on by the nation's communist party.

FOOTNOTES

Early Warning: December 7th 1941

On the north shore of Oahu, Hawaii, an almost hidden U.S. National Park Service marker commemorates a small radar outpost. On the fateful day of 7 December, 1941, the Opina Mobile Radar Station could have played a key role in providing an early warning of the impending Japanese attack on Pearl Harbor. Unfortunately for the United States, things went differently.

At 4 AM on 7 December, U.S. Army privates Joseph L. Lockard and George E. Elliot began their watch at the mobile radar station which was set up near Kahuku Point on Oahu's north shore. The station was one part

of an air, land and sea network which was supposed to prevent a surprise attack on Hawaii. That morning Lockard and Elliot were under the command of Lieutenant Kermit Tyler, a pursuit officer, located at the Fort Shafter's Information Center, thirty miles south of Kahuku Point. As a pursuit officer, Tyler supported the air controllers in the interception of enemy planes. However, Tyler had held the position four days and had only a rudimentary knowledge of its skills.

At 7 AM the night shift at the Information Center ended and the enlisted men who plotted incoming threats on maps promptly left. Only Tyler and Private Joseph McDonald, a switchboard operator, remained. Over at Kahuku Point, Lockard and Elliot were also ending their shift when their radar screen lit up with a large image. Lockard thought the image was a malfunction owing to its size but decided to continue observing it. Meanwhile, Elliot plotted the sighting on a map and determined it was about 132 miles north of Oahu. The size of the image indicated that it was a group of 50 or more aircraft.

Lockard and Elliot were concerned that they might have detected an inbound attack and called Lt. Tyler. Tyler could have reported the



The wreck of the Arizona in Pearl Harbor.

From the Dustbin of History

"The Royal Air Force does not have traditions, they only have habits."

—Anonymous

incident to his superior officer, Major Kenneth P. Bergquist. Tyler chose not to, instructing Lockard to ignore the sighting. Tyler's reason for what in retrospect seems an incredible decision was based, oddly enough, on the fact that earlier he had heard a local radio station playing Hawaiian music. He knew the music was played all night to aid the navigation of planes coming from mainland America 11 B-17s of the 38th and 88th reconnaissance squadrons were scheduled to be arriving from California. In fairness, Tyler was present at the Information Center largely as an observer and was not responsible for the air warning system.

Despite Tyler's dismissal (at approximately 7:20 AM), Elliot was still anxious about the image, and convinced Lockard to continue their watch. They did so until 7:39, when the image was lost due to interference caused by the coastal mountains. What followed is well known, the Japanese surprise air attack on the U.S. fleet anchored at Pearl Harbor and the surrounding facilities.

But what would have happened had Tyler chosen to contact his superior officer? Bergquist would have had approximately 30 minutes to analyze the situation and alert Army and Navy high commands in Hawaii. Other actions that morning demonstrated that U.S. forces could respond rapidly to a crisis. Earlier, at 6:30 AM, the USS *Ward* sighted and sank a Japanese submarine within Oahu's defensive perimeter. The *Ward's* Commanding officer, Lieutenant William W. Outerbridge, reported the attack to the 14th Naval District Headquarters at 6:53. Within 20 minutes the message had been passed on to the Commander in Chief Pacific, Admiral Husband E. Kimmel.

Kimmel thought that the sub sinking was an isolated incident and chose not to issue a general alert. But a report of an air sighting by the Opina Mobil Radar Station in addition to the *Ward's* action could

have provided impetus for a general alert. No such alert was given until the attack on Pearl Harbor was underway. Then, the first wave of Japanese planes used the element of surprise, attacking swiftly and with deadly results.

Finding almost no resistance from anti-aircraft fire, the first Japanese wave only lost 9 planes. By contrast, the second wave, which faced more extensive flak, lost 20 aircraft. Alerted U.S. defenders might have increased these enemy losses and reduced the effectiveness of the attack. Also, an early warning could have provided U.S. ships at anchor additional time to fire up their cold boilers and escape to the open seas. The U.S. had missed an opportunity to alter the outcome of its first battle in World War II.

—Gary Romano

A New Reaction for Tanks

Reactive armor has become the new bane of tank killers. Most tank killing rounds rely on either kinetic energy to shatter a tank's armor or a directed blast of intense hot gases to burn a hole through the steel. These two primary means of tank killing have been thrown into disarray by reactive armor.

Reactive armor consists of hundreds of small blocks of explosives attached to the outside hull and turret of the tank. When an antitank round hits one of these explosives it detonates, deflecting the force of the incoming antitank round and saving the tank to fight another day. Reactive armor works equally well against HEAT (high explosive antitank) and kinetic energy rounds. After combat, the crew simply replaces the expended blocks and the tank is ready to go again. That is until now. Faced with the prospects of being unable to kill enemy tanks, the United States Army went to work.

The Army is developing a new round that will defeat current and

future reactive tank armor. No one will say exactly how the round will accomplish this task but it is obvious that it will be some sort of multipart munition. The first part will detonate the reactive armor and the next will penetrate the tank itself. If the round is successfully tested it is only a matter of time before the blocks of reactive armor disappear from the exterior of modern tanks.

Peace Treaty signed Between Eritrea and Ethiopia 12 December 2000

Back in issue 203 Gary Valenza covered the war in the Horn of Africa. Here is his update on the ensuing peace.

Six months after a tenuous cease-fire ended the gruesomely bloody war between Ethiopia and Eritrea, a formal peace treaty was signed by the two countries' leaders, Meles Zenawi of Ethiopia and Issaias Afwerki of Eritrea [*December 2000. ed.*]. Once the original cease-fire was in place, U.S. envoy Anthony Lake, U.N. Secretary General Kofi Annan, and the Organization of African Unity placed intense diplomatic pressure on the two leaders to formalize the end of hostilities. While the peace treaty was signed in Algeria, accompanied by the usual diplomatic pomp and circumstance, there remain sizable issues to be resolved beyond the famines engulfing both countries and their IMF debt servicing.

War weariness has settled over both country's populations, manifested by complete lack of celebrations on either side for the end of the fighting, as well as extreme bitterness and exacerbated by both sides use of demonizing propaganda against the other. There is as well the huge number of casualties which affect nearly every family and village in the region. Even with the peace treaty signed, Ethiopia's official designation for this conflict is "Eritrea's War of Aggression." The six point treaty

itself is a vague document encouraging both nations to be "nice" without addressing any substantive issues, other than establishing a plethora of commissions.

Among the issues to be resolved include the original spark to this war, the establishment of a precise border between the two countries. Ethiopia, the more or less military victor, has begun withdrawing its troops from those areas of Eritrea it conquered in the last month of fighting. Canadian and Dutch contingents, authorized by the U.N., have arrived for monitoring. They are the first of what is to be a 4,200 man peacekeeping force (United Nations Mission in Ethiopia and Eritrea-UNMEE, under the command of Major General Patrick Cammeart), placed as a buffer between the two antagonists.

Other issues the various commissions are to address include: dealing with 650,000 displaced persons from both countries; attempting to assess the social damage to the civilian population; and arranging POW exchanges via the International Red Cross—although so far neither country claims to know how many POWs are incarcerated. Both countries are also supposed to provide the UN peacekeepers with maps of the locations of the thousands of land mines still in place, mainly located in the various no man's lands between trench lines, although again, neither side has yet to comply with this mandate. And in perhaps an unintended bit of irony, both countries are charged with the task of determining the causes of the war.

Though fragile, the peace treaty may hold. Both sides did refrain from shooting at each other from June to December of 2000. Eight days before signing the treaty and under UN supervision, both Ethiopian and Eritrean soldiers jointly removed the remains of 20 of their dead comrades lying near a road in western Eritrea. At least it is a start.

—Gary Valenza

The Night Owl

At the start of World War II none of the belligerent states had a purpose-built night fighting aircraft. The airpower experts simply did not think there would be a need for such an aircraft. However, events would soon prove them wrong.

In the autumn of 1940, both the British and Germans had embarked on night bombing campaigns against their opponents' cities. The raids were not particularly effective but the mere fact that enemy aircraft were operating over their respective homelands sent both powers' leaders scurrying to find aircraft that could be used for air defense at night. Models were hurried into the air. These early night fighters were simply modified twin-engine day fighters or bombers. Their advantages were a long range, a large array of heavy machineguns and cannon, and the space to carry radar operators and all of the electronics, fuel, and ammunition necessary to execute a night patrol.

To fulfill the night fighter mission, the Germans pulled aircraft such as the Messerschmitt Me-110 and Junkers Ju-88 from front line duty and extensively reworked them to accommodate radar and other electronic gadgets needed to fight at night. Their armament was greatly increased to give them the ability to knock the sturdy bombers out of the sky. Speed and maneuverability were not great concerns because the only expected opposition were the slow and ungainly enemy heavy bombers.

But by late 1941 British bombers were getting faster and more maneuverable. The Hadley Page Halifax bomber was almost as fast as the Messerschmitt Me-110. Also the Allies were using their own electronic warfare to counter German interceptors. It was apparent that a new generation of night fighters was needed.

The second generation of German night fighters emerged on the scene in 1943. The Heinkel He-219, the Focke-Wulf Ta 154A, and the Junkers Ju-388J *Storkebeker* all entered the competition to become Germany's ultimate night interceptor. But the Heinkel He-219 was the only airplane to see service as a night fighter. The Focke-Wulf Ta 154A never reached series production and the Junkers Ju-388J was still in the prototype stage at the end of the war.

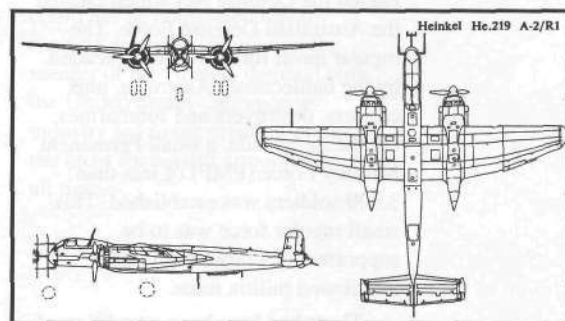
The Heinkel He-219 "Owl" was originally conceived in April 1940 as a multi-purpose high-speed bomber, aircraft destroyer and torpedo bomber. Despite its impressive initial testing the Luftwaffe was not overly fond of the plane. In June 1941

Heinkel was told to build only the destroyer version of the plane.

At about this time General Josef Kammhuber, the head of the German night fighter force, was demanding new and more powerful planes. Heinkel quickly realized the potential of adapting the new He-219 to the night fighter role and immediately proposed it to the Luftwaffe. The Reichsluftministerium (RLM—Reich Air Ministry) accepted the proposal and construction on the prototype Owl began in January 1942.

The new aircraft made its first flight in November 1942 and proved to be an awesome airplane. Although it experienced some teething problems, it was quickly accepted and put into production. The He-219A-R1 pre-production aircraft was taken to the principal night fighting base of Venlo, Holland to demonstrate its capabilities. Much to the chagrin of doubters within the RLM, the pilots not only were enthusiastic about the Owl, but the commander of one of the night fighter squadrons flew it on a combat mission on the night of 11/12 June 1943 and actually shot down a British bomber.

Series production began on 3 August 1943 and the first deliveries were made in the early fall. The Heinkel He-219A-0 had a wing span of 60'8" and a length of 50'11". It stood 13'5" high and had a gross weight of 28,990 lbs. The plane was powered by two Daimler-Benz DB 603A 12-cylinder, liquid-cooled, in-line engines. It had a top speed of 348 mph and a range of 1,305 miles. The Owl carried the latest electronic warfare equipment of the Third Reich, and was armed with two 30mm Mk 108 cannon and four 20mm MG151 machine guns. The aircraft was crewed by a pilot and radar operator. Aside from shooting



Heinkel He-219 "Owl"

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down bombers, it proved capable of tackling Allied night intruders, such as the de Havilland Mosquito.

The pilots of the night fighter squadrons were so impressed with the "Owl" that when they began receiving the production models they kept the pre-production planes and continued to fly them. But RLM was not satisfied with the airplane's high-altitude performance and on 25 May 1944, decided to phase out the He-219 in favor of the Junkers Ju-388. Despite official decree the pilots continued to clamor for more Owls. The last He-219s were assembled from spare parts in the factory and shipped to the night fighter squadrons.

A total of 286 Owls were produced during the course of the war. They proved to be one of the Luftwaffe's most effective interceptors in the year or so remaining to the Third Reich.

The Australian Army and the Defense Act in World War II

When General Douglas MacArthur arrived in Australia in 1942 he was advised that its army strength was roughly four active divisions, all currently overseas, and more than 300,000 partially trained militia. The militia, while numerous, could not be deployed outside Australian territory. This was due to the legal situation faced by the Australian government vis-a-vis the army. Why did this situation exist? The answer goes back to earlier in the century.

1 January 1901 saw the dawn of both the 20th century and the birth of the Commonwealth of Australia as a dominion within the British Empire, the "new nation for the new century." In 1903 the government of Australia passed the Defense Act which created the Australian Defense Force. The regular naval force was to be headed by the battlecruiser *Australia*, plus cruisers, destroyers and submarines. On the Army side, a small Permanent Military Force (PMF) of less than 3,000 soldiers was established. This small regular force was to be supported by a large and widely distributed militia force.

There had long been a tradition of militia training among the colonies and later states that were to form

Australia, and this tradition was kept in place by the Defense Act. The concept behind the Defense Act was that Australia would supply naval and army units to support regular British forces in future theaters of conflict. It was not anticipated that Australia would need to call men to the colours unless the Empire faced some sort of military threat, given Australia's isolation and the protection of the Royal Navy. But in practical terms what did this mean if a threat materialized?

As mentioned, the PMF initially numbered some 3,000 men but had grown in 1939 to 3,572. Of these, approximately 450 were officers, all of whom had to be graduates of the Royal Military College. The rest of the PMF were specialists or instructional personnel whose function was to train the militia. The main fighting arms, at first infantry, cavalry, and artillery, and then later engineers, armour and the rest were all militia formations. In the first years of the century, all able bodied Australian men were supposed to be in a militia unit somewhere. But in reality, it was relatively simple to avoid this commitment.

If a threat to the Empire materialized, it was necessary for the government of the day to request the Governor General to declare a "time of war." This allowed for two things. First, a call for volunteers to man an Australian Imperial Force (AIF). The AIF would form an Expeditionary Force and deploy to the theater of operations to augment other imperial forces. Conscription was not required to fill this force, as it was assumed that volunteers would provide sufficient numbers. There was a precedent for this assumption based on experiences of the Maori, Boer and Sudan Wars.

Secondly, if the threat was directly to Australia, militia formations could be placed on full time duty. When the "time of war" declaration was repealed, the militia would go back to part time duty, and the AIF would be disbanded. The main difference between the AIF and the militia was that the former could be sent overseas, while only the latter could be used within the boundaries of Australian territory.

In 1914 what became known as the 1st AIF was raised, centered on

the 1st through 5th Infantry Divisions and twelve Light Horse regiments. As the fighting was all many thousands of miles from Australia, and the only close threat eliminated in 1914 with the conquest of the German base at Rabaul, no militia were placed on full time duty in World War I.

In 1939, the 2nd AIF was raised, composed of the 6th through 9th Infantry Divisions. Some of these units were committed to the campaign in the Western Desert, fighting Rommel. With the growing threat in the Pacific after December 1941 many militia formations were put on full time duty and some deployed to nearby New Guinea. In both these instances special action of pronouncing a "time of war" was carried out prior to raising the AIF.

As mentioned, no soldier belonging to a militia formation could be sent outside Australian Territory without that soldier specifically volunteering for the specific duty. At the beginning of World War II, Australian Territory included Australia as it stands today, plus the old Queensland colony of Papua and the old German Pacific territory of New Guinea. The latter was mandated territory to Australia after World War One. Therefore, militia units could be and were sent to garrison these areas when they came under threat from the Japanese. Still, the provisions of the Defense Act meant that only the AIF formations could be sent elsewhere. Thus, the numerous Australian militia units in 1942 could not be used by MacArthur for his offensives in the Pacific, a fact that the general resented greatly. They could not even be deployed in the area of the Dutch East Indies (now Indonesia).

Several things were done to alleviate this problem. First, the area deemed to be Australian Territory for the purposes of the Act was expanded. Then, whole militia battalions were requested to and voted to become AIF. This freed up the deployment of these units.

After World War II ended, full time formations were sent to the occupation force in Japan as the British Commonwealth Occupation Force (BCOF). In 1950, when a unit of this force was to be deployed to South Korea in response to the communist invasion, they had to be asked to volunteer all over again.

New units raised in Australia were also asked to volunteer to go to Korea. It was this unusual legal minefield that prompted the Australian government to change the Defense Act in 1950. These changes allowed for regulars of all arms to be raised and maintained in Australia.

So the final question is, how could the BCOF troops be maintained abroad in light of the provisions of the Defense Act of 1903 after the Japanese surrender in August 1945? The answer was simple: the Prime Minister never asked the Governor General to revoke the "time of war" provision put in place in 1939. Thus, for practical purposes Australia remained in a "state of war" from September 1939 until May 1952.

— Peter Wyche

The Development of the American Armored Car

The armored car was a popular weapon of World War One. The speed of the vehicle, its inherent defensive capabilities, and the power of its machine guns made it ideal for reconnaissance, quick strikes against lightly defended enemy positions, and internal security. Armored cars were also cheap and easy to build. The French, British, Russians and Germans all built successful armored cars in 1914-18. The U.S. was quick to get in on the act.

Between the World Wars, the United States Army Ordnance Department spent a great deal of time and effort searching for the ideal type of armored car. The first example was the Studebaker Scout Car which appeared in the early 1920s. It was a standard Studebaker touring car with a Lewis machine gun on the passenger's side of the vehicle. The Lewis gun was protected by a steel gun shield and although it was not very effective, it still qualified as a military vehicle.

The Army differentiated between armored cars and scout cars. The scout cars would be used by infantry and cavalry units for reconnaissance, while the armored cars would be integrated into the new mechanized forces which were just then beginning to form.

The first official Army Scout Car, the T-1, was manufactured by Pontiac. This vehicle had bucket

seats, no armor plating and a single machine gun. It was followed by the T-2 which was based on the Chevrolet Phaeton chassis. The vehicle had armored shutters over the radiator and also carried a single machine gun. Following these vehicles, the Ordnance Department conducted a series of studies of armored cars which were officially designated T-3 through T-6. Only a few of each of these vehicles were produced and few went beyond the prototype stage.

A few months after the T-1 entered service, the Army put out a contract for a purpose built armored car. The request was quickly answered. The LaSalle Division of Cadillac produced a vehicle which had a fully armored chassis and a steel box over the passengers' compartments. The steel hull had gun ports in the sides and a machine gun could be mounted on top. The Army requested four prototypes, designated T-2E1, E2, E3 and E4, for evaluation. The only difference between the vehicles was in the amount of armor plating and shape of the hull. LaSalle completed the vehicles in 1929 and each underwent a series of rigorous tests.

The T-2 series was followed by several other designs through the 1930s, which differed in the number of wheels, hull design and armament. However, all shared a similarity in that they were completely armored and carried some time of weapon, usually in a revolving turret.

The opening of the Second World War accelerated the development of the armored car. By the end of 1941, the Ordnance Department had no less than seven different prototypes. The first of these prototypes was designated the T-17. It was a four-wheeled turreted vehicle, armed with a 37mm gun. It was produced jointly by Ford and Chevrolet. The next prototype, the T-18, was a heavy, eight-wheeled vehicle produced by General Motors and armed with a 57mm gun in a tank turret. The T-19 prototype was a six-wheeled armored car. It was equipped with a 75mm gun [*a rather heavy weapon for the time*. ed.]. The T-20 prototype was a commercial design and was canceled after only four prototypes.

Studebaker offered the T-21 and T-22 designs. The T-21 prototype was

a six-wheel Gun Motor Carriage, designed to carry the standard American 37mm antitank gun. The T-22 design came in a four and a six-wheel version. Both were armored and carried a 37mm gun. Finally, the T-23 prototype was a six wheeled armored car, built by the Fargo division of Chrysler Corporation.

It was obvious that developing so many armored cars simultaneously was a waste of time and money but the dilemma was that all of the designs were good. Neither the Ordnance Department nor the combat arms that would operate the vehicles could decide on one design. However, with U.S. entry into World War Two, the Army needed to get one or two armored car designs into immediate production.

In order to facilitate the process the Army created a Special Armored Vehicle Board under the command of Brigadier General W. B. Bruce. The board was charged with sorting out the various armored designs and choosing the best for production. It was no easy task, but General Bruce was a man of action. After studying the various armored car designs, he recommended that all except the T-22 be canceled. The T-22 held great promise in his view and, with certain modifications to the turret would make an excellent armored car. With that simple recommendation the T-22 was officially accepted for production as the M-8 Armored Car, the "Greyhound." The Ford Motor Company plant in St. Paul, Minnesota was awarded the contract to build the M-8. A total 8,523 of the standard vehicle were built during the war. It served successfully on all fronts and in a wide variety of units.

The M-8 Greyhound success was born of the dozens of armored car projects initiated by the Army during the 1920s. Many of the programs could not be completed due to funding restraints. However, the merger of the Army's demand with the United States' automotive industry led to the creation of one of the most successful armored cars of all time.

The Unknown Machine Gun

The Schwarzlose machine gun was the standard Austro-Hungarian machine gun of the First World War. This machine gun used the standard 8mm Austro-Hungarian service ammunition. It was fed into the gun using a fabric belt. The gun fired 400 rounds per minute and had a maximum range of 1,500 yards.

The Schwarzlose was very rugged and was much appreciated by the front line troops. However, the barrel was too short for the gun which made it inaccurate and gave off considerable muzzle flash. In order to reduce the flash, a funnel shaped blast suppressor was added to the end of the barrel. While this did reduce the flash, it did not improve accuracy. Still, its rugged design and reliability made the gun popular. Although the Austro-Hungarians were the only country to officially use the Schwarzlose, captured models were used by the Italians and Russians.

In addition to its ground role, the Austro-Hungarian Air Force also adapted an air cooled version of the gun for its aircraft. This version was known as the Maschinengewehr 07/16.

The Schwarzlose machine did yeoman service for the Austro-Hungarian Army and Air Force. Its fame has been eclipsed by the more popular machine guns of the war but this weapon served its nation well.

Shooting Up the Raptor

The F-22 Raptor, the U.S. Air Force's newest fighter, will undergo antiaircraft tests at Wright Patterson Air Force Base. The engineers at the base will take an F-22 apart and then shoot the wings, fuselage and tail with antiaircraft gun fire to see if it will hold together. This seems to be an expensive way to test the aircraft, as it is made of hi-tech carbon fiber materials and has a computer on board that makes flight corrections for the pilot. In combat, any enemy round which hits the aircraft in a vital area will cause systems failures that will make the aircraft virtually unflyable. The tests will most certainly validate this, at a huge cost to taxpayers.

DATA FILE

Italian Special Naval Operations in World War I

On 23 May 1915, Italy officially declared war on Austria-Hungary. While the armies mobilized the navies squared off to establish control of the Adriatic. The Austro-Hungarian navy was small but powerful. At the beginning of the war it possessed four modern dreadnought battleships, fifteen pre-dreadnought battleships and a combined strength of thirty-five cruisers and destroyers. The fleet maintained its main anchorages at Pola and Cattaro on the Adriatic, and smaller ones at Trieste, Fiume, Sebenico, and Spalato.

The Italians had a strong and powerful navy to oppose the Austro-Hungarians. They had six modern dreadnought battleships, fifteen pre-dreadnought battleships, and a combined total of sixty-two cruisers and destroyers. Allied commanders considered the Italian Navy quite capable of defeating the Austro-Hungarians at sea. However, events would quickly prove these estimates of the naval situation in the Adriatic to be overly optimistic.

The Italian Navy was spread out across the Adriatic and the Mediterranean. In addition to keeping the Austro-Hungarian navy at bay, the Italians had to protect their merchant shipping and their overseas colonies. The inability of the Italians to mass their fleet caused constant problems throughout the war and gave the Austro-Hungarian Navy the initiative. In response, the Allies augmented the Italians with twelve French destroyers and four British battleships. This presented the Austro-Hungarians with a dilemma.

Austro-Hungarian naval commanders knew that their ships could not operate outside the confines of the Adriatic. Once they rounded the "boot" of Italy they would face the combined British, French and Italian fleets. In addition, their return route would most certainly be blocked by major elements of the Allied fleets. But despite the fact that they could not leave the Adriatic, the Austro-Hungarians could certainly control it by bold actions.

On the day Italy declared war, the Austro-Hungarian fleet displayed its aggressiveness. The ships weighed

anchor, sailed across the Adriatic, and bombarded several towns along the Italian coasts. These raids continued during the summer of 1915 and the Italian fleet seemed at a loss to stop them. Italian commanders moved squadrons of ships about, established patrol routes, and even tried bombarding the Austro-Hungarian coast. Try as they might, they could not stop the Austro-Hungarian fleet. As soon as the Italians concentrated enough warships to challenge the Austro-Hungarians, they retreated to the safety of their well protected ports. Meanwhile, the concentrations of Italian ships became targets for enemy submarines. By the end of the summer the cruisers *Giuseppe Garibaldi* and *Amalfi*, and the British light cruiser *Dublin*, had been torpedoed and sunk by submarines.

Needless to say, the Italians were most disconcerted by these setbacks. The Italian Minister of Marine resigned in disgrace on 25 September 1915. The British and French governments were furious. They were now forced to commit more ships to reinforce the Adriatic, a secondary theater of war at best. So an alternative plan was developed. If the Italian fleet could not defeat the Austro-Hungarians at sea then the Allies were going to have to go into the enemy's anchorages to sink their ships. However, that was easier said than done.

The Austro-Hungarian fleet was well protected in its base at Pola. The seas around the harbor were covered by a flotilla of patrol boats for early warning. In addition, the entrance to the harbor was protected by booms and anti-submarine nets. Searchlights and shore batteries strategically placed around the harbor could engage raiders. Finally, any ships that penetrated the harbor had to be capable of sinking a *Tegetthoff* class battleship. There were four of these dreadnoughts in the Austro-Hungarian Navy: the *Viribus Unitis*, *Tegetthoff*, *Prinz Eugen* and *Szent Istvan*. Each was a modern ship, armed with twelve 305mm guns mounted in four turrets. Each had a belt of armor around its hull which ranged from 150mm to 280mm. Decks had 48mm of armor on them and the torpedo bulkheads were 50mm thick. With a top speed in the neighborhood of 20 knots, these battleships were a force to be

reckoned with. A frontal attack would clearly be too expensive.

Fortunately, the Italian Navy had several individuals who were up to the task of developing special weapons. The first was Ensign Attilio Bisio who designed and built a naval "tank." This strange craft was called the Grillo Climbing Boat. The craft was basically an 8 ton torpedo boat which mounted treads on the sides. It measured 52'6" long and 10'2" wide and was powered by two 10 hp electric engines which gave it a top speed of 4 knots. It was armed with two 17.7" torpedoes and had a crew of three. In operation the Grillo was designed to sail up to the booms and nets outside of the enemy harbor and simply climb over them by use of its treads. Once over the nets it would continue on as a normal torpedo boat.

When it was in range it would deliver a conventional torpedo attack. The design was so promising that four boats were constructed. Alas, in actual operation the Grillo proved less than successful. When two of the boats attempted to climb over the booms of Pola harbor they were immediately brought under fire by Austro-Hungarian shore batteries. Both ships were damaged by enemy guns and then sunk in the harbor.

Despite the failed attack by the Grillos, the Italians were determined to find some new way to force the enemy harbor. The next idea came from a naval surgeon, Sub-Lieutenant Raffaele Paolucci. He proposed building a 220 lb underwater mine. This mine was 160 cm long and 60 mm in diameter. It had an air tank on each end, used to maneuver the mine into position under an enemy ship. The mine had a time fuse which could be set for a maximum delay of one hour. The mine would be attached to the targeted ship by a length of rope. There were several obvious problems with this. Primarily, the mine had to be carried by a swimmer, and dragging a 220 lbs weight in the water reduced swimming capability substantially.

But Captain Constanzo Ciano, who had been put in charge of the special weapons department, did not want to lose Paolucci's enthusiasm. He teamed him up with a naval engineer, Raffaele Rossetti. The team was an immediate success. Rossetti had been working on an underwater

"chariot" which could carry raiders and explosives. In late 1917 he and Paolucci developed a manned torpedo which could carry two 340 lb explosive charges. The torpedo was an obsolete 14" Mark B 57 that could move at a speed of 3 knots and could stay underwater at an operational range of ten miles. The divers held onto the side of the torpedo and controlled its speed by means of a lever. Once near the target, two mines could be detached from the torpedo and attached to the bottom of the ship's hull by means of a powerful magnet. This magnet gave the weapon its name, the Mignatta (i.e., "leech").

The Mignatta appeared to be the answer to the Allied need for a weapon that could force an enemy harbor. The Italians planned to attack at night, sliding the torpedo over the net at the entrance to the harbor. Then, running just below the surface, they were certain they could get close enough to destroy an Austro-Hungarian battleship.

In the autumn of 1918 the team began its preparation for a raid, embarking on a rigorous training program. By late October they were ready. Italian intelligence had located the Austro-Hungarian battle fleet in Pola harbor. On the night of 31 October 1918 the Italians launched their raid. Paolucci, Rossetti and the Mignatta were taken to Venice and loaded aboard torpedo boat PN 65,

commanded by Captain Constanzo Ciano. Late in the evening the torpedo boat launched the raiders at the mouth of Pola harbor.

The raid proved more difficult than expected. Throughout the evening the two Italians battled the cold and the enemy defenses as they tried to penetrate the harbor. Finally, during the early morning hours they managed to get the Mignatta next to the Austro-Hungarian dreadnought *Viribus Unitis*. Two mines were quickly unloaded from the torpedo and the two swimmers went to work. One of the mines was attached to the dreadnought while the other was fixed on a nearby steamer. Timers were set. The exhausted swimmers made their way out of the harbor and were picked-up by the waiting torpedo boat.

Shortly after dawn both mines exploded. The *Viribus Unitis* sank shortly after and the steamer was badly damaged. The Mignatta had worked to perfection. Unfortunately, the success was short-lived. Upon returning to port the two officers found that the dreadnought was scheduled for transfer to the new Yugoslavian navy shortly before it was sunk. Still, despite the unfortunate whims of politics, Sub-Lieutenant Paolucci and Major Raffaele had proven that their method of forcing an enemy harbor was both efficient and effective.

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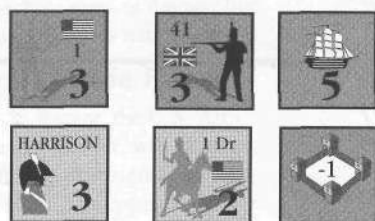
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War of 1812

I just got the map proof for this one. Joe Youst did his usual fine job, illustrating the theater of operations from the Great Lakes down to New Orleans and as far west as the Mississippi River valley. **War of 1812** uses a point-to-point movement system, not so much for reasons of playability but rather for realism. The communications in much of North America in the early 19th century were so abominable that armies were restricted mainly to moving along the major roads, trails and waterways. Units are historical regiments and battalions, with everyone from the Glengarry Light Infantry to the US Marine Corps present. Players can choose levels of mobilization, trading political points for more units and supplies. The game includes some of the neglected features of this war, such as the fighting in the interior between American militia and various Indian tribes. There are also a plethora of random events, with everything from the Star Spangled Banner inspiring the Americans to Wellington making a guest appearance in Canada. Many thanks to developer David Wessman and his playtesters for the effort they put into this one.



Sample counters for War of 1812.

Asia Crossroads

This is the "great game," Britain versus Russia in central Asia, 19th century. The map stretches from the eastern shores of the Caspian Sea to the Sinkiang basin to Deli in India and the Persian Gulf. The movement system accounts for the multi-year nature of the turns, with players expending supply to move their forces in multiple impulses. Units represent combined arms formations, and there are numerous historical leaders. Players have to deal not only with fighting each other, but also with resistance from various Central Asian nations (such as Kazakhstan and Afghanistan). There are also possibilities for the Manchus intervening, the Indian Army mutinying, and the Nihilists launching a terrorist campaign.

Indochina

This is the First Indochina War, the French versus the Communists, 1946-54, which set up the later American involvement in Vietnam. Game scenarios cover critical campaigns in which one side or the other had the opportunity to win a conventional victory, including the Dien Bien Phu campaign of 1953-54. Both sides have special capabilities. The Viet Minh are better at cross-country movement and have guerrilla units which can pop up in the countryside. The French have mechanized and airborne units and airpower. Two combat results tables show the difference between mobile and positional warfare, with each player gaining different advantages based on their historical doctrine. There are also options for Chinese and American intervention, including "what if" the US contributed an atom bomb or two. All this makes for to-the-brink campaigning and the winner can change the history of Southeast Asia. **Indochina's** developer is that well known guerrilla game designer, Brian Train.

S&T Upcoming—Everything is subject to change!

207 **War of 1812:** United States versus Great Britain, all over North America.

208 **First Indochina War:** French versus Viet Minh, 1946-54.

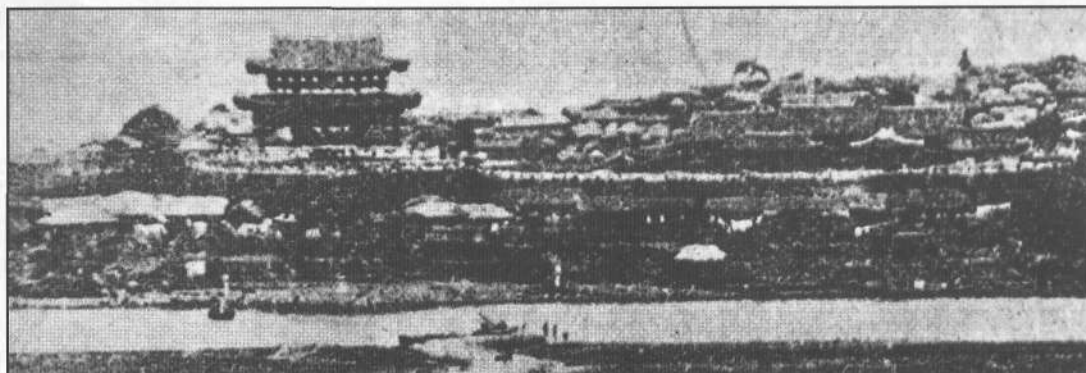
209 **Belisarius:** Reconquer the Roman Empire, 6th century AD.

210 **Operation Elope:** Allied intervention in the Russian Civil War.

Forgotten Wars:

The Sino-Japanese War 1894-5

by Brad Martin



Pyongyang in the 1890s.

The Taewon'gun (prince of the Great House and regent of Korea) tried to insulate his son, King Kojong, from foreign influence. He spurned Japanese attempts to establish commercial and diplomatic relations, but the Japanese were insulted and, having learned much from the West, they sent in the gunboats. Thus in 1876 Japan forced "the Hermit Kingdom" of Korea to open up to the rest of the world while disregarding China's centuries old claim to suzerainty over that country.

To counter Japanese influence, the Chinese Emperor, T'sung-chih, put Li Hung-chang in charge of Korean affairs (Li already held various positions, such as viceroy of the Chinese capital province of Chihli, trade commissioner of the north, and commander of the northern fleet). Li dispatched two agents and they persuaded the Taewon'gun to announce that Korea was a dependent state of China. Thus began a chain of incidents which would lead to the Japanese army marching into Korea and beyond the Yalu River.

Opening maneuvers

The young king was patriotic and had a flexible mind but he was dominated by his wife, Queen Min. Min wished to supplant the Taewon'gun's appointees with those of the Min clan, so she decided to seek Japanese support for her court faction. Japanese officers were invited to train the Korean army and the pro-Japanese Independent Party was wooed. The Taewon'gun was not ready to be sidelined, so he incited Korean officers displaced by the Japanese to rebel. Koreans attacked the Japanese Legation and killed seven of its staff. In the subsequent confusion the

Taewon'gun resumed power and Queen Min was forced to flee.

Li, not wanting an independent Korea (which he believed would inevitably fall under Japanese influence), had the Taewon'gun arrested and installed his protege, Yuan Shih-K'ai, as Chinese resident in Seoul. Yuan reinstalled Queen Min and with the help of six battalions of Chinese soldiers soon dominated the country.

Chinese control of Korea did not last long. The Chinese had to withdraw three battalions to assist in the undeclared war against France in Indochina, 1883-85 [see S&T #200. ed.]. Pro-Japanese Koreans used the opportunity to rebel. In December 1884 they stormed the palace and killed all the pro-Chinese officials they could lay their hands on. "Conservative" faction leaders appealed for Chinese help. Li Hung-chang sent in 2,000 troops. These surrounded the palace and the coup d'etat soon collapsed. An enraged Korean mob encouraged by the Chinese sought revenge against the Japanese, killing 10 Japanese officers and 30 civilians.

Japanese public opinion was outraged. While Japanese leaders urged caution, they could not tolerate the presence of Chinese troops in Korea. Ito Hirobumi went to Tientsin and negotiated a convention that required the mutual evacuation of forces from Korea. The Tientsin Convention virtually reduced Korea to a co-protectorate between the two East Asian powers. Sensing China's weakness, Russia took the ice-free Port Lazareff on China's northeast coast, and Britain seized Port Hamilton in the south. The Japanese government was satisfied



with this arrangement. They were still in the midst of a period of rapid modernisation and unready for a full-scale war.

But Japanese domestic opinion was aroused. The rhetoric of Asianism became rampant, the idea that it was incumbent upon the Japanese to take the lead for the salvation of all Asia, if necessary by eliminating or reforming corrupt regimes and thereby countering Western imperialism. Due to Korea's geographic proximity, the country was seen as the prime target for Asianism. Japanese *shishi* (heroes) demanded that bold acts be undertaken to prevent Western powers from taking over the country. The assassination of the leader of the pro-Japanese Korean faction by agents of Yuan Shih-K'ai galvanised the *shishi* into action. They encouraged a Tonghak rising in Korea with the hope that the Japanese government would be forced to go to war to protect what had become its most vital foreign market.

China appealed to Britain to mediate and suggested a simultaneous withdrawal. When Japan rejected this offer, Yuan Shih-K'ai called for reinforcements. Part of the reinforcement convoy was intercepted by three Japanese cruisers, the *Yoshino*, *Naniwa*, and *Akitsushima*, off the island of Feng-tao on 25 July 1894. The Chinese warship *Ts'ao Chiang* was totally outclassed in the fight and soon surrendered. The *Chi Yuan* fled for Port Arthur and the *Kwang I* was beached and burned. With the escort removed, the Japanese turned on the transports. The British Jardine and Matheson company owned steamer, *Kowshing*, was sunk by the *Naniwa* with the loss of over 1,000 soldiers, (the *Naniwa* was captained by Heihachiro Togo who would win fame in the Battle of Tsushima in 1905 against the Russian fleet).

This naval action had consequences on land. In Korea, Chinese troops from Chihli province, commanded by General Yeh Chih ch'ao, had moved to block the Japanese advance on Seoul, but the loss of so many reinforcements resulted in their retreat to Asan. The Japanese entered the capital and the Taewon'gun was again installed as regent. While he hated the Japanese he loathed Queen Min even more. Both sides

finally declared war on 1 August, recognizing a conflict already being fought.

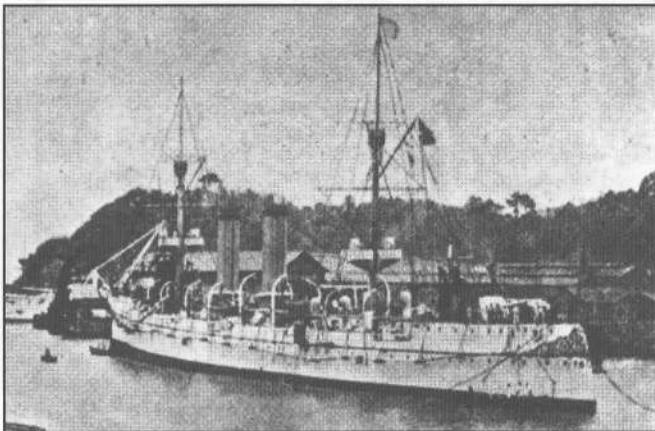
War in Korea

Ito Hirobumi and other Japanese *genro* (elder statesman) now decided to take over the initiative from the *shishi* and to clear the Chinese out of Korea. On 6 August 1894, the 5th Division (General Nodzu) landed unopposed at Fusan and advanced to attack the walled town of Ping Yang (modern Pyongyang) on the right bank of the Tatung river. Ping Yang was defended by 14,000 Chinese under General Yeh. On 15 September the Japanese attacked, but despite some initial success were checked with heavy casualties. Nevertheless, that night the Chinese withdrew to the Yalu River, the border between Korea and Manchuria. While his army escaped, General Yeh would later be executed for his failure in this battle. The Japanese 3rd Division (General Katsura) landed at Chemulpo and, together with 5th Division, formed the 1st Army (General Yamagata Aritomo).

At sea, the balance of power was nominally weighted in China's favour. The Chinese had 65 warships compared to Japan's 32, and her two 7,000 ton ironclads outclassed Japan's heaviest ship of 4,000 tons. However, the Chinese ships were slow (best speed 16 or 17 knots), most of the senior officers were incompetent political appointees, and corruption was endemic (10" guns had only three shells each, many of the shells proved to be duds, some were filled with cement or sand, and many of the smaller guns were assigned the wrong size ammunition). The Japanese ships were more modern, faster, armed with quick-firing guns, and officered by efficient and professional sailors trained by Royal Navy Admiral Archibald Douglas and his team of 50 British and French instructors. Most debilitating to the Chinese position was that only part of the navy was mobilised to fight the war. The Nanyang, Kwangtung and Foochow squadrons were kept neutral by their provincial governors.

Naval Battle of the Yalu, 17 September 1894

It took until mid-September for the Chinese fleet to get ready for combat. Its commander, Admiral Ting Juch'ang, was pressured by the Grand Council for action and threatened with dismissal if he sat in port. Li authorised the fleet to escort a troop convoy to bring reinforcements to Chinese forces deployed around the Yalu River. Five steamers carrying 4,000 reinforcements safely arrived at the mouth of the Yalu. But then a Japanese fleet of 10 warships, one gunboat, and one armed transport under Vice-Admiral Sukenori Ito left the mouth of the Tatung river and intercepted the convoy. At noon on 17 September word was passed to the 10 anchored ships of the Chinese fleet that the enemy had been sighted.



SS Yoshino Maru

The Meiji Military

The Japanese military that fought the Sino-Japanese War had been built up from the forces of the many domains of the *bakuhau* system that existed under the Tokugawa Shogunate. Following the 1859 opening of Japanese ports to Western merchants, the flow of arms into the country resulted in an undercutting of samurai loyalty to the established order. To counter this threat the shogunate initiated wide-ranging military reforms using the expertise of French army and British naval advisers. The reforms continued after the Meiji Restoration of 1868.

A modern national military was based on the 1871 formation of the Imperial Guard and the 1873 Conscription Edict. The central government asserted the principle of central jurisdiction over the military, but the physical facilities of the domain troops were maintained. The new 10,000-strong Imperial Guard was drawn from the best of the domain troops, and the organisation models used by the domain armies and the bakufu [*Shogunate*, ed.] were also maintained. Most urgent was the development of an officer corps equipped with the skills adequate to train recruits and effectively use modern weapons. This was accomplished by the establishment of military academies staffed by French and British instructors and by sending candidates to the West for experience.

Although there were an estimated 450,000 unemployed samurai it was decided that the rank-and-file soldiers were best obtained by conscription. The 1873 Edict was based on the French model which excused from service men who were family heads or who were heirs of farms or family businesses and also had provisions for purchasing exemptions. The building of this new military was entrusted to the Hyobusho (Military Affairs Ministry), staffed by professional military officers.

The army was clearly the leading service during the early Meiji period as the maintenance of internal order was the highest priority. The navy was hampered by the weakness of the industrial base and political instability. Most of the key figures in the naval ministry were drawn from the old bakufu. It also took longer to develop a professional officer corps as the average length of stay in the West for naval training was eight to eleven years. The army gained great prestige from suppressing the 1877 Satsuma Rebellion, in which samurai rebelled in a last gasp of the old order. This success was hailed as a triumph for the new conscript army model. However, it also revealed organisational deficiencies in supply and coordination

A General Staff of the army was created in 1878, increasing the autonomy of the top decision making structures of the military. A new Conscription Edict was passed replacing the French system with the German military model. Army doctors rather than village officials determined who was fit to serve, thereby increasing the quality of recruits. The opening in 1883 of the Japanese Army War College to train upper-level staff officers also saw German influence increase. In 1887 an agency to supervise and standardise army education and training, the Inspectorate, was created.

The designation of the emperor as commander-in-chief in the Meiji Constitution of 1889 reinforced the special relationship between the imperial institution and the military. The impact of this relationship was to strengthen the ability of the military to obtain financial and manpower resources, to resist attempts by other state organisations to control the military, and to strengthen the military's control over its own members by invoking the special duty of each to the ruler, thus reinforcing their sense of uniqueness and their separation from society. The special relationship held up military men as models for society. Military men moved out into the regular police, top-ranking officers moved into ministerial portfolios in the 1880s, and significant numbers moved into the educational system and the civil service.

Yamagata Aritomo played a major role in this movement of officers into the wider society. He developed an extensive network of men linked to him personally in influential positions in the bureaucracy. The network spread the model of "organisational professionalism" throughout society, helping to create a unified and centralised Japan—and militarizing the country.

In the mid-1880s the government committed itself to an ambitious naval program, which through the shipyards at Tsukiji and Yokosuka stimulated the growth of heavy industry. The navy itself was ardently Anglophile and even more isolated from society than the army. It gained formal autonomy from the army only with the 1889 Constitution. By 1890 the Japanese army and navy had assumed the fundamental features that they were to maintain until the end of World War II.

Admiral Togo



Chinese Admiral Ting was an old Anhwei Army cavalry officer, but he was aware of his limitations and readily accepted advice offered by the many foreign officers attached to his fleet. He knew that his crews were in good morale, but that many of his officers were less optimistic, especially the southerners from the Foochow naval academy. Ting had prepared for battle as best he could. The heavy steel shields from the Krupp twelve-inchers had been removed (they had proven to be splinter traps), bags of coal were piled around the guns, and decks were sanded and flooded to check fire. Now all that remained was to choose battle formation, line abreast (ships parallel to each other) or line ahead (ship following a leader).

Given that the Chinese flag codes were inadequate for quick communications, Ting had earlier issued a set of general instructions. He arranged his ships in pairs, requiring them to fight end-on and to follow the movements of the flagship. His intent seems to have been for the fleet to proceed in line abreast in teams of two ships. This may have been Ting's intention but when the fleet got underway there was confusion and with the wide differences in speed between ships, the Chinese formed a crescent with their two battleships in the center.

The Japanese came on in line ahead which favoured their superiority in quick-firing armament. The Flying Division under Rear-Admiral Tsuboi (with the *Naniwa*,

continued on page 46

The Ch'ing Military

The Manchu leader Nurhaci who founded the Ch'ing dynasty in the 17th century, based his power on a tribal military organisation whereby all his subjects were divided into companies, each of which were assigned a coloured banner. Membership in one of the eight banners was hereditary so the whole population was transformed into a military machine.

After the defeat of the Ming, the former rulers of China, the regular Manchu banners (Ch'i-ping) were stationed in the capital and at a few strategic points in China. There were 200,000 of these bannermen. Ming leaders who surrendered were given ranks of nobility, and their troops were organised into the L-ying, or Army of the Green Standard. The 600,000 soldiers of this army were stationed throughout the countryside to deal with local rebellions. A continual problem of the Ch'ing military was the lack of a unified command. Originally the leaders of the banners shared in the top decision-making, but this group leadership model was gradually replaced by a Grand Council and then to the direct control of the emperor. This worked as long as there was a strong emperor, but strong leaders were few and far between among the later Ch'ing.

By the 19th century the bannermen had been assimilated into the Chinese population and taken up more pleasurable pursuits than soldiering. The Green Standard troops were of little value because they were rarely paid and usually used as servants or laborers by their officers. They were thus totally ineffective against the better organized, and technologically superior British and French armies, or even local rebels, such as the Taipings. The Manchus were thus forced to turn to the local Chinese gentry who were permitted to raise militia. These new soldiers were well-paid and trained, disciplined, and loyal to their officers. The officers were generally Confucian scholars and defenders of Chinese,

not Manchu, culture. The militia were successful against the Taipings and other rebels in the mid-nineteenth century, but they were Chinese, and thus regarded

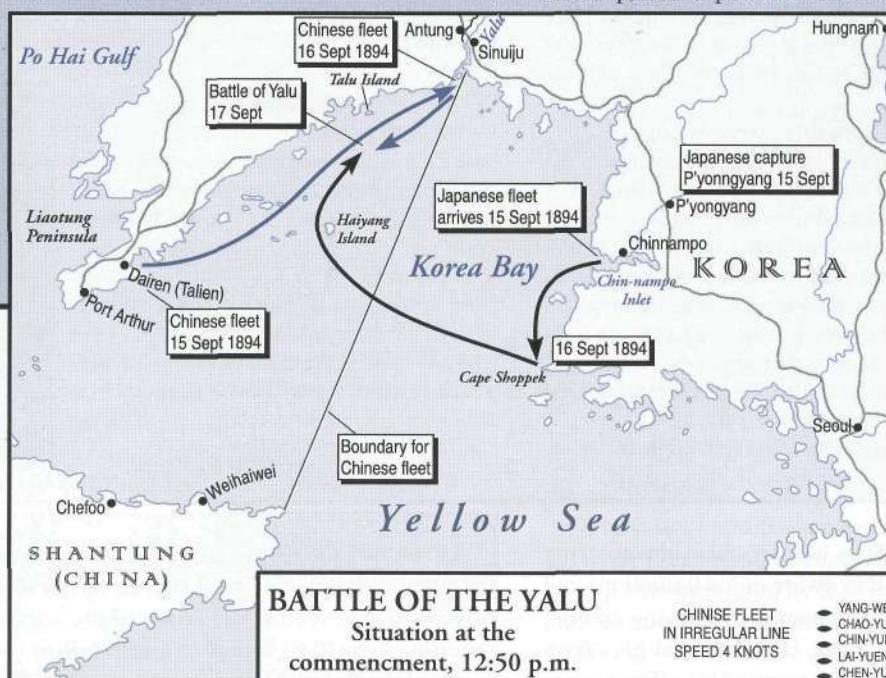
as untrustworthy by the Manchus. Hence they were not employed on a regular basis, only being raised when there was a crisis.

As governor-general of Chihli province, Li Hung-chang had built up an army for the defence of the coast near Tientsin. By the time of the Sino-Japanese War, Li was elderly and had relaxed his control. Nevertheless, his and the so-called Peking Field Force (13,000 strong) under General Yeh were the best armies China had. They were equipped with modern weapons, repeating rifles, steel cannons, and had been trained in Western tactics.

The bulk of 92,400 infantry and 23,400 cavalry in the provinces of Chihli, Shantung and Manchuria were a much more mixed bag. Infantrymen were armed with Mauser, Remington, and Winchester rifles. But many also used the traditional one inch calibre muskets which had to be operated by two men. The artillery lacked mobility and the gunners had little training. There was no organized administrative services, and supply and medical support had to be improvised at the local level. So the Chinese military was no match for the professional Japanese army.

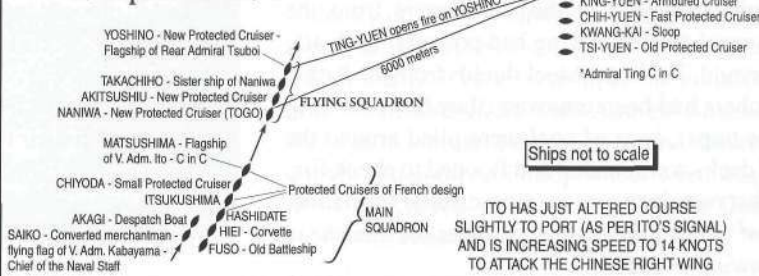
Despite all this, China was supremely confident on the eve of war. Japan was regarded as so insignificant that there was little point in conducting a thorough assessment of its military strength and capabilities. An official wrote: "A mouse and not a tiger—her funds all borrowed, her ships made of wood, her troops mere civilians, her accomplishments meagre, her national strength, hollow, and her people hopelessly divided." Only after the rapid string of Chinese defeats were some officials prepared to admit that they had underestimated their enemy: "No wonder we are losing! Witness the fact that our weapons are inferior to theirs. We indulge in comfort while they are inured to hardship; our troops bivouac in civilian quarters while the enemy, well-

sheltered and well-clad, camp in the open. We operate on our own territory and yet do not know the topography, but they all carry maps individually and move over obscure paths and waterways as if they were old familiar roads." This was an ill harbinger for the decades ahead.



BATTLE OF THE YALU

Situation at the
commencement, 12:50 p.m.
17 September 1894



The Tonghak Movement

The Tonghak movement was founded by the Korean scholar Ch'oe Che-u (1824-64), who was alarmed at the spread of Christianity. He preached that the blending of Buddhism, Confucianism and Taoism into a cult of Eastern Learning (Tonghak) was superior to Western Learning (basically, Roman Catholicism). His main idea was the unity of heaven and mankind and thus the universal equality of all people. This message was widely accepted among the grossly overtaxed Korean peasantry and they flocked to his standard. It was not, however, to the liking of the government which banned the movement and executed Ch'oe.

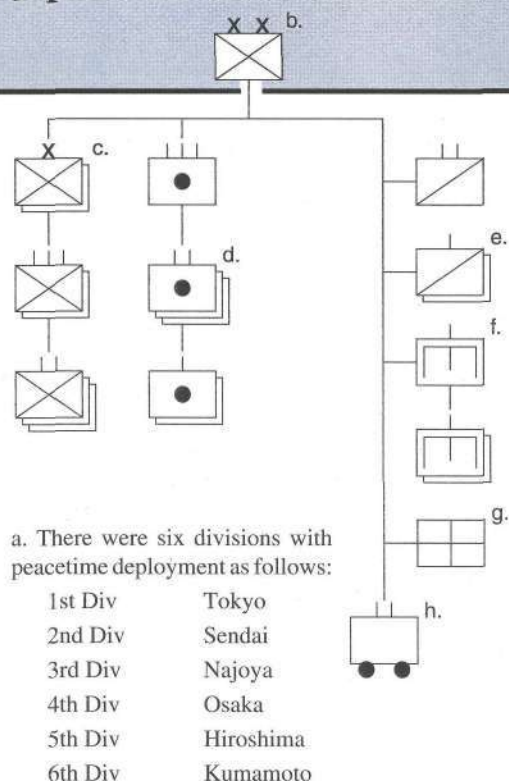
The plight of the peasantry deepened after the opening up of Korea in the 1870s, which permitted the export of rice to Japan (increasing the domestic price) and competition over fishing grounds. When a series of droughts reduced tax revenues the government, unable to tax the aristocracy, sought to make up the shortfall by imposing additional exactions on the peasantry. These taxes sparked an increasing number of demonstrations and caused the Tonghak movement to re-emerge from the underground. By 1892 there were about 100,000 adherents and they had seized the provincial town of Poun. From there they marched on Seoul and petitioned King Kojong to lift the ban on the movement and to rehabilitate Ch'oe. Graffiti appeared all over the city calling for the expulsion of foreigners and the extirpation of Roman Catholicism. Terrified of the rebels, but more so of outside intervention, the king refused and instead bid the Tonghak to return to their homes. Surprisingly, they did.

It was not until 1894 that Tonghak patience was exhausted. A district magistrate's extortionate taxes sparked off a rebellion that soon spread to the whole of southwestern Korea. With sharpened bamboo sticks and honed farm tools the peasants defeated a provincial army. Emboldened, they presented to the king a table of 12 demands, including: the removal of aristocratic oppression, the burning of slave registers, the end of the caste system, and the redistribution of land. The king responded by sending out his elite guardsmen only to see half of them desert and the other half be crushed by the rebel army! When the Tonghaks captured the provincial capital of Chonju, the king panicked and appealed to Li Hung-chang for support.

Li Hung-chang responded to King Kojong's appeal for help against the Tonghaks by sending an expedition with 2000 Chinese troops. These landed at the port of Asan and soon suppressed the rebels. Ito Hirobumi and the Japanese cabinet used this Chinese intervention as an excuse to land 8,000 of their own men (a mixed brigade from Sasebo, under General Oshima), and to demand that the Korean government be reformed. Ito believed that the time was right for military action in Korea before Russia gained strength in the Far East.

Later, when the Japanese gained control of the country they opened up all the ports to the export of rice, reigniting the uprising. The Tonghak leader, Chon Pong-jun, led an army of 100,000 into the city of Nonsan and attacked Japanese supply bases there. Although still fighting the Chinese, the Japanese army was forced to detach some units to deal with the peasants. After a week of fierce fighting near Kongju, the Tonghaks were routed. Although crushed as a revolutionary force, the Tonghak survived in the Ch'ondogyo religious movement which was an early stimulant to Korean nationalism.

Japanese Territorial Division^a



b. The peacetime divisional strength was about 9,000 rising to about 17,000 in war.

c. The infantry were armed with the Murata rifle of 1889 pattern—a single shot breech loader of 8mm caliber. Each

man carried 100 rounds. In reserve were 30 rounds per rifle in battalion transport and also in the divisional ammunition column. Each battalion had 800 rifles.

d. There were two field gun "battalions" and one mountain gun "battalion." The guns were compressed bronze throwing a projectile with a weight of 9 lbs. 5 oz. with a muzzle velocity of 1,417 f.s. There were 142 rounds carried with the battery, the same number with the divisional ammunition column. The only difference with the mountain gun was that it was shorter with a muzzle velocity of 849 f.s.

e. Each squadron had 100 sabres.

f. Bridging and telegraph equipment.

g. The medical corps consisted of two bearer companies and six field hospitals.

h. The train battalion consisted of the personnel and ponies for all regimental and divisional transport. There were three supply columns and five ammunition columns. Rations for eight days were transported. Each pack pony carried 250 lbs. During the war much use was made of hand-carts drawn by three coolies carrying 300-400 lbs.

i. As well as the territorial divisions there was a Guard Division which had a strength of 13,000 having only two infantry battalions per regiment and no mountain guns.

The Pei Yang Squadron

Ship	Captain	Tons	Armament	Speed (nm)	Fate
<i>2nd Class battleships</i>					
Ting Yuan (1)	Liu Pu-ch'an (a)	7430	4 x 12", 4 x 6" Krupp	12	torpedoed in Weihaiwei
Chen Yuan (1)	Lin T'ai-tseng (b)	7430	4 x 12", 4 x 6" Krupp	12	surrendered in Weihaiwei
<i>Armoured cruisers</i>					
Lai Yuan	Ch'iu Pao-jen	2850	2 x 8.2", 2 x 6" Krupp	10	torpedoed in Weihaiwei
P'ing Yuan	Li Ho-lien	2100	1 x 10.2", 2 x 6" Krupp	6 or 7	surrendered in Weihaiwei
<i>3rd Class protected cruisers</i>					
Chih Yuan	Teng Shih-ch'ang(c)	2300	3 x 8.2", 2 x 6" Krupp	15	torpedoed battle of Yalu
Ching Yuan	Lin I-sheng	2300	3 x 8.2", 2 x 6" Elswick	14	sunk battle of Yalu
Ching Yuan	Yeh Tsu-kuei	2850	2 x 8.2", 2 x 6" Krupp	10	sunk by gunfire at Weihaiwei
<i>3rd Class unprotected cruisers</i>					
Chi Yuan (2)	Fang Pai-ch'ien(d)	2355	2 x 8.2", 1 x 6" Krupp	12.5	surrendered in Weihaiwei
Ch'ao Yung (3)	Huang Chien-hs,n (e)	1350	2 x 10.2", 4 x 4.7" Krupp	6	sunk battle of Yalu
Yang Wei (3)	Lin Li-chung(e)	1350	2 x 10.2", 4 x 4.7" Krupp	6	sunk battle of Yalu
6 British-built gunboats					
<i>Training ships</i>					
Wei Yuan	Ying-ch'i				torpedoed in Weihaiwei
Kang-chi					
13 Torpedo boats					

The squadron had 304 officers and 2,820 men and was based at the fortified harbours of Port Arthur and Weihaiwei.

(1) armed with four short 12" Krupp breech-loaders (in two pairs of staggered side-mount barbettes).

(2) German-built cruiser. Two new Gruson 1.97" four-pound quick-firing guns just arrived from Europe were fitted after the battle of Feng-tao.

(3) British built ship.

(a) Committed suicide after the final surrender.

(b) Committed suicide after Chen Yuan struck something (a rock or a torpedo) when entering Weihaiwei harbour.

Replaced as captain by Yang Yung-lin, who also committed suicide after the surrender.

(c) Captain Teng refused a life preserver and went down with his ship and all its 250 crew.

(d) Executed after the battle of Yalu after being accused of cowardice in that battle and in the Battle of Feng-tao.

(e) Drowned in the Battle of Yalu.

Other Chinese ships

Kwang Ping (1)(2)	Ch'en Pi-kwang	1000	3x 4.7" Krupp	10	surrendered in Weihaiwei
Kwang Chia (1)	Wu Ching-jung(a)	1290	3 x 4.7" Krupp	10.5	grounded in Talienwan
Kwang I (1)	Lin Kuo-hsiang	600			lost at battle of Feng-tao
Ts'ao Chiang (3)		572			captured battle of Feng-tao

(1) From the Kwangtung squadron. The ships were on joint north-south maneuvers in the summer of 1894 when the war started and were not released.

(2) A 1000 ton steel torpedo cruiser built at the Foochow dockyard in 1891.

(3) A Nanyang squadron ship, built in Shanghai 1869.

(a) Cashiered for cowardice during the Battle of Yalu

Imperial Japanese Navy ships at the Battle of Yalu

Ship	Captain	Tons	Armament	Speed (nm)
<i>3rd Class battleship</i>				
Fuso	Arai	3718	4 x 9.4" Krupp, 2 x 6" Krupp	11
<i>1st Class cruisers, armoured</i>				
Chiyoda (1)	Uchida	2450	10 x 4.7" Yuan	?
Hiyei	Sakurai	2200	9 x 6"	9
<i>2nd Class protected cruisers</i>				
Akitsushima (2)	Kamimura	3150	4 x 6" Q.F., 6 x 4.7" Q.F.	16
Hashidate (3)	Hidaka	4277	1 x 12.6" Carnet, 11 x 4.7" Q.F.	14
Itsukushima (2)	Yoko-o	4277	1 x 12.6" Carnet, 11 x 4.7" Q.F.	14
Matsushima (2)	Omoto/Dewa	4277	1 x 12.6" Carnet, 12 x 4.7" Q.F.	14
Naniwa (1)	Togo	3709	2 x 10.2" Krupp, 6 x 6" Q.F.	16
Takachiho (1)	Nomura	3650	2 x 10.2" Krupp, 6 x 6" Q.F.	15
Yoshino (5)	Kawara	4150	4 x 6" Q.F., 8 x 4.7" Q.F.	20
<i>Armed Transport</i>				
Saikio-maru	Kano	2913	2 light guns and some small Q.F.s	10
<i>Gunboat</i>				
Akagi	Sakamoto	615	2 x 4.7" Q.F.	8

(1) Built in Britain.

(2) Built in France, 1890.

(3) Japanese built, of steel construction, at the Yokosuka yards, 1891.

(4) Built in Britain by Armstrong's in 1893.

(5) Built in Britain, said to be the fastest warship afloat at the time of its construction.

Q.F. = quick-firing guns, usually for defence against torpedo boats

Takachiho, *Yoshino* and *Akitsushima*) began a flanking turn around the Chinese starboard wing. This gave the Chinese a chance to "cross the Japanese T," but the opportunity was not taken. It was later alleged that Captain Liu Pu-ch'an on the flagship *Ting Yuan* did not wish to expose his ship's flank in making a quarter-turn and countermanded the order, covering his insubordination by ordering his guns to open fire at the hopelessly long range of 6,000 yards.

Regardless, the Japanese Flying Division opened fire at 3,000 yards and shot up the old British cruisers *Ch'ao Yung* and *Yang Wei* on *Ting's* right. The elegant varnished wood paneling of the officers' quarters on both ships was soon ablaze. A British observer ashore wrote, "The *Chao Yung*, an absolute ruin, drifted helplessly ashore, half a league from where we stood—her upper works knocked to pieces; her decks, strewn with mutilated bodies, an indiscriminate mass of wreck and carnage..." The captains of both ships drowned.

While these two ships fought bravely to the end, two others, *Chi Yuan* and *Kwang Chia*, fled the battle. The *Yoshino* peeled away from the Flying Division and attacked the *P'ing Yuan* and *Kwang Ping* which were lagging behind. These two ships also fled. On its way

Other Japanese ships involved in the Weihaiwei blockade:

1st Class cruisers, armoured

Kongo

Riojo

3rd Class cruisers

Kaimon

Katsuragi

Musashi

Nishin

Takao

Tenriu

Tsukushi

Tsukuta

Yamato

Yayeyama

plus...

2 Sloops

7 Gunboats

23 Torpedo boats

There were 1,155 officers and 10,079 men.

back to the main battle line, the *Yoshino* was almost rammed by the *Chih Yuan*, but torpedoed the Chinese ship instead, sinking it with all 250 hands. The rest of the Flying Division turned to port and attacked the *Ching Yuan* which, after taking an hour of bombardment, also went down with all hands.

The Japanese main body then circled the remaining Chinese ships in a clockwise direction but this action brought the slowest ships close to the Chinese battleships. The battleship captains, Liu Pu-ch'an and Lin T'ai-tseng, fought well and heavily damaged the

Mandarins and Meiji

Li Hung-chang (1823-1901) was the most influential man in China during the later nineteenth century. Li was a protégé of Tseng Kuo-fan (who was instrumental in defeating the Taiping Rebellion, 1851-68) and successfully defended Shanghai against the rebels. He took part in the suppression of the Nien revolt and was rewarded with the position of grand secretary and superintendent of trade for the North. This brought him into contact with foreign countries and he came to realise the value of Western technology. He was the leading member of the "self-strengthening" movement which hoped to use Western knowledge and techniques to enable China to resist foreign encroachment while preserving her traditional social structure. He transformed the Anhwei Army into a modern military force and created an ironclad Chinese navy. However, his policies always had opponents and he was never able to establish a centralised military command. This lack



Li Hung-chang

of unity led to defeat in the war with France in 1884 [see *S&T* #200, ed.] and again in Korea. The Sino-Japanese War was just as damaging to Li as it was to the Ch'ing Dynasty.

Yuan Shih-k'ai (1859-1916) was educated in the Classics and purchased a military title. He first came to prominence as a member of the Chinese army sent to Korea in 1882. He was appointed Chinese resident and commissioner of commerce and in conjunction with Queen Min's faction began reforming the Korean army. His service during the Sino-Japanese War won the approval of the Court and he was chosen to reorganise and train the defeated Chinese army. In suppressing the Boxer Rebellion of 1899-1901, he gained Western support and became the most powerful figure in north China. In 1911 the Ch'ing Court, desperate to fight the new forces of the Chinese Republic, appointed him prime minister and he fought the Republicans to a standstill. The two sides came to an agreement and Yuan became provisional president of the new republic. In 1916 he founded a new dynasty but was unable to win the support of the provinces and it collapsed after three months.

Yi Ha-ung [alias **Prince Hungson, the Taewon'gun**] (1821-98) came to power in Korea in 1864 when he arranged for the Dowager Empress Cho to choose his son, Kojong, as king. He took the title of Taewon'gun ("Prince of the Great House") and ruled as regent. A strong leader and a man of action, the Taewon'gun was determined to preserve the dynasty by removing peasant discontent. He did this by attacking the vested interests of the aristocracy, but in the process the system was weakened and became susceptible to peasant rebellion. Aware that the foreign powers were hungry to gain access to Korea, the Prince had a simple foreign policy: no treaties, no Catholics, no West, and no Japan. He was quite happy to see Korea remain a "dependent country" (shuguo) of China. However, he had not counted on the sway Queen Min held over his son, and Yi was forced into retirement in 1873. In 1894 the Japanese forced King Kojong to restore the Taewon'gun, but he was only a masquerade for Japanese control. The Japanese

soon tired of him and he was again forced into exile.

Queen Min was a member of the powerful Min clan and was chosen to marry the 13-year-old King Kojong in 1866. She was a "woman of great determination and much poise of manner" and became "the ablest female politician in the history of the dynasty." The Taewon'gun recognised that she was far too able and did not like her one bit, and the feeling was mutual. Five years after her marriage she gave birth to a son but he died three days after, it was rumoured, because the Taewon'gun had given him "some kind of ginseng palliative." From that day onward dislike turned to hatred and Min worked to oust the regent from power. She gathered around her a faction of pro-Chinese Koreans and eventually they persuaded King Kojong to force his father to retire. She developed a close relationship with Yuan Shih-k'ai and at the same time tried to encourage a limited reform. However, she could not prevent the Japanese from gradually dominating the country. She was driven out of Seoul in 1894 and assassinated in 1896.

Ito Hirobumi (1841-1909) was born into a peasant family yet played a crucial role in the building of modern Japan. He led missions to Europe in the 1870s and 1880s and drafted the Meiji constitution in 1889, establishing the National Diet [*Parliament*, ed.]. As prime minister he pushed through the modernisation of the country, instrumental in the defeat of China in the Sino-Japanese War. Frustrated by the blockage of government legislation Ito resigned and joined the political fray. His Seiyukai party soon came to control the Diet and Ito now hoped to get his platform passed. However the *genro* (elder statesmen) blocked all progress and Ito retired to become resident-general of Korea. He tried to pursue an even-handed policy but nevertheless was assassinated by a member of the Korean independence movement.

Yamagata Aritomo (1838-1922) is regarded as the founder of the modern Japanese army. He was born into a family of lower ranking samurai and as a student became a member of revolutionary loyalists opposed to the growing influence of foreign powers. The Shimonoseki Incident of 1864, in which an Anglo-Dutch-French-American fleet bombarded some Japanese coastal forts, convinced Yamagata that the anti-foreigner policy was doomed to failure unless Japan acquired modern armaments. His role in suppressing a pro-Shogunate revolt resulted in Yamagata being appointed commander of the 10,000 strong Imperial Guard. He then introduced conscription, separated the army and navy, and became army minister.

In 1877 Yamagata headed the expeditionary force that crushed the Satsuma revolt. With all opposition removed he assumed the position of chief of staff and proceeded to remodel the army along Prussian lines while still emphasizing the old samurai virtues of bravery, loyalty and obedience to the emperor. Yamagata became Japan's first prime minister but soon tired of politics and eagerly took up the role of commander of the 1st Army during the Sino-Japanese War.

After the war he returned to government, enacting a wide range of conservative policies to suppress the labour movement, to strengthen the bureaucracy, and to increase the autonomy of the armed services. He led a contingent to suppress the Boxers and served as chief of staff during the Russo-Japanese War.

Matsushima, forcing Ito to transfer his flag. This was an unanticipated development for Ito. He had expected his fleet's French Carnet twelve-inch rifles to demolish the Chinese battleships—the Carnets were supposed to penetrate 30" of armour. However no damage on the battleships' 14" armour belt exceeded 4 inches. The two battleships were hit over 350 times but went on fighting. After five hours of battle, Ito decided to withdraw. Some Chinese torpedo boats had come up and Ito was concerned about his ship's vulnerability to them.

The Chinese had lost 5 ships (including the *Kwang Chia*, which ran aground) and 700 sailors in this battle. The Japanese had 80 men killed and three ships damaged sufficiently to warrant their return to Japan. The naval battle of the Yalu gave Japan command of the sea. For the remainder of the war the Chinese fleet did not venture out of port.

As the first major battle between ironclads, the Battle of the Yalu was intensively analysed by the world's naval authorities. The Japanese victory seemed to reveal the advantage of the close line ahead formation with its resultant concentration of firepower. The battle also demonstrated the invulnerability of battleships to the fire of smaller vessels and that battleships were too slow to catch cruisers. Henceforth, fleets were divided into separate battleship, fast armored cruiser and smaller cruiser squadrons.

Surviving Chinese ships, many severely battered, returned to Port Arthur. Repairs proceeded at a rather slow pace—a badly decomposed body was discovered on one ship two weeks after the battle! The Chinese court was displeased. Li was stripped of one of his honours and a German army general was offered command of the Peiyang fleet; he wisely declined.

Across the Yalu and into China

By October the Chinese had gathered about 20,000 men under General Sung at Chiuliencheng on the Yalu river. On the Japanese side, Marshal Yamagata decided that a frontal attack was out of the question so he decided to turn the Chinese left flank instead. Japanese engineers built a bridge across the 200 yard wide Yalu at night, allowing the 1st Army to surprise the defenders. Outmaneuvered, Sung retreated westwards into Manchuria leaving detachments to defend various towns. He turned south when he learned that the Japanese were marching towards Port Arthur.

A new Japanese force, the 2nd Army (led by Marshal Oyama), entered the theater on 24 October, landing on the northern coast of the Liao-tung peninsula to attack Port Arthur. The land route to the port was defended by a garrison of 10,800 at Chinchou, and by six forts armed with modern Krupp and Creuzot guns at Talienwan Bay.

By 6 November the Japanese 1st Division (commanded by General Yamaji) was ready to attack. As the Japanese began to advance, the Chinese retreated and

the forts fell without a shot being fired. Why this excellent defensive position was so readily abandoned is not known. The 1st Division was joined by a mixed brigade from the 6th Division (led by General Hasegawa) and advanced down the peninsula in two columns.

The land defences of Port Arthur formed a rough semi-circle of 2.5 miles, consisting of eight forts garrisoned by 9,100 men. Japanese artillery fire repulsed a Chinese counter-attack and on 21 November Marshal Oyama ordered his army to attack. Siege artillery had softened up the defenders and a night march assured tactical surprise. The Japanese captured three forts in a five minute rush. The way was now open to the harbour and it was not long before the Chinese threw in the towel. The Japanese lost 66 men killed, the Chinese about 2,000 with the bulk of the garrison escaping up the peninsula.

General Sung with a force of about 8,500 men now arrived and attacked the 1,500 strong Japanese garrison at Chinchou. He was repulsed with heavy losses. The rapid collapse of the fortress of Port Arthur forced the Chinese government to admit its military weakness. An embassy was sent to Japan to negotiate peace, but it was rejected as lacking sufficient credentials. After their string of victories the Japanese were not that eager to lay down arms.

The ultimate Japanese goal was Peking, but supply considerations ruled out such an advance during winter. However, to deceive the Chinese into believing that their target was Mukden in Manchuria, the Japanese government ordered the 1st Army to take Haicheng (which would cut the line of communications between Mukden and Port Arthur). This was done without difficulty on 13 December. The Tartar General I-ko-teng-a counterattacked towards Fenghuangcheng, but was halted by a brigade of the 3rd Division (led by General Tachimi). General I brought up reinforcements and resumed his attack, but was again defeated and retreated to Liaoyang. With his line of communications cut by the fall of Haicheng, Sung attempted to move north from Kaiping, to join General I. However, General Katsura of the 3rd Division correctly deduced Sung's intentions, and drove the Chinese off to the west after a day-long battle in fields of snow. By January 1895, General I had gathered an army of 15,000 Tartars and Mongols and launched two attacks on Haicheng. Both were easily thrown back by the Japanese.

Attack on land, victory at sea

The Chinese fleet (the two battleships, 7 cruisers, 6 Armstrong gunboats and 11 torpedo boats) had withdrawn from Port Arthur before its fall and retreated to Weihaiwei on the Shan Tung peninsula. Weihaiwei was the next target of the Japanese. A 50-transport convoy landed the 2nd Division and part of the 6th Division unopposed at Yungcheng Bay on 20 January 1895. Meanwhile, the Japanese fleet blockaded Weihaiwei

harbour. The Chinese garrison there consisted of about 7,500 men, but most of the forts were oriented against a naval and not a land attack. Admiral Ting had even gone as far as ordering these forts destroyed, but was prevented from doing so by the local commanders.

On 30 January the Japanese captured three of the eastern forts from their landward sides, and submarine mines guarding the harbour were deactivated. Weihaiwei itself was captured on 2 February and the Chinese abandoned the western forts. Active defence was reduced to the island of Liu kung tao and its naval yard at the mouth of Weihaiwei harbour. With the harbour defences breached, Admiral Ito sent in 10 torpedo boats to attack the Chinese fleet. The *Ting Yuan* was sunk for the loss of one torpedo boat and two more damaged. A further torpedo attack the next night was more successful with the *Lai Yuan*, *Wei Yuan* and *Pao Hua* sunk. On 7 February the remaining Chinese torpedo boats tried to escape westwards, but all were sunk.

The Japanese were now free to repair the captured forts and their coastal defence guns, just as Ting had feared. They turned them on the Chinese fleet anchored at the naval yard. Ting took personal command of the *Ching Yuan* and attacked one of the Japanese-held forts, but his ship was hit below the waterline by a 9" shell and had to be beached. With the fleet under bombardment from both land and sea, there was a mounting Chinese clamour for surrender. Admiral Ting wanted his captains to scuttle their ships first, but they refused, fearing that such action would result in Japanese reprisals. By 11 February the situation was chaotic and a group of soldiers even threatened Ting with death. Ting retired to his cabin where committed suicide. The Chinese surrendered the next day. The *Chen Yuan*, *Kwang Ping*, *Chi Yuan*, *P'ing Yuan* and six gunboats were turned over to the Japanese.

End of war, beginning of a larger conflict

This series of defeats had so discredited Li Hung-chang and his policy of "self-strengthening" that he was dismissed and disgraced. With no fleet remaining in northern waters and the Japanese army preparing to march on Peking, the Chinese court had no option but to seek peace. The Japanese, who were now suffering supply problems, were ready to negotiate. As a final humiliation, the court appointed Li peace envoy to Japan. The negotiations at Shimonoseki saw the Japanese present harsh terms and Li was unable to induce them to be lenient. He argued that Japan should join China in playing off the Western powers against one another, but the Japanese were too interested in establishing their own empire in the East. The Japanese position eased only after their government was embarrassed when Li was shot in the face by a rightwing fanatic.

The Japanese immediately proclaimed a ceasefire and drew up a treaty which provided that the Chinese: 1) recognize Korean independence, 2) pay an indemnity of 200 million taels [*a measure of silver*. ed.], 3) cede Taiwan, the Pescadores Islands, and the Liaotung peninsula, 4) open Chungking, Soochow, Hangchow and Sha-shih as ports, and 5) recognize the right of Japanese to open factories and engage in industry in China. These demands seemed outrageous to the Chinese and some urged that the war continue, but recognising the straits of their situation, the court ratified the Treaty of Shimonoseki on 8 May 1895.

The Taiwanese, however, refused to cede their island to Japan and declared an independent republic on 25 May. This obstacle to peace was swiftly dealt with by Li's son, Li Ching-fang, backed up by a Japanese army. A more serious objection came from Russia, Germany and France, which saw Japan as becoming too powerful in China. Their Triple Intervention forced Japan to reduce the indemnity and to hand over the Liaotung peninsula to Russia. This caused many Japanese to resent the West, especially Russia, for cheating them of what they regarded as the full fruits of their victory.

The war ended the influence of Li Hung-chang and was a devastating blow to the prestige of the Ch'ing dynasty. There was no excuse for China being defeated by the Japanese, until then seen as an upstart minor power on China's periphery. The way was paved for the Ch'ing's overthrow in 1911 and the establishment of the Chinese Republic. For Japan, the war demonstrated that she too could play the imperial game of the West, and gave her the military experience that would prove invaluable in the war against Russia one decade later.



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Strategic Deployment in South Asia & the Indian Ocean

by Joseph Miranda



Indian troops waiting to be deployed by air.

S&T continues its analysis of potential conflict in Asia...

In the emerging world of the 21st century, the ability to project national military power is becoming an increasingly complex equation. The United States has a global military reach, with its worldwide network of bases, its naval and air striking power, and its information warfare capabilities. But American power is balanced by the large land forces maintained by Asian nations. In South Asia, the predominant power is India.

The Strategic Setting

U.S. policy has been to refrain from making large scale commitments of land forces to combat abroad. Instead, policy has been to take advantage of American superiority in airpower, naval forces and logistics to concentrate maximum force at critical points. American allies are expected to provide the bulk of land combat forces to engage in ground combat. In comparison, real and potential foes of the United States lack sufficient logistics, transport and airpower to challenge the United States on the strategic level. American diplomacy has been generally effective in isolating its foes, thereby allowing the U.S. and its allies to overwhelm them without interference. This was true during the 1991 Gulf War, where Iraq found only Jordan willing to support it regionally. Meanwhile, the U.S. was able to mobilize not only its NATO allies but also the UN and several Middle Eastern countries to provide troops and diplomatic support for the war against Iraq.

U.S. policy has been to fight in such a manner as to gain the maximum domestic and international political advantages at the least cost. The 1991 Gulf War was a victory won quickly, at little cost, and providing an example to the world (via the globalized media) of the supremacy of American technological warpower. The subsequent American involvement in the UN intervention in

Somalia proved to be something of a setback, as U.S. forces became bogged down in guerrilla warfare. But the U.S. had, at least, the sense to withdraw from a situation that was a potential disaster. The 1999 U.S. led NATO offensive against Serbia, while having mixed military results, nonetheless was an adequate demonstration of the power of NATO and the dangers of opposing U.S. policies in the field.

However, this policy has also led to a reaction among America's competitors. Many nations are scrambling to take advantage of the latest military technology, to include sensor systems, precession guided weapons (such as cruise missiles) and "information warfare" (the latter term being now used for the combination of electronic warfare, PSYOP and cybernetic operations).

U.S. policy also has had political ramifications. Many countries, such as India, see American policy as a combination of righteousness and blatant disregard for international law. Indeed, U.S. policy shifts frequently are generated by the current political needs of its government. Thus, the U.S. intervention in the Gulf War was justified by UN mandate, yet the attack on Serbia was in contravention of the NATO charter. While U.S. government policy may play well to domestic constituencies, it is increasingly alienating other nations. Again, this impinges on the ability of U.S. forces to deploy in the region by creating a political climate in which the utilization of foreign bases and allies will be made increasingly difficult.

Indian military commentators view the United States as having "geo-economic reach," the ability to project its power globally via a combination of economic and military factors. Consequently, for India to defend its interests, it must take a proactive policy. India has the potential for becoming a major regional

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R U S S I A



Population	273,100,000	<i>Army (units)</i>	<i>Active</i>	<i>National</i>
Gross Domestic Product	\$8,790,200,000,000 (1998)			<i>Guard+ reserve</i>
Military budget	\$276,200,000,000 (1999)	Armored divisions	2	1
<i>Total armed forces</i>		Mechanized divisions	4	4
(active)	1,370,000	Infantry divisions	-	2
Army		Light infantry Divisions	2	1
(active)	469,000	Air assault divisions	1	-
(reserve)	784,000	Airborne divisions	1	-
Navy		Training divisions	-	12
(active)	369,800	Armored brigades	-	2
(reserve)	197,000	Mechanized brigades	-	4
Marine Corps		Infantry brigades	-	5
(active)	171,000	Light infantry brigades	-	3
(reserve)	96,000	Armored cavalry regiments	3	1
Air Force		Infantry Scout brigades	-	1
(active)	361,000	Aviation brigades	5	-
(reserve)	177,000	Artillery brigades	6	-
Paramilitary	-	Independent infantry battalions	3	3
<i>Strategic Command</i>		Independent airborne battalions	1	-
ICBM	680	Independent artillery battalions	-	36
Bombers	174	Independent aviation battalions	-	18
Submarines (ballistic missile armed)	18	SAM battalions	11	9
SLBM	c. 432			

Army (equipment)

Tanks	8,000	
Other AFV*	24,500	
Artillery	4,700	
Surface to surface missile launchers	-	
Air defense guns	-	
Surface to air missiles	500 (Patriot)	
Helicopters	1,500 armed/3,500 other	
Amphibious ships	58	
Landing craft	110	

Navy

	Active	Reserve/ Inactive
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Aircraft carriers (each with c. 70 a/c + 6 h/c)	11	2
Submarines (tactical)	57	
Battleships	-	2
Cruisers	29	-
Destroyers	54	-
Frigates	37	1
Patrol/coastal/missile boats	21	-
Mine warfare:	27	-

Amphibious (active)

Command	2 (700 troops)	
LHD	6 (5 a/c, 48 h/c, 1,900 troops, 60 AFVs, 3 ACV)	
LHA	5 (6 a/c, 21 h/c, 1,900 troops, 100 AFVs, 1 ACV)	
LPD	11 (800 troops, 4 AFVs)	
LSD	16 (c. 500 troops, 40 AFVs)	
LST	2 (350 troops, 10 AFVs)	

Landing craft	c. 200	
Support and logistics	c. 60	-
Military Sealift Command		
Cargo	8	-
Tanker	10	-
Propositioning Force	34	-
Fast Sealift	8	-
Hospital	2	-
Reserve Sealift	-	164

Naval Aviation squadrons		
Fighter squadrons	12	1
Fighter/ground attack squadrons	24	2
Electronic warfare	18	1
Recon squadrons	10	9
Antisub Warfare sqds	10	-
AEW	10	2
Logistic support	4	12

Helicopter squadrons		
Antisubmarine Warfare	20	4
Mine countermeasures	2	-
Cargo	6	4

Marine Corps

	Active	Reserve
Infantry Divisions	3	1
Fighter/attack squadrons	18	4
Tanker squadrons	6	2
Attack helicopter squadrons	6	2
Transport helicopter sqds	25	6

Air Force

	Active	Reserve
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Fighter/ground attack	52	56
Bomber squadrons	-	3
Electronic warfare squadrons	2	-
Airborne early warn sqds	6	-
Tanker squadrons	23	30
Recon squadrons	3	-
Transport squadrons	28	46

Special Operations Forces (SOF)

Army SF groups	5	2
Army Ranger regiments	1	-
PSYOP groups	1	2
Civil affairs battalions	1	36
Army aviation regiment	1	-
Navy groups	3	6
Air Force squadrons	14	4

Notes:

a/c: number of aircraft

h/c: number of helicopters

*AFV: armored fighting vehicles: includes reconnaissance, infantry fighting vehicles, armored personnel carriers, and amphibious tanks.

Amphibious ships:

LHA: Landing ship, assault (helicopter capable)

LHD: Landing ship, dock (helicopter capable)

LPH: Landing platform, helicopter

LPD: Landing platform, dock

LSD: Landing ship, dock

LST: Landing ship, tank

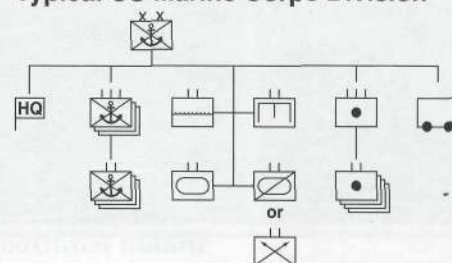
LSM: Landing ship, medium

LCU: Landing craft, utility

Division: the basic combined arms formation of most armies. Generally divisions range from 12-18,000 soldiers, including combat and support formations. Divisions have two to four major maneuver elements (brigades), an artillery regiment or brigade, plus divisional logistical services. A brigade, regiment or group is roughly equivalent to one third a division.

Squadrons: the basic building block of most air forces. A squadron consists of four to 24 aircraft, depending upon type. Several squadrons are combined into a group or wing.

Typical US Marine Corps Division



power. It has a domestic arms industry, a large population, and well equipped armed forces with a history of solid operations, most notably the victory over Pakistan in the 1971 war [see *S&T* 174, ed.].

The geography of the South Asian/Indian Ocean favors India in certain regards. The Indian peninsula juts out into the Indian Ocean, providing a strategic barrier interdicting naval movement from southeast Asia to the Persian Gulf and vice versa. There are no major land masses south of India on which opposing forces could establish bases. India has several major naval bases along its coasts, giving it a position from which it can interdict the surrounding waters. And India is between China (through Tibet), Southeast Asia, and the Middle East, giving it the advantage of central position, i.e., a position from which it can maneuver forces to three different fronts, dealing with separate threats individually.

Furthermore, India maintains extensive paramilitary forces, and these forces conduct many of the border defense and internal security missions which might be otherwise relegated to the armed forces. Indeed, the strength of India's paramilitary formations exceeds that of its active Army. But these formations have little ability to deploy outside the country. Some of these formations, such as the Home Guard, have minimal training. Nonetheless, they do free up other army units for deployment.

But there are several mitigating factors against Indian military predominance in South Asia. The primary one is political, insofar as the Persian Gulf States and Indonesia on the periphery have been U.S. allies for decades. The horn of Africa is a different case, with the disastrous UN intervention in Somalia during the early 1990s indicating the difficulty of establishing control of regions which have been fragmented by guerrilla warfare. Nonetheless, Indian forces have been involved in peacekeeping operations under UN auspices, and have been involved in an active counterinsurgency in Ceylon. The other difficulty is military, in that India lacks the ability to move and support its forces across oceanic or aerial expanses.

Force Structures

Army

In terms of land combat forces, India would appear to have an edge over the United States. India maintains 39 divisions, compared to the U.S. 34 (Army plus Marines). Upon closer examination, India maintains an even greater edge. Twenty-

one of the U.S. divisions are in the reserves/National Guard, and could be mobilized only after considerable time and effort, as well as domestic political debate. The experience of the 1991 Gulf War was that U.S. National Guard combat units needed training before they could perform to the same standards as active units (interestingly enough, U.S. reserve units which performed non-combat and support roles, such as medical support, often out-performed active units, as the reservists had expertise in their military areas from their civilian professions). Another limiting factor on U.S. deployment of ground forces in the region is that it must maintain forces in various other theaters, such as Europe, as well as within the United States itself for contingencies.

U.S. forces currently deployed in the Pacific, including the west coast of the U.S., amount to four divisions and one brigade. These could be supplemented by units in the rapid deployment role, notably the 82nd and 101st Airborne divisions. During the Gulf War, the United States deployed about nine divisions to the theater of operations over a span of five months.

The U.S. maintains a specialized formation for intervention in the Persian Gulf region, the Central Command. This command currently includes the basing facilities on the Arabian peninsula, plus the 5th Fleet. It could also be heavily reinforced from other commands in the event of war. For a variety of political reasons, the U.S. maintains no combat forces in the Persian Gulf per se. The critical element is how rapidly the United States could deploy its forces—and it is the possession of bases and logistical facilities in the theater that provide the foundation for any such intervention.

The U.S. Army has a very effective proven doctrine for land warfare, called AirLand Battle. AirLand Battle emphasizes the integration of ground combat and air power to fight throughout battle areas. AirLand emphasizes a rapid pace of operations to continually outmaneuver and outperform the foe at all levels. A recent development calls for commanders to coordinate their operations via a complex set of communications and computer links, disseminating information up and down the chain of command.

U.S. units also have extensive electronic warfare assets assigned to them, capable of intercepting and jamming enemy communications. The objective is to give the friendly side a clear picture of the battle area while degrading the enemy's ability to gather information about American forces. The idea is to force the enemy to fight "blind."

A vulnerability in U.S. doctrine is that it requires high levels of training to execute. The one major test for AirLand Battle was during the 1991 Gulf War, but this saw only three days of sustained land combat. The real question, which is unanswered in the present, is how well the U.S. system would function in the event its own forces sustained major casualties, or if there were a breakdown in communications.

Naval Power and Basing

The U.S. Navy is deployed in five fleets globally: 2nd Fleet is in the Atlantic, 3rd in the central Pacific, 5th in the Indian Ocean, Persian Gulf and Red Sea, 6th in the Mediterranean, and 7th in the western Pacific (note that even numbered fleets are assigned to the Atlantic-Mediterranean and odd numbered fleets in the Pacific and south Asian waters). 5th Fleet is deployed as a force usually only during crises or wars; in these events, it would be formed from units from other fleets.



Indian paratroops

The United States maintains a chain of bases from the Persian Gulf to the Pacific coast of America itself. The primary weakness of this chain is within the Indian Ocean. The U.S. base in the Indian Ocean is Diego Garcia, a small island located several hundred kilometers south of the Indian peninsula. The U.S. would be able to take advantage of friendly naval facilities in countries on the Indian Ocean periphery such as Australia, Indonesia, and Singapore. But these bases are dependent upon friendly governments. The experience of the UN intervention in Somalia in the early 1990s, and the collapse of the Suharto regime in Indonesia in 1999, indicates how unpredictable these states can be. A local guerrilla war can turn such deployments into political liabilities and force their abandonment.

In East Asia, the United States maintains extensive forces in Japan and Korea, and is allied with Taiwan and the Philippines. These countries, along with the U.S. territory of Guam, provide a strategic "triangle" from which American forces can be deployed to mainland Asia. The U.S. formerly maintained extensive base facilities in the Philippines (Clark Air Force Base, Subic Bay), but these have been evacuated in recent years. The Indonesian archipelago provides a strategic barrier for naval forces through which naval transport can be interdicted. Throughout General Suharto's rule (1965-1999) Indonesia was an ally of the United States. The 1999 overthrow of Suharto has, again, introduced an element of instability into this relationship.

In South Asia, the primary U.S. ally is Pakistan. Pakistan holds a commanding position on the Asian land mass itself, being at the strategic crossroads between Iran, Afghanistan, Central Asia (with its traditional trade routes), and India. Indeed, past invasions of India have come through this region, from Alexander's Macedonians through the Islamic, Mogul and Afghan eras. And the British used what is now Pakistan as their base for several invasions of Afghanistan in the 19th century — invasions whose purposes included maintaining a British presence opposite Central Asia (which, in the 19th century, was the target of Russian imperialism). Moreover, Pakistan is also located at the entrance to the Persian Gulf, with its implications for control of Middle Eastern oil. But Pakistan is beset by many problems, including fiscal insolvency and the instability generated by the 1999 coup.

Therefore, while the United States does maintain an extensive network of bases in Asia, those which face South Asia itself are tenuous. Of course, the United States can deploy its forces from the western periphery of the region via bases in Europe and Africa. The U.S. position in Europe is fairly solid. With the extension of NATO to Eastern Europe in the 1990s, the U.S. is actually advancing geopolitically from Western Europe towards the Eurasian heartland.

The U.S. position in Africa is more uncertain. Egypt and Israel remain solid U.S. allies, thereby guaranteeing access through the Suez Canal. But the U.S. withdrawal from Somalia removed the possibility of the horn of Africa becoming a major American base.

From a military standpoint, it would be extremely difficult for any Asian power to challenge the U.S. along the periphery. The United States maintains a very large superiority in naval and air strength over any potential challenger in Asia. The United States' main edge is in its "capital" ships—aircraft carriers and guided missile cruisers. The U.S. has 11 aircraft carriers, compared to India's one. And India has no cruisers, compared to 29 for the U.S. [as of late 1999, ed.]. Further-

more, American aircraft carrier capacity is far larger than any foe's, with each U.S. attack carrier being capable of launching upwards of 80 aircraft. A deployment of even 50% of total American naval strength to Asian waters would still place the U.S. Navy ahead of all potential competitors combined.

Consequently, India's ability to challenge the United States on the high seas is extremely limited. Just as critically, while U.S. bases in the periphery of the Indian Ocean may seem vulnerable, being located in nations which are weak militarily, or as in the case of Diego Garcia, being small islands, they do pose a problem to any opposing nation—namely, how to reach them. Without a strong navy, it would be difficult for any opponent of the U.S. to occupy these bases, or if they were able to take them by surprise attack or coup, to be able to hold them in the face of a determined U.S. naval response.

Again, though, the real problem is basing. Would America's allies be willing to allow the U.S. to use their port facilities? Some reasons they might not want to do so are political: these nations may not want to be drawn into a U.S. sponsored war for fear of retaliation from other belligerents. Also, local governments might have to answer to their own people, or at least militant factions, who would see such U.S. deployments as subordinating national interests to foreign domination. This is reflected in the fact that, unless there is an immediate threat, the Persian Gulf states do not allow the U.S. to deploy major combat units in their territory.

The factor of domestic instability can be seen in Iran. While Iran was once a staunch ally of the United States, the 1979 anti-Shah revolution turned the situation around radically. Indeed, throughout the 1980s, the U.S. supported Iraq in its war against Iran, and the U.S. even conducted limited naval operations against Iran to secure oil trans-shipping routes (and, perhaps, as retaliation for the seizure of the U.S. embassy in Teheran by Islamic militants).

Airpower

The United States Air Force has recently reorganized itself to intervene globally by organizing Expeditionary Aerospace Forces (EAF) (the original concept was called the Air Expeditionary Wing). These are "wing" sized units (about 70-150 aircraft) which can be assigned different types of squadrons to meet specific missions. The idea is that each EAF can

Asymmetry

"Asymmetry" is being recognized as a principle of warfare in American military thinking. The basic idea behind asymmetry is that different types of forces will take advantage of their own strengths and exploit enemy weaknesses. In itself, asymmetry is not a new concept, but what is happening is that the multitude of forms of modern warfare make asymmetrical warfare all the more feasible—land, air, naval, special operations, nuclear, and now even cyberwar are each fronts in which opposing forces can fight.

For example, United States strategy in the 1991 Gulf War and the 1999 Serbian intervention was to exploit its own airpower to destroy infrastructure and force the enemy's collapse for logistical, economic and political reasons. Significantly, the Somali intervention in 1992 proved to be a case where the U.S. could not exploit this strategy insofar as the Somalis lacked any advanced infrastructure to attack! The ensuing confrontation became one of land troops versus land troops, where the indigenous guerrillas had the advantage.

INFOWAR-CYBERWAR-C2 WARFARE

Emerging as new fields of conflict are "Information Warfare" (Infowar) and "Cyberwar." These terms are used somewhat interchangeably in defense circles, and the doctrine for their employment has yet to be fully established.

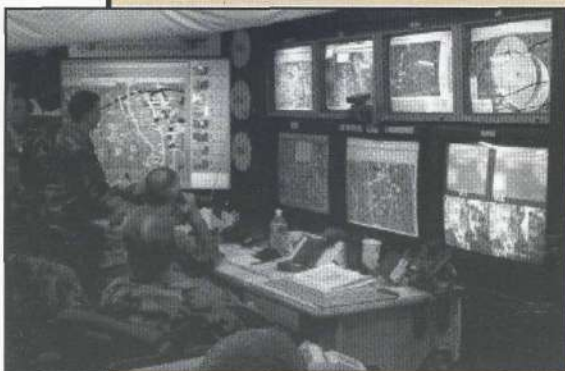
Broadly, information warfare consolidates all forms of military operations which impact human perceptions:

- Electronic warfare: electronic surveillance, electronic countermeasures, and offensive electronic measures (such as jamming).
- Psychological operations (PSYOP): propaganda and other political actions.
- Deception: measures designed to deceive enemy forces about the strength and intentions of friendly forces.
- Operational security (OPSEC): measures which defend against enemy infowar and intelligence operations.
- Direct action: special military operations, such as terrorism and hostage rescue, which have a political impact.

[The categories of infowar frequently change. These are current at the time of this writing. ed.]

Cyberwar is the use of computers and other cybernetic systems to conduct operations. Cyberwar includes:

- Intelligence: penetration of enemy cybernetic systems to gather information.
- Offensive: using viruses, logic bombs, trojan horses, and other means to sabotage enemy cybernetic systems
- Political: using the Internet to disseminate propaganda, organize opposition groups, and control insurgent forces.
- OPSEC: defending against enemy cyberwar.



Far from being hypothetical operations to take place in the future, information warfare and cyberwar are current practice. The United States government implements extensive measures to ensure that it has "information dominance," the ability to disseminate its particular policy line and to secure its cybernetic systems while denying its opponents the same.

At home, the Internet has caused concern for U.S. planners. Major fears include enemy penetration of computer systems and ensuing sabotage by, for example, the destruction of air traffic control systems or playing havoc with the stock market.

Information warfare and cyberwar give countries a means to project power globally as the entire world is "plugged in" via the Internet and global television. Dissemination of information via the Internet, for example, is a way for foreign forces to reach audiences which might be receiving only official government information. For example, were the U.S. to launch an air offensive against an Asian nation, that nation might be able to use the Internet to show photographs and videos of civilian casualties.

PSYOP serves as a low cost means to gain objectives and to attack enemy forces on a front in which they are not necessarily prepared to fight. One front is the global news media, capable of reaching worldwide audiences. During the Gulf War, the U.S. military controlled much of the media's access to the theater of operations and projected the image of a surgical Coalition air campaign against Iraq. Consequently, other nations' military planners see themselves as needing their own PSYOP capabilities to counter U.S. infowar campaigns.

Related to both infowar and cyberwar is the concept of Command Control Warfare (or C2 Warfare). The basic concept behind C2 Warfare is that if a friendly military force can maintain its own communication and can deny the same to the foe, then it will have a decisive advantage since the enemy will be "fighting blind." There are different ways in which C2 warfare can be conducted, including infowar and cyberwar. U.S. air attacks against Iraq in 1991 were designed to sever communication lines between Baghdad and Iraqi troops on the front lines. This left Iraqi formations without centralized leadership. This lesson has not been lost on Asian powers, who have been scrambling to build defensive systems for their own C2, and to find ways to attack enemy capabilities.

be deployed on short notice for contingencies.

Increasingly, the practice for air operations is to combine different types of aircraft into a single unit to perform missions. This trend began in earnest during the war in Vietnam. There, U.S. air planners found it necessary to organize "mission packages," composed of bombers, fighters, electronic warfare, "wild weasel" (anti-radar), rescue, and reconnaissance aircraft. This practice became standardized during the 1990s with the Gulf War air campaign, where different types of air units were combined into single missions often on an *ad hoc* basis.

The new organization responds to two developments. One is the increased lethality of modern aircraft. In World War Two it often took several hundred bombers to destroy a single target. Modern precision guided weaponry allows a single squadron (about 12 aircraft) to accomplish the mission. The second is the rapid expansion in radar and anti-aircraft missile

capabilities. Aircraft missions need electronic warfare capabilities in order to penetrate and destroy enemy air defenses.

The primary limitation on deployment of the EAFs is that there must be bases, as well as supply and maintenance organizations, for the EAFs to function. There are two ways these airfields can be created. One is to wait until a crisis breaks out and then build them and their logistical infrastructure, an obviously inefficient method since the crisis may be over before such measures can be taken. The other is to have bases and logistics already established in theaters globally. This latter alternative is more efficient, since it allows for an infrastructure to which air units could fly in an emergency. But this also has problems. There is the cost of building and maintaining bases worldwide. Then there is the security situation. An infrastructure of global bases becomes vulnerable to opposing forces' military actions, to guerrilla warfare, and to local political instability.

Some elements of U.S. airpower, such as B-52 and B-2 bombers, can be based in the United States itself and strike targets globally by using aerial refueling. This method avoids the political, military and logistical problems posed by basing aircraft in the theater of operations itself. Also to be considered as a form of airpower are U.S. cruise missiles. Cruise missiles can be launched from bombers and warships operating outside of other countries' airspace and coastal waters. Again, this not only enhances the ability of the U.S. to project power globally, and reduces the political impact of deployments abroad.

The U.S. Navy avoids the basing dilemma by maintaining its 11 active attack aircraft carriers. These carriers can deploy to most points accessible to shipping. The Navy also maintains its own logistical organization, both on the carriers themselves and via support vessels. And, at least in the near future, American aircraft carriers appear to be largely invulnerable to enemy attacks, given general U.S. naval superiority.

The strategic implications of U.S. airpower can not be underestimated. By establishing a network of bases and having the capability to deploy aircraft carriers, the United States can effectively extend its reach globally. In comparison, no Asian nation has anything close to the capacity the U.S. has for strategic deployment.

Strategic Lift

The primary American ability to deploy troops into South Asia is via sealift. The U.S. maintains an extensive fleet of amphibious warfare ships which are capable of lifting at least two divisions simultaneously. Furthermore, U.S. amphibious ships have considerable ability to launch helicopters, extending the reach of U.S. forces beyond the immediate coast. U.S. sealift capability would be capable of providing supplies to any intervention force.

Air transport can also be used to move combat and support forces. But experience has demonstrated that a much greater proportional effort is needed to move forces by air and then support them. Aircraft require extensive logistical support themselves, and the capacity of aircraft is limited compared to that of ships. In Vietnam, for example, the United States moved well over 90 percent of its materiel to the theater of operations by ship. The United States maintains much of its air transport capability in the reserve components of the Air

Force. To mobilize these reserves would again require domestic political debate.

In the Gulf War the U.S. had access to logistical facilities in the region which had been established years before in anticipation of the need to bring in outside forces. Even so, it took five months before the U.S. and its allies had sufficient forces in theater to launch offensive operations. All this indicates the complexity of the military equation since it must include logistical and political considerations.

Special Operations Forces

Another area in which the United States maintains a considerable edge is in special operations forces (or "SOF"). SOF encompass a wide range of "unconventional" units and missions, including support of indigenous guerrillas, strategic raids and reconnaissance, counter-terrorism, and psychological operations (PSYOP, i.e., propaganda). U.S. SOF have gone through a variety of reorganizations in the past several decades, but are currently under a single command, which facilitates their employment. The primary ground special operations forces units are in the Army, with five Special Forces groups on active duty. Each Special Forces group is trained to conduct unconventional operations in a specific area of the world. The U.S. also maintains a Ranger Regiment which is for more traditional commando type missions. The Air Force maintains Special Operations Wings, which include aircraft capable of broadcasting propaganda via radio and television, and gunships which can support low intensity conflict operations. The Navy also has its SEALs (Sea-Air-Land teams). The U.S. also includes among its SOF the more politically oriented PSYOP and Civil Affairs units, the latter specializing in establishing government services in occupied and liberated areas.

SOF give the U.S. a means to intervene throughout Asia at low cost. Indeed, SOF units routinely conduct operations during peacetime with friendly governments (and sometimes by themselves). Because of their low profile and ability to work with foreign nationals, SOF attract less attention on the international front than does conventional force deployment. For example, Special Forces teams will frequently train friendly armed forces and paramilitary forces in low intensity conflict tactics, thereby facilitating the abilities of pro-American governments to maintain internal security.

Most Asian nations also have their own SOF in various forms, but nowhere near the scale of the United States. Many of the types of missions which are conducted by U.S. SOF are often conducted by other nations' intelligence agencies or paramilitary forces, so it is difficult to compare their strengths. For example, Pakistan's intelligence service has supported the Taleban movement in Afghanistan, and Islamic militants in Kashmir.

Another reason for the low level of Asian SOF is that countries with a history of guerrilla warfare, such as China and Vietnam, have used their regular forces to conduct unconventional operations. However, with the end of the Cold War, ideologically based mass guerrilla warfare is becoming *passé* as an instrument of national power. While in the 1950s and 1960s there was considerable impetus towards global revolution, the political climate of the 1990s has favored an expansion of transnational corporations. This has led to the integration of formerly revolutionary states, such as the People's Republic of China, into the global capitalist system.



Indian troops on counterinsurgency duty in Sri Lanka.

Strategic Opportunities

Several of India's potential combat fronts are located inland. These include Kashmir and the frontier with China in Tibet. These fronts are in highly mountainous regions which place severe limitations on force deployment and combat. For example, logistics create dilemmas because it is difficult to transport supplies along narrow mountain passes, especially in the face of enemy interdiction operations. Combat units also have a hard time operating because of cold, altitude (reduced oxygen), and terrain. India has attempted to deal with this situation by developing specialized mountain divisions whose personnel are trained and acclimated for this type of terrain. Recent years have also seen India make extensive use of helicopters to overcome difficulties in transportation in the mountains.

Both Kashmir and Tibet would be extremely difficult for United States forces to reach unless the U.S. had the cooperation of friendly governments in Pakistan or China. Moreover, combat in these regions would mean operating out of range of U.S. naval support. Consequently, the fronts in which India is likely to deploy for major military operations are the ones which are least accessible to United States power projection capabilities.

Looking to the south, the U.S. Navy could interdict any Indian maneuvers in the Indian Ocean and Persian Gulf. But again, there is the problem of basing. India maintains several bases along its coastlines, whereas the nearest U.S. bases are located along the periphery of the Indian Ocean. Of course, the U.S. could maintain ships at sea via its resupply craft, but even so, there would be the problem of operating out of range of friendly land based airpower in the face of the Indian air force. On the other hand, the experience of both Korea and Vietnam demonstrates that the U.S. can conduct extensive long term aerial operations in hostile waters with little fear of retaliation.

Logistics

Logistics comprises the unglamorous but vital aspects of military support: supply, maintenance, transportation, medical, and administrative services. It is in logistics that the United States has maintained a superiority throughout the 20th century: the U.S. military fought across oceanic expanses in the World Wars, Korea, Vietnam, and Iraq.

The United States maintains logistical facilities throughout the periphery of Asia and also prepositions equipment on ships and bases. In the event of war, all that need be done is transport the troops (who presumably will then pick up the equipment in-theater). One contingency is to deploy major logistical elements to a theater at the earliest stages of a campaign. This presents an ironic situation for planners since it is the non-combat logistics units who will be the first troops in a theater of operations rather than the combat formations.

Countries with large combat forces, such as the People's Republic of China, are frequently hard put to maintain their forces in the field due to lack of supply and maintenance. During their 1979 invasion of North Vietnam, for example, the Chinese found themselves outrunning their lines of communications.

India has a major problem with high unserviceability rates for its military equipment, especially aircraft. What this means is that too much equipment is inoperable owing to lack of spare parts or maintenance. Operability is a critical factor in modern warfare because, obviously, even the most advanced weapon is useless if it cannot work. Maintenance failures also

contribute to a high rate of aircraft accidents in the Indian military, again, undermining military readiness. What both the American and Indian logistical situations indicate is that military power can often be more apparent than real. Mere numbers of aircraft, armored vehicles, and warships do not necessarily translate into an effective force in the field.

Nonetheless, India maintains an extensive defense industry, thereby allowing it to at least partially equip and supply its own forces. Programs include nuclear weapons and energy, missiles, main battle tanks, and aircraft, all the components of a modern military.

High-Tech

Precision Guided Weaponry

Precision guided munitions represents a trend away from the mid-20th Century doctrine of delivering ever larger payloads, a trend which culminated in the building of first the atomic and then the hydrogen bomb. It is more militarily efficient to be able to deliver a weapon to the target and destroy it with a single weapon than to devastate an entire area and perhaps miss the target itself! There is also the political advantage of minimizing civilian casualties and thereby being able to appear in the guise of fighting a "humanitarian" war. Again, the Gulf War demonstrated the efficacy of this approach by the United States and its allies.

On the other hand, the NATO air campaign against Serbia in 1999 appears to demonstrate that precision guided weapons can be negated by passive countermeasures such as camouflaging vehicles, deploying in rough terrain, and building dummy tanks to deceive the attackers. As is true of most military systems, each measure is followed by a countermeasure, in an endless cycle.

Theater Missiles

India, China, Iraq, North Korea, and Iran all have some form of short and intermediate range missiles. The best publicized is, of course, the "SCUD" (the Soviet SS-1), which the Iraqis used during the 1991 Gulf War. While Iraqi SCUD attacks had little effect on the military situation, they did have a profound impact on the political front. Saddam Hussein, apparently, attempted to draw Israel into the war by firing at Israeli cities—with the implication that if the Israelis attacked Iraq in retaliation, this would alienate America's allies in the Islamic world and lead to the dissolution of the Coalition. While cooler heads prevailed on the Coalition side and Israel kept out of the war, this does indicate the potential that missiles have for influencing the political situation.

Essentially, theater missiles can be used to project power throughout a region "on the cheap." They do not require extensive basing facilities and, indeed, their launchers can be moved about quite easily, avoiding enemy airstrikes.

The United States itself has dismantled its theater missile capabilities, with the retirement of the Pershing missile program. To a large degree, this capability was redundant for the U.S., with its ICBM capabilities and its ability to deliver ordnance via bombers and cruise missiles.

One potential that theater missiles have is for negating the ability of any nation to deploy its air and naval power in the region. This can be done by firing at enemy ports and airbases. The objective would be not so much to destroy enemy aircraft or ships but to make these facilities unusable. This is especially true if missiles contain chemical or biological warfare payloads.

India Order of Battle, 2000

Population	999,840,000
Gross Domestic Product	\$469,000,000,000 (1998)
Military budget	\$10,700,000,000 (1999)

Total armed forces

(active) 1,173,000

Army

(active) 980,000

(reserve) 800,000

Navy

(active) 53,000

(reserve) 55,000

Air Force

(active) 140,000

(reserve) 140,000

Paramilitary c. 1,100,000

Army (units)

Armored divisions	3
RAPID divisions	4
Infantry Divisions	18
Mountain divisions	9
Artillery divisions	1
Armored brigades	7
Infantry brigades	5
Mountain brigades	2
Airborne brigades	1
SSM regiments	1
Air defense brigades	4
Engineer brigades	3

Army (equipment)

Tanks	3,500
Other AFV	1,600
Artillery (towed)	4,200
Artillery (Self propelled)	180
Artillery (MRL)	150
SSM (launchers)	3-5
Air defense guns	2,400
Surface to air missiles	1,800
Helicopters	200
Landing craft	2

Navy

Aircraft carriers	1 (12 a/c + 7 h/c)
Submarines (tactical)	16
Cruisers	-
Destroyers	7
Frigates/Corvetes	18
Patrol/coastal/missile boats	40
Mine warfare:	18
Amphibious	
LST	2
(1 h/c, 500 troops, 18 tank)	
LSM	7
(140 troops, 6 tanks)	
LCU	10

Naval Aviation

Attack squadrons	2
Antisubmarine Warfare sqds	6
Airborne early warning	(3 a/c)
Reconnaissance squadrons	3
Marine regiments	1
Air Force	
Fighter/ground attack squadrons	18
Fighter squadrons	20
Electronic Warfare	(8 a/c)
Airborne early warning	(4 a/c)
Tanker	(6 a/c)
Maritime attack	(4 a/c)
Reconnaissance squadrons	2
Transport squadrons	12 (200 a/c)
Transport squadrons	11 (120 h/c)
Surface to air missile squadrons	38 (280 missiles)

Paramilitary (personnel)

National Security Guards	7400
Special Protection Group	3000
Special Frontier Force	9000
Rashtriya Rifles	40,000
Defence Security Corps	31,000
Indo-Tibetan Border Police	32,000
Assam Rifles	52,500
Railway Protection Force	70,000
Central Industrial Security Force	890,000
Central Reserve Police Force	165,000
Border Security Force	185,000
Home Guard	472,000
State Armed Police	400,000
Civil Defence	394,000

Coast Guard

Personnel	5500
Patrol craft	36
Aviation squadrons	3

Indian Deployment, 1999

Army. India divides its army into five regional commands:

North, which includes eight infantry and two mountain divisions.

West, with one armored, five infantry and three RAPID divisions.

Central with one armored, one infantry, one RAPID divisions.

East with one infantry and seven mountain divisions.

South with one armored and three infantry divisions.

Navy. The Indian Navy's main bases include Mumbai (nee Bombay), HQ Western Fleet Command, Goa (Naval Air HQ), Karwar, Kocchi (Southern Command HQ), Visakhapatnam (Eastern Fleet HQ), Calcutta, Madras, Port Blair in the Andaman Islands (Far Eastern Command HQ), and Arakonam (Naval Air HQ).

RAPID Divisions: mixed mechanized/infantry units.

Nuclear Power Projection

Both the United States and India have nuclear capability. The United States has overwhelming nuclear strength and global delivery capabilities. India's capabilities are mainly regional, with delivery via theater missiles and aircraft.

Indian nuclear strategy is in no small part influenced by the end of the Cold War. With the collapse of the Soviet Union, the international balance of power has swung in favor of the United States. Consequently, India sees its nuclear weapons as, among other things, a way to maintain the balance of power in its favor in Asia. Another implication is that as long as the Cold War was a going concern, India could count on either the USSR or the U.S. as a balance against China, and as a shield against China's nuclear weapons.

But with the U.S. as the sole remaining superpower, India may have to face China on its own, especially as China integrates itself into the U.S. dominated transnational corporate economy. Consequently, it becomes vital for India to develop a nuclear capability simply to maintain its position in Asia.

One use of nuclear weapons might be in a tactical role (as opposed to strategic uses against opposing nations' cities). For example, an Asian power might negate U.S. naval superiority via the use of nuclear weapons against major U.S. fleet units, such as aircraft carrier battle groups. Given that aircraft carriers are central to both U.S. naval warfare capabilities and strategic projection, and that the U.S. has only 11 active aircraft carriers, the loss of even one or two could make a decisive difference. Indeed, the U.S. has not lost an aircraft carrier (or any other major surface warship) in combat at sea since the end of World War II. Even the threat of nuclear weapons against American ships might force U.S. leaders to limit their use in foreign waters.

A different use of nuclear weapons might be to negate American superiority in electronic warfare and command control capabilities (sensors, jamming, detection, electronic intelligence gathering, communications, computers, etc.). Nuclear weapons produce an electromagnetic pulse (EMP) which destroys the efficacy of electronic systems. The detonation of a nuclear weapon in the atmosphere, away from military and civilian targets, could conceivably degrade U.S. capabilities in these areas.

Nuclear weapons are a political advantage as much as a military one. They have increased the international stature of both India and Pakistan, given them enhanced power in international diplomatic fronts such as the United Nations, and have caused considerable consternation of the United States, which has tried to limit the possession of nuclear weapons.

And what about the political reaction to the use of nuclear weapons? The U.S. has shown a marked reluctance to take losses in combat since it withdrew from Vietnam. But would the specter of a nuclear attack against American ships lead to mass public demand for retaliation? Certainly the experience of Pearl Harbor indicates that U.S. public opinion swings between extremes, ranging from the isolationism of the 1930s to the determination to fight a total war again Japan and Germany in 1941-45.

Conclusion

The United States exercises power throughout South Asia all out of proportion to the size of its land forces owing to its extensive naval and airpower, its logistical capabilities, and its being able to exert political and economic leverage—as well as its nuclear superiority. The Persian Gulf oil states rely on the U.S. for military protection from Iran and Iraq. Japan, the Republic of Korea, and the Philippines are all tied to the U.S. through diplomatic, security, and economic factors. The one major gap in the American arc is in South Asia where India maintains local military power, and where the American basing system stretches thin.

What has prevented India, and indeed other major Asian powers such as the People's Republic of China, from becoming major regional powers is their lack of the fundamentals of power projection: logistics, transport aircraft and shipping, and regional bases.

Power projection represents not only the ability to commit forces globally. It can also be the threat of using force. The ability of a nation to launch missile and nuclear attacks can serve to intimidate its potential foes. But nuclear blackmail is no substitute for intelligent diplomacy.

The decisive factor comes back to politics. If the U.S. can maintain its alliance structure throughout the region, then it will be able to intervene effectively. If this structure is undermined, then the U.S. will face limited strategic opportunities in South Asia.



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