Military Review

U. S. Army Command and General Staff College, Fort Leavenworth, Kansas

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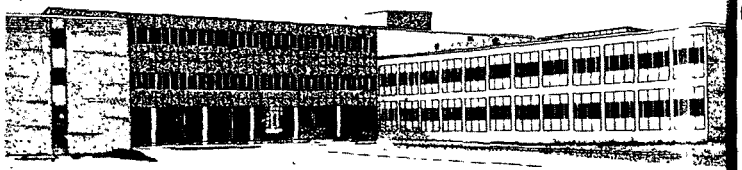

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PSYWAR: THE LESSONS FROM ALGERIA

Slavko N. Bjelajac

ON 1 July 1962 Algeria gained her independence. A French Army, weary from seven years of savage, frustrating warfare, began a gradual withdrawal to the European mainland.

It is not the purpose of this article to discuss whether the French Army "won" or "lost" in Algeria. Rather, its purpose is to examine the methods of psychological warfare employed by the French Army as it fought the war in Algeria; and to determine how the lessons learned by the French in the conduct of psychological warfare may be useful in the future.

The French Army in Algeria defined its goal as "bringing together the two local communities and restoring their confidence in each other and in the mother country."[1] However, as the French told their troops in Algeria:

Bringing back peace and calm to this portion of French soil cannot be the result of power alone. . . . without psychological action their effort and sacrifices will be doomed to barrenness and the rebellion will flare up from its ashes. A handful of ambitious agitators, full of hate and without scruples, will then succeed in separating you from the unknowing population and throw them into misery and anarchy.[2]

French pacification efforts did succeed in winning back the loyalty of —or at least, in keeping under control —large areas of the population. Many of the principles employed and the lessons they learned are, therefore, worth noting. Guided by the slogan, "In the face of lies, impose the truth; in the face of terror, bring back confidence," the French based their pacification campaign on the principle that the troops should concentrate not only on military activities, but also on psychological and civic-type operations emphasizing personal (human) contacts:

It is a question of making each soldier understand that he must undertake, besides the purely military ac-

[1] General Directive Number 1 issued by the Resident Minister of Algeria, 19 May 1956, in *Guide Practique Pacification.*

[2] *Ibid.*

tion, a psychological action that is no less important and which is carried out through human contacts.[3]

This idea, first used openly in guerrilla warfare by Mao Tse-tung and Ho Chi-Minh and then employed successfully in counterguerrilla operations by Magsaysay, is a fundamental factor in winning popular support.

Every French soldier in Algeria was made an agent of pacification. Troops were reindoctrinated and kept informed each week concerning current developments, and plans for psychological operations were continually revised and communicated to all echelons. Discussions were held at least once a week to evaluate the successes and failures of the campaign.

The essential elements in the "human contact operation" were:

- Reassuring the population that everything possible was being done to protect them.
- Visiting people and showing them sympathy and help.
- Respecting their customs and traditions.

Troops were given dictionaries and briefed on the local customs to facilitate their mingling with the population; commanding officers often visited the marketplaces and talked with people from all walks of life.

A constant flow of subtle propaganda, tailored to the backgrounds of the audience and backed by simple arguments and facts, was of great importance. During the weekly meetings, themes were developed under the guidance of specialists and then circulated among the population in the form of rumors or slogans. At these meetings every French soldier was reminded that the population would judge France by his attitude, and that this attitude must, therefore, be courteous and sincere.

Spontaneous Sessions

In trying to reach the masses, crowds were seldom created for special propagandizing sessions. Instead, advantage was taken of places and occasions where crowds spontaneously gathered—marketplaces, festivals, ceremonies, and public works projects where large numbers of workers were present. After carefully selecting the proper place, day, and time, meetings were held for youth groups, school children, and villagers; Arab records, military choruses, and sketches with constructive themes were presented.

The constant repetition of propaganda, aimed at making a permanent impression, proved to be of great importance. The French learned that while the image, the slogan, and the pamphlet are good, the spoken word is better. Deeds such as rewards for work of local interest, requisitioning means of transportation and medical aid, opening schools and establishing new settlements, helping victims of the rebels, and other civic functions are the most effective forms of propaganda. This phase of pacification, if properly carried out, should wean the populace from rebel organizations and the rebel cause generally, and lead it to inform on rebel agents and their activities.

[3] *Ibid.*

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French troops were told that power alone could not return peace to Algeria

Information on local rebel activities led to crippling the organization in the area. Individuals who were coercing the populace to join the rebel movement or to supply it with intelligence, food, and shelter, or who were terrorizing the people, usually were arrested and put in "rehabilitation" camps. The majority of rebels were allowed to go free providing they pledged to cooperate with pacification efforts. Once leading rebel elements were apprehended, an atmosphere of calm and a desire to cooperate with the authorities were usually created.

An Active Role

No longer fearful of denunciation, and becoming convinced that the rebel cause was unjust or lost, the population was progressively trained to play an active role in maintaining order. Unarmed civilians formed units of guides to help or to participate in patrols; to observe the approaches to the village; and to select local authorities and administrative officers to run their local governments. Given weapons, villagers formed their own police force, patrols, home guards, and other units which directly or indirectly assisted the government forces and defended the lives and property of the populace.

In organizing self-defense units, the French learned the importance of making the ordinary citizen feel that the revolt was of direct concern to him, and not merely a matter between the rebels and the government. Striving for as high a degree of public participation as possible, they were careful not to make the mental or physical requirements too stringent, as this tended to eliminate from participation many individuals who could then be recruited by the enemy.

Since there were innumerable tasks

to be done, almost every person was given a role of some responsibility and thus felt himself important to the counterinsurgency and pacification. Operating on these principles, the French organized self-defense units to protect villages or groups of villages, to guard people when they were working in the fields, and to work generally for the welfare of the population. Militarily advanced units, called raiders, were also formed either to carry out missions by themselves or to assist the regular military force.

Popular Participation

To increase popular participation as much as possible, supplementary self-defense and raider units were organized to expand both the defensive and offensive capability of the population. In doing so, the military authorities worked with the local officials. Because these self-defense groups were working for the welfare of the people, participants were not paid for their services but were given weapons, equipment, food, ammunition, and other supplies. Raiders, however, were paid by the day or night, and given bonuses for special accomplishments.

A special security system, based on a hierarchical organization, was developed, following the rule that there is a limit to the number of individuals one can control directly. Thus, one member of a family was placed in charge of his household, four or five family heads were grouped into neighborhood committees, and heads of these committees were grouped into district committees. The higher echelons of this hierarchy sent delegates to the chief of the counterinsurgency operations in the territory, thus placing at the latter's disposal both a network of intelligence and a chain of command through which to exercise influence, execute decisions, and punish rebel sympathizers. This system also provided the population with rapid access to the authorities so that their rights as private citizens could be protected despite the disruptive activities of the rebels.

Lessons

Here are some lessons which the French military learned in the course of their pacification activities:

- Everything must be done to avoid errors, "for a long and patient effort can be washed out by one lone blunder." The errors to be avoided at all costs are: hurting pride (and everything which touches on the indigenous man's family, his customs, and religion); too-stringent demands; precipitant action; broken promises; feebleness; unjust treatment; and utilization of undesirable elements of the people. The choice of collaborators, intermediaries, and interpreters is of capital importance or contact with the people will suffer. Local officials guilty of extortion, or officials with doubtful morality, are likely to arouse resentment and hostility. One must rely on sincere and honest men who are not afraid to voice the grievances of the people.
- Complicated and negative slogans must not be used in psychological operations. The first will not be read, and the second will be turned against the organs of pacification.
- "Lone horsemanship" may be damaging. A plan of action must be carefully established, the advice of administrative authorities and civil affairs officials must be obtained, and neighbors must be informed of plans and actions.
- Know the enemy and his organization. The rebels will always seek to put their organization in the best position; if partially or totally destroyed,

they will seek to restore it. The search for detection and destruction must be patient and methodical. The rebel force in the hills is not the whole enemy; it is a small fraction only. The enemy has a politico-military organization which is widespread and well organized.

- Rebels must be given a chance to surrender. In principle, those who surrender should be given a chance to prove their sincerity—preferably by participating immediately in operations against their former comrades. An exception should be made, of course, for those responsible for crimes.

- The pacification forces may have to participate in the administration of a country or province of a country, and must have their own capability for this kind of operation. The person responsible for that operation has to cooperate closely with the normal administrative authorities. There should not be separate military and civilian policies but one common policy. Military personnel must avoid taking the place of civilian authority, but should cooperate with the provisional structure and prepare for the return of normal administrative life.

- A construction program may be necessary to improve the living conditions of the populace who may suffer from previous inadequacies and from destruction by rebels. Roads, schools, dispensaries, water wells, and irrigation canals may be constructed under military direction in coordination with local authorities.

- There should be compensation for the victims of terrorism or those deprived in some way during the process of pacification. Effective workable measures here may become, and usually are, the most gratifying in the total pacification effort.

- Rules on etiquette in relation to the indigenous population (in Algeria with the Moslems) must be established, be familiar to, and be practiced by every man and woman in the pacification force. This may be a difficult task, but it must be carried out. Booklets should be printed and classes held in which every man must be properly indoctrinated.

- Detailed arguments furnishing the principal themes of the propaganda, both written and oral, must be prepared, constantly improved, and kept up to date. In psychological warfare for the purpose of pacification, there is no room for errors or even for "loose talk"; it must be centrally directed and devised to meet the needs of each sector and district (target audience sympathetic, hostile, neutral, educated, illiterate, urban, rural).

- The procedure used in disseminating propaganda material should be set forth with precision. This includes identification of the target audience as well as the extent, volume, and rate of dissemination.

- Motion pictures must be utilized to the utmost. Documentary, recreational, and military films must be used on a large scale.

Nuts and Bolts

To some, these lessons may seem discredited by the fact that the effort from which they were derived ended at the Evian conference table. To others, accustomed to looking at the "sweep" of a problem, they may appear somewhat picayune.

Without going into an elaborate analysis of the war in Algeria, it seems quite clear that the lessons the French learned are more valuable because they emerged from trial and

error in a long and bitter struggle.

Too long now, we have looked comfortably and with serene detachment at the "broad" problem facing us in various areas of the globe. We have worried about issues of over-all strategy, about the propriety and desirability of intervention, and about how best to apportion our economic and military assistance among threatened societies.

We will be increasingly in the direct path of what Khrushchev has euphemized as the "wave of the future." To master the challenge we must focus from the broad canvas onto the "nuts and bolts" of the conflict which has been thrust upon us.

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The Use and Abuse of Military History

Michael Howard

THERE are two great difficulties with which the professional soldier has to contend in equipping himself as a commander. First, his profession is almost unique in that he may only have to exercise it once in a lifetime, if that often. It is as if a surgeon had to practice throughout his life on dummies for one real operation; or a barrister only appeared once or twice in court toward the close of his career; or a professional swimmer had to spend his life practicing on dry land for Olympic championship on which the fortunes of his entire nation depended.

Second, the complex problem of running an army at all is likely to occupy his mind and skill so completely that it is very easy to forget what it is being run *for*. The difficulties encountered in the administration, discipline, maintenance, and supply of an organization the size of a fair-sized town are enough to occupy the senior officer to the exclusion of any thinking about his real business: the conduct of war.

It is not surprising that there has often been a high proportion of failures among senior commanders at the beginning of any war. These unfortunate men may either take too long to

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adjust themselves to reality—through a lack of hard preliminary thinking about what war would really be like—or they may have had their minds so far shaped by a lifetime of pure administration that they have ceased, for all practical purposes, to be soldiers. The advantage enjoyed by sailors in this respect is a very marked one; for nobody commmanding a vessel at sea, whether battleship or dinghy, is ever wholly at peace.

If there are no wars in the present in which the professional soldier can learn his trade, he is almost compelled to study the wars of the past. For after all allowances have been made for historical differences, wars still resemble each other more than they resemble any other human activity. All are fought, as Clausewitz insisted, in a special element of danger, fear, and confusion. In all, large bodies of men are trying to impose their will on one another by violence; and in all, events occur which are inconceivable in any other field of experience.

The Danger

Of course, the differences brought about between one war and another by social or technological changes are immense, and an unintelligent study of military history which does not take adequate account of these changes may quite easily be more dangerous than no study at all. Like the statesman, the soldier has to steer between the dangers of repeating the errors of the past because he is ignorant that they have been made, and of remaining bound by theories deduced from past history although changes in conditions have rendered these theories obsolete.

We can see, on the one hand, depressingly close analogies between the mistakes made by the British commanders in the Western Desert in their operations against Rommel in 1941 and 1942 and those made by the Austrian commanders against Bonaparte in Italy in 1796 and 1797: experienced, reliable generals commanding courageous and well-equipped troops, but slow in their reactions, obsessed with administrative security, and dispersing their units through fear of running risks.

On the other hand, we find the French General Staff both in 1914 and 1939 diligently studying the lessons of "the last time" and committing appalling strategic and tactical blunders in consequence. Operations were conducted with an offensive ferocity which might have brought victory in 1870 but which resulted in massacre in 1914. In 1939 the French prepared for the slow, thorough, yard-by-yard offensive which had been effective at the end of the First World War but which had become totally outdated.

The lessons of history are never clear. Clio is like the Delphian oracle: it is only in retrospect, and usually too late, that we can understand what she was trying to say.

The Guides

Three general rules of study must, therefore, be borne in mind by the officer who studies military history as a guide in his profession and who wishes to avoid its pitfalls.

First, he must study in *width*. He must observe the way in which warfare has developed over a long historical period. Only by seeing what does change can one deduce what does not; and as much can be learned from the great "discontinuities" of military history as from the apparent similarities of the techniques employed by the great captains through the ages.

Observe how in 1806 a Prussian

army soaked in the traditions of the greatest captain of the 18th century, Frederick the Great, was nonetheless destroyed; and how the same thing happened in 1870 to a French army brought up in the Napoleonic mold.

Consider whether in the conditions of warfare of 1914-18 the careful studies of Napoleon's or Moltke's methods, and the attempts to apply them on both sides, were not hopelessly irrelevant; and whether, indeed, the lessons which Mahan drew from his studies of 18th century naval warfare did not lead the British Admiralty to cling to the doctrine of the capital fleet for so long that, in the age of the submarine and the aircraft carrier, Great Britain was twice brought within measurable distance of defeat.

Knowledge of principles of war must be tempered by a sense of change and applied with a flexibility of mind which only wide reading can give.

Next he must study in *depth*. He should take a single campaign and explore it thoroughly, not simply from official histories but from memoirs, letters, diaries, and even imaginative literature, until the tidy outlines dissolve and he catches a glimpse of the confusion and horror of the real experience.

He must get behind the order subsequently imposed by the historian and recreate by detailed study the omnipresence of chaos, revealing the part played not only by skill, planning, and courage, but by sheer good luck. Only thus can he begin to discover, if he is lucky enough not to have experienced it at firsthand, what war is really like—"what really happened."

And last, he must study in *context*. Campaigns and battles are not like games of chess or football matches, conducted in total detachment from their environment according to strictly defined rules. Wars are not tactical exercises writ large. They are, as Marxist military analysts quite rightly insist, conflicts of *societies*, and they can be fully understood only if one understands the nature of the society fighting them. The roots of victory and defeat often have to be sought far from the battlefield in political, social, and economic factors.

To explain the collapse of Prussia in 1806 and of France in 1870, we must look deep into their political and social, as well as into their military history. Without some such knowledge of the broader background to military operations, one is likely to reach totally erroneous conclusions about their nature and the reasons for their failure and success.

The Result

Today, when the military element in the great power struggles of the world is inhibited by mutual fears of the destructive power of the weapons available to both sides, such political and economic factors have an importance such as they have never possessed before; but even in the most apparently formal and limited conflicts of the past they have never been entirely absent.

Pursued in this manner, in width, depth, and context, the study of military history should not only enable the civilian to understand the nature of war and its part in shaping society, but also directly improve the officer's competence in his profession. But it must never be forgotten that the true use of history, military or civil, is, as Jakob Burckhardt once said, not to make men clever for next time; it is to make them wise forever.

CUBA:

A CASE STUDY OF UNCONVENTIONAL WARFARE

Merle Kling

POLITICS and war share common properties since all political behavior, including the various kinds of warfare, is characterized by relationships of conflict among individuals and groups who seek to expand their power and influence. As a form of political behavior, warfare is distinguished by the extensive use of violence.

When unconventional warfare is waged, the techniques of violence become diverse and flexible, and the ultimate stakes of the conflict comprise control of the apparatus of government. Winners and losers in such a contest, accordingly, are judged with reference to their ability to command the institutions of government —courts, police organizations, and military units—that demonstrate a capacity to enforce the most severe sanctions, including deprivation of life, for disobedience. By these criteria, Fidel Castro and his followers, in 1959, won in Cuba, and his opponents lost. And social scientists inherited the perplexing question: Why?

In our quest for an answer, we, by drawing upon the public record of events, shall attempt:

• To differentiate the nature and consequences of Castro's use of violence from the

traditional role of violence in Latin-American politics.

- To assemble the more prominent variables which appear to account for Castro's effective seizure of power.
- To suggest generalizations and hypotheses derived from the Cuban experiences, which may serve to clarify the nature and functions of guerrilla warfare.

Castro versus Tradition

"Violence," as William S. Stokes has observed, "seems to be institutionalized in the organization, maintenance, and changing of governments in Latin America."[1] Frequently, in Latin America, shifts in governmental personnel have been accompanied by displays of military force.

Under such circumstances, a relatively small military detachment occupies government buildings, the president and his close associates take refuge—asylum—in a foreign embassy, and a new junta proclaims itself in control of the governmental administration. More than 30 Latin-American presidents were displaced by such techniques between 1945 and 1955.

Conforming to the restraints inherent in a *coup d'état* or *golpe de estado* or palace revolution, such revolts, while abruptly terminating the tenure of governmental personnel, do not disturb the prevailing pattern of social and economic relations. They ordinarily confine themselves to changing the composition of a group of officeholders by methods which are not formally authorized by written laws or constitutions. But their goals appear quite limited, their effects are contained, their participants are few, and their periods of violence are brief.

[1] William S. Stokes, "Violence as a Power Factor in Latin-American Politics," *The Western Political Quarterly*, Volume 5, Number 3, September 1952, p 446.

In the case of contemporary Cuba, while sporadic acts of violence have not been absent, Castro's pursuit of power by unconventional means principally assumed the form of guerrilla warfare. The strife between Castro and his opponents has been marked by intermittent air raids, bombings, sabotage, kidnappings, and summary executions; and relatively isolated acts of terrorism may have contributed to the demoralization of one or another party to the conflict at times.

But, prior to Fulgencio Batista's departure from Havana in January 1959, Castro and his supporters allocated the major share of their resources to a sustained campaign of guerrilla warfare. In the process of traveling to power by this unconventional route, they employed violence in a manner which deviated from traditional Latin-American practice.

Castro's rise to power was distinguished by protracted military warfare, the broad range of the social and economic stakes involved in the conflicts, and the threat to established systems of decision making. The expansion of Castro's power has affected previous social and economic institutions and has drastically transformed the entire system by which decisions

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are reached within Cuba. Therefore, the term "revolution" rather than *golpe de estado* applies to the cluster of changes wrought by his employment of violence. And revolutions, as distinguished from *coups d'état* that are symptomatic of the region's chronic political instability, are rare in Latin America.

In contrast with the rapid execution of the *golpe de estado*, Castro and his followers engaged in a lengthy period of guerrilla warfare. Castro was not without experience in the more traditional employment of violence in Latin America. On 26 July 1953—his revolutionary movement later took its name from this date—he took part in a sanguine attack on Moncada Barracks in Santiago de Cuba, and, if this assault had proved successful, it is possible that Fulgencio Batista

would have been removed as President, leading governmental personnel would have been shuffled, and social changes of only a very modest order introduced.

Under such circumstances, Castro conceivably might have been a party to a *coup d'état*. But the attack on Moncada Barracks was repulsed. Castro was captured, brought to trial, delivered a dramatic oration in his defense which subsequently was published under the title of "History Will Absolve Me," and was exiled. And the 26th of July Movement acquired martyrs.

When Castro returned to compete for power in Cuba in 1956, he no longer relied upon the traditional Latin-American tactics of violence to overthrow the Batista government. In fact, he resorted to a type of combat —guerrilla warfare—which notably accelerates the rate of social change. Whatever may have been his intentions, his commitment to guerrilla warfare implied a protracted military campaign of more than two years, sweeping economic changes, and radical modifications in the status and power of Cuban social groups.

In the wake of Castro's successful campaign of guerrilla warfare, accordingly, there came the confiscation of rural lands, the nationalization of foreign and domestic properties, the establishment of cooperative or government-managed farms, the expansion of social services, the suppression of opposition groups, and the indefinite postponement of pledged elections.

There was also the replacement of Batista's army by a new militia, the encouragement of a favorable climate for the activities of the Cuban Communist Party, bitter denunciations of the United States, tensions with the Roman Catholic Church, and the inauguration of measures of diplomatic and military coordination with the Sino-Soviet bloc.

On 2 December 1961 Castro declared that he considered himself a Marxist-Leninist and that Cuba would travel the road to communism under the direction of a political party molded in the image of the Communist Party of the Soviet Union. Changes of this type and scope have not been the usual concomitants of a *golpe de estado* in a Latin-American country.

Sources of Success

It is doubtful that any key or decisive single factor can be isolated to account for Castro's successful seizure of power. Every conceivable variable that can be correlated with his victory, of course, does not deserve equal weight. But an explanation which acknowledges the role of multiple factors, at least at this stage of our knowledge, seems to rest on the most substantial foundation of available evidence, and the conjuncture of perhaps six factors appears to correlate significantly with the rise to power of Castro and his supporters.

Undermining Batista's Authority

Castro and his followers continuously challenged the legitimacy of Fulgencio Batista's exercise of power. They pointed to his assumption of office by means of a *coup d'état* in 1952. They emphasized the dependence of his regime upon extreme measures of punishment, including torture. They denounced governmental corruption and venality. They contrasted the conspicuous luxury of the wealthy with the dismal poverty of the poor. They accused the regime of encouraging gambling and vice. They popularized a version of the Batista regime which

portrayed it as brutal, dictatorial, illegal, and immoral.

Their propaganda sought to make the Batista regime repugnant to good men regardless of their ideological persuasions. And, in retrospect, their propaganda was demonstrably effective. Not only did it accelerate the disillusionment of sectors of the Cuban population with Batista, but it placed the United States Government in a defensive posture when it occasionally employed or assisted former members of the Batista regime after Castro's consolidation of power.

Their propaganda, indeed, simultaneously accomplished the feats of prejudicing United States support of Batista. This was accomplished on the grounds that he was unworthy of aid from a government committed to the values of democracy; was exploiting Cuban nationalistic sentiments; and that Batista was an accomplice of foreign economic enterprise. Consequently, the Batista regime, both at home and abroad, was discredited, and the moral bases for its authority destroyed. In the language of the United States white paper on Cuba, issued 3 April 1961:[2]

The Cuban Revolution could not . . . have succeeded on the basis of guerrilla action alone. It succeeded because of the rejection of the regime by thousands of civilians behind the lines—a rejection which undermined the morale of the superior military forces of Batista and caused them to collapse from within.

Charismatic Leadership

Dr. Fidel Castro Ruz easily qualifies as a charismatic leader. His political style is colorful, extreme, flamboyant, and theatrical. He disdains established conventions and routinized procedures; he conspicuously departs from organizational norms of behavior and appearance.

His beard, as well as the beards of his guerrilla fighters, makes for a distinctive appearance. His recklessness in attacking Moncada Barracks, his defiant speech when brought to trial, his vociferous confidence in victory despite the initially disastrous results of his landing in Cuba in 1956 have conferred upon him a special reputation for courage and heroism.

There is a mystique about his capacity to overcome adversities. His preference for a combat uniform likewise casts him in the role of a self-denying defender of deprived groups. Even his marathon television addresses serve to endow him with a unique identity and vaguely defined prowess. He thus lays claim to the magical qualities of the charismatic leader. He is a man who can inspire legends.

Particular importance, moreover, probably attaches to charismatic leadership in contemporary Cuba. First, underdeveloped countries, with their large agrarian populations, often betray a propensity for leadership cast in a charismatic mold; and many features of the Cuban economy, despite the country's large urban population, conform to the patterns of underdeveloped countries.

Second, the traditions of Latin-American countries have not channeled political conflicts into stable, durable, political parties; political conflicts, commonly, have assumed the form of struggles between strong individuals—*caudillos*—and their followings. There has been a cultural tendency in Latin America to define political battles in personal terms, and

[2] US, Department of State, Cuba, Department of State Publication 7171, Inter-American Series 66, Washington, D. C., April 1961, p 3.

Cuba has not been immune to this tendency.

Third, the morale of a guerrilla fighter especially is dependent upon an exalted view of his leader. Many circumstances in the life of a guerrilla fighter may demoralize him. His life is in danger. His conditions of daily life are uncomfortable, with few amenities. His food supply is uncertain. His familiar pattern of social relations is ruptured. His hour of triumph usually is remote. But faith in the extraordinary powers he attributes to his leader may help to sustain him in his ordeals. Fidel Castro has been a leader who could evoke intense emotional responses of faith and loyalty.

Attracting the Peasantry

In December 1956 a dozen men—the survivors of a band of 82 who had sailed from Mexico on the yacht *Gramma* and had landed on the western coast of Oriente Province—escaped to the jungles of Sierre Maestra Mountains in Cuba. Their mission was to overthrow the regime of Fulgencio Batista. But a dozen men, even when their numbers include Fidel Castro, Raúl Castro, and Ernesto "Ché" Guevara, do not overthrow a government in command of substantial conventional military forces.

In order to accomplish their mission, this small corps of leaders obviously had to recruit numerous additional fighters. Since urban underground movements had proved insufficiently powerful to overcome the forces of Batista, Castro, in pursuit of power, necessarily had to recruit his guerrilla troops from among the inhabitants of rural areas. He also had to rely upon members of the peasantry for information, or intelligence, supplies, and protection from the enemy.

Whatever may have been the original motives of Castro and his associates, whoever may be the present beneficiaries of the Castro policies, and whatever may be the ultimate fate of the Castro regime, the military imperatives of guerrilla warfare in 1957 and 1958 dictated a program of drastic agrarian change. To increase the size of his guerrilla army, Castro had to appeal to the peasantry and to the unemployed rural inhabitants.

His interest in obtaining power thus meant that he had to become identified with policies holding out the promise of shifts in the pattern of landownership. For the composition of a volunteer army, the military personnel upon whom leaders rely for the attainment or exercise of their power influences the social and economic decisions of the leaders; and Castro's guerrilla army, to a significant degree, was composed of discontented peasants and was dependent upon the sympathy, active and passive, of an agrarian population.[3]

Not surprisingly, therefore, Castro's movement became one of radical agrarian change. The sugar industry, with its enormous impact on the Cuban economy, absorbed the labors of farmers and brought factories to rural areas. But it did not create a large agrarian population with a direct interest in the maintenance of the private ownership of land, and it could not provide employment throughout the year for rural workers.

If the Cuban experience is representative, in fact, we can generalize that intrasocietal guerrilla warfare is facilitated by a peasantry which does

[3] "Castro's army was recruited primarily from the peasantry. The long-exploited *guajiros* gained new hope from Fidel's promise of land, and many became adept students of guerrilla warfare." Edwin Lieuwen, *Arms and Politics in Latin America*, Revised Edition, Frederick A. Praeger, New York, 1961, p 264.

not possess the soil it cultivates and a rural population which lacks adequate employment.

Middle-Class Interests and Values

Some have described the Cuban revolution of 1958-59 as a middle-class revolution. The leaders of the guerrilla troops could trace their backgrounds to middle-class professions, including medicine and law; the urban underground which cooperated with the guerrillas was composed of persons with middle-class origins; and political figures associated with middle-class interests helped to finance the original Castro expedition which sailed from Mexico.

In his march to power, Castro did not deliberately antagonize these elements in Cuban society. On the contrary, he sought to enlist their sympathy and assistance. For this purpose, he exploited their resentment and hatred of Batista, promised to sponsor free elections and civil liberties, and avoided specific statements of social, economic, and foreign policy which might prejudice their allegiance.

After he came into power, he even, transiently, rewarded non-Communist middle-class adherents with official governmental positions. Later, of course, businessmen and other middle-class groups, who originally had sympathized with the Castro movement, swelled the ranks of Cuban exiles.

As he confessed in his speech of 2 December 1961—in which he publicly proclaimed his fealty to Marxism-Leninism—Castro initially concealed his hostility to the interests and values of these groups, because he did not wish to alienate "the *bourgeoisie*" at a time when his pursuit of power required the maintenance of a broad coalition of support.

Applying Guerrilla Warfare

The cadre of leaders around Fidel Castro was familiar with the principles of guerrilla tactics and adapted the doctrines of guerrilla warfare to the social conditions and the terrain of Cuba. It, in short, was composed of trained fighters. Before the invasion of Cuba in December 1956, this group was instructed and drilled in the tactics of guerrilla warfare in the mountains of Mexico by Alberto Bayo, a veteran of guerrilla warfare during the Spanish Civil War.

The members of the group were aware of the need for recruiting young persons who could endure the hardships of guerrilla fighting. They perceived the peasantry as a vulnerable target for their appeals. They had assimilated the lesson that special advantages are attached to surprise and hit-and-run maneuvers in guerrilla warfare. They appreciated the protection provided by a cloak of secrecy over the details of military operations. They recognized the role of deception.

This group knew the value of a sanctuary which might be afforded by mountainous terrain. They arranged for the acquisition of arms and ammunition—from the enemy, from allies abroad, and from guerrilla-managed factories. They realized the importance of attention to details, such as making shoes and tobacco available to their recruits. They implemented plans to spread propaganda by radio announcements and clandestine newspapers. They distinguished between the functions of a member of an urban underground and a guerrilla army based on rural areas.

The members of the group had learned that a small, determined nucleus could initiate guerrilla warfare

and that a growing guerrilla band must be divided into relatively small detachments. They profited from the experiences of guerrilla movements in Asia with highly mobile tactics, and they shunned direct engagements with the enemy from fixed positions.

Neutralization of United States

While it is impossible to attach precise weights to the various factors which contributed to Castro's seizure of the governmental instruments of power in Cuba, the neutralization of the power of the United States may be evaluated as a variable of extraordinary importance.

Despite his charismatic leadership, his skill in discrediting Batista, the technical knowledge of guerrilla warfare on the part of his troops, the popularity of his appeal to the peasantry, and the integration of middle-class groups into his movement, Castro's quest for power in Cuba may well have proved fruitless if United States power had been unqualifiedly committed to the prevention of his entry into Havana.

In retrospect, the capabilities of the United States, however, were cast on the scales of power neither to tip them decisively in Castro's direction nor to frustrate his ambitions: American power was neutralized. This neutralization of United States power can be attributed to three major constraints upon the evolution of our Cuban policy.

The Negative Image of Batista

As the conflict between the Batista regime and the Castro guerrilla fighters intensified, a cluster of negative symbols became fastened to Batista. He was portrayed as a ruler who profited from gambling and corruption and who maintained his authority by cruel and sadistic methods. Supporters of Batista in the United States found themselves compelled to offer apologies for the nature of his regime. As a last resort, they appealed for assistance to his regime on the grounds that it was, at least, uncompromisingly hostile to communism.

But the disposition of the United States to take a dubious view of the reliability of dictators as allies curbed enthusiastic and bold assistance to Batista. Ultimately, in fact, the United States withdrew military support for the Batista regime and thus hastened its demise.

The Confused Image of Castro

Our virtual rejection of Batista did not mean that we embraced Castro. Rather, we became preoccupied with efforts to solve the paradoxes of Castro's career. Was he a Communist? Was he a demagogue? Was he a romantic nationalist without additional ideological encumbrances? Was his fondest desire merely to preside over free elections in Cuba, or did he contemplate a radical transformation of the Cuban economy?

If he was not a Communist, why did widely circulated reports stress that his brother Raúl, and his close associate, Ernesto "Ché" Guevara, were participants in Communist activities? If Fidel was a Communist, why had the Cuban Communist Party initially made such a contemptuous estimate of his military operations?

If he represented interests which were unalterably hostile to the United States, why did a responsible journalist, Herbert L. Matthews, describe him so sympathetically, on the basis of interviews, in dispatches to *The New York Times*? If he was a Communist, why did an official of the Central Intelligence Agency, testifying before a congressional subcommittee, declare

that the available evidence did not warrant such a conclusion.[4]

Absorption with these questions perpetuated a blurred image of Castro. Unable to reconcile prevalent contradictions in his behavior and attitudes, the United States could not conveniently classify him as either a firm friend or a grim foe.

Without a satisfactory evaluation of Castro's role and status, the United States, of course, could not commit her resources appreciably to facilitate or to retard his rise to power. It is a plausible deduction that United States power would have been used differently if Castro had announced in 1956 —as he did five years later—that he was a dedicated Marxist-Leninist.

Ambivalence of Policies

Ambiguity of image spawned ambivalence of policy. The United States neither offered Castro the massive assistance which might have imposed obligations of reciprocity nor resorted to the economic and violent sanctions which might have frustrated his military victory. We cancelled shipments of arms to the Batista regime in the spring of 1958, and we did not forestall shipments of arms to Castro by such friends of the United States as José Figures, a former President of Costa Rica.

Nevertheless, the United States did not diplomatically abandon the Batista regime and make available unqualified support to Castro. After Castro's entry into Havana, moreover, he did not receive an official welcome upon his visit to the United States and apparently no gestures were made in the direction of extending substantial economic assistance to Cuba.

Thus, in the period of Castro's rise to power, the power of the United States, which might have proved decisive in shaping his fate, was neutralized. Castro's guerrilla forces were permitted to consolidate their triumph in Cuba with a minimum of obligation to the United States. We failed to establish a claim to the benefits due a friend, and we did not assert the dominance of a militarily superior enemy.

Conclusions, Implications, and Lessons

An analysis of a single case cannot justify a statement of exhaustive conclusions about guerrilla warfare. But certain tentative propositions, perhaps more accurately labeled as hypotheses, may be offered on the basis of this examination of Castro's successful seizure of power.

These generalizations—each of which might be subjected to additional investigation and research—here will be stated baldly, in a summary style, without the elaboration and qualification that more abundant space would permit.

Not Exclusively Military

Guerrilla warfare is not exclusively a problem in military strategy, tactics, and training. The military aspect is merely one component in a system of guerrilla warfare. When guerrilla warfare is waged with success, military tactics are coordinated with political, social, economic, and psychological variables.

Knowledge in the application of the military doctrines of guerrilla warfare, for example, would not have proved a sufficient condition for success on the part of Castro's forces if other variables had not served to neutralize the power of the United States.

[4] US, Congress, Senate, Subcommittee of the Committee on the Judiciary to Investigate the Administration of the Internal Security Act and other Internal Security Laws, *Communist Threat to the United States Through the Caribbean*, 86th Congress, 1st Session, Part 3, 5 November 1959, pp 162-164.

Value of Publicity

Despite the high value attached to secrecy in the folklore of guerrilla warfare, publicity may promote the interests of a guerrilla movement. Detailed revelations of the military positions, deployment, or composition of guerrilla units, of course, may prejudice their security.

However, publicity about their leaders and their exploits may serve to encourage diffuse attitudes of sympathy, to attract fresh recruits, to create doubts about the authority of the established government, and to cultivate an image of irresistible guerrilla power. The interviews between Castro and Herbert L. Matthews of *The New York Times*, for example, not only performed these functions, but explicitly contradicted Batista's propaganda that Castro was not alive.

Motivations of Leaders

An explanation of the motivations of guerrilla leaders probably must be sought chiefly among psychological variables. The evidence indicates that individual members of the middle class —a very small proportion in comparison to the total size of the class— sever their conventional relations with professional colleagues or students in order to lead a guerrilla band. The overwhelming majority of doctors, lawyers, teachers, and students, however, do not become guerrilla leaders.

Under the circumstances, we may hypothesize that factors of personality structure are crucial in propelling individuals into roles of guerrilla leadership. For the leaders, in other words, participation in guerrilla warfare may discharge psychological functions; for their supporters, guerrilla warfare may discharge other functions. Whereas leaders, through guerrilla activity, may resolve personal tensions of which they rarely are aware, their supporters may at least consciously pursue relatively tangible goals, such as the acquisition of land or more attractive economic rewards.

Appeal to Disaffected Peasantry

Persons with rural backgrounds and residence provide indispensable support for a guerrilla army. The Castro movement attracted support from urban middle-class groups, but a significant core of guerrilla fighters in the Sierra Maestra Mountains consisted of peasant recruits. This trait of guerrilla warfare implies that the social and economic appeals of a guerrilla movement are directed to a disaffected peasantry.

Special Cuban Factors

While guerrilla warfare in Asia and guerrilla warfare in Cuba share some uniform characteristics, each guerrilla movement also appears to incorporate discrete or unique elements. Thus guerrilla leaders often may exhibit charismatic qualities, but Fidel Castro remains a distinct individual, with traits of personality which distinguish him from other guerrilla leaders. Castro himself is a nonrecurring variable.

Similarly, a peasantry without traditions of private ownership of land regularly may provide a vulnerable target for guerrilla propaganda; but, in Cuba, thanks to the presence of sugar mills in the countryside, the ranks of the disaffected peasantry were augmented by unemployed and underemployed rural workers. Again, rural inhabitants with factory experience cannot be listed as a factor which invariably correlates with guerrilla warfare.

The fact that Cuba is an island— and that the original band of guerrilla fighters arrived by water transportation—also introduced a special geo-

graphical variable in the Cuban pattern of guerrilla warfare.

Antiguerrilla Measures

A large-scale commitment to guerrilla tactics may not represent the most appropriate response of a highly industrialized country to hostile guerrilla warfare in another country. The Cuban experience suggests that a highly industrialized country, such as the United States, when confronted by a hostile guerrilla movement elsewhere, must seek to undermine the appeal of guerrillas to the rural population through social and economic measures and, concurrently, to evolve military policies which are compatible with the skills of urban groups in the threatened country.

In the absence of such efforts, the development of technical expertise in combating guerrilla forces probably cannot provide an insuperable obstacle to guerrilla successes. There is a priori reason, moreover, to endow guerrilla warfare with an aura of moral attributes superior to those imputed to other types of warfare.

Relevant View of Future Needed

In order to cope with the problems associated with guerrilla warfare, the United States requires a relevant model of the future which allows for change. Guerrilla warfare is a dramatic attempt on the part of some groups to secure change. To limit the adverse effects of guerrilla warfare, the United States will find it necessary to define her interests in a fashion which makes allowances for social and economic changes in underdeveloped areas, including Latin America. Interests defined along such lines then can be defended with commensurate power.

In seeking to forestall the negative consequences of fresh outbreaks of guerrilla warfare in the Castro pattern, we might well discover precedents in the record of our experiences with Mexico.[5] Obviously, the Cuban and Mexican revolutions are not identical. Significantly, Mexican relations with the Soviet Union have not resembled Cuba's intimate ties with the Communist countries. However, both the Cuban and Mexican revolutions have been marked by the traits of civil war, difficulties in securing diplomatic recognition from the United States, shifts in landownership, conflicts with the Roman Catholic clergy, expropriation of foreign-owned enterprises, and the resort to nationalistic and radical political symbols.

We did not welcome the violence of the Mexican revolution. We condemned Mexican restraints upon the Roman Catholic Church. We engaged in a prolonged controversy over the Mexican expropriation of foreign oil interests. We were not enthralled with the language of the Mexican revolution which incorporated "socialism" and "revolutionary" as positive symbols and covered the walls of government buildings with glorified portraits of Marx and quotations from the *Communist Manifes.*

Despite these bases for friction, however, we reached an accommodation, and United States investments in substantial quantities entered Mexico after the Second World War. In a sense, the United States found it possible to maintain satisfactory relations with Mexico by defining her

[5] During the period 1936-1940 Mexico, under the aegis of the National Revolutionary Party, later the Mexican Revolutionary Party, adopted Socialist-Agrarian practices and nationalized a large portion of the foreign-owned industrial base. Following a period of disorganization and confusion resulting from extremists' activity after World War II, the revolution came to maturity in 1946 with the peaceful election of Miguel Alemán Valdés as President.—The Editor.

economic interests to allow for the substitution of manufacturing capital in place of agrarian and mineral capital. In another sense, the United States defined her international interests to allow for Mexican support on issues of foreign policy, including issues brought before the United Nations..

The dependence of Cuba upon the Sino-Soviet bloc as well as Castro's profession of belief in Marxism-Leninism, of course, are without Mexican counterparts. But the interest of the United States lies in preventing the emergence of regimes with the distinctive features of the Castro regime in 1961.

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22 October 1962

. . . . unmistakable evidence has established the fact that a series of offensive missile sites is now in preparation on that imprisoned island [Cuba]. The purpose of these bases can be none other than to provide a nuclear strike capability against the Western Hemisphere.

* * * * * * *

Acting, therefore, in the defense of our own security and that of the entire Western Hemisphere, and under the authority entrusted to me by the Constitution as endorsed by the resolution of the Congress, I have directed that the following initial steps be taken immediately:

• First: To halt this offensive buildup, a strict quarantine on all offensive military equipment under shipment to Cuba is being initiated. All ships of any kind bound for Cuba, from whatever nation or port, will, if found to contain cargoes of offensive weapons, be turned back. This quarantine will be extended, if needed, to other types of cargo and carriers. . . .

• Second: I have directed the continued and increased close surveillance of Cuba and its military buildup. . . . Should these offensive military preparations continue, thus increasing the threat to the hemisphere, further action will be justified. . . .

• Third: It shall be the policy of this nation to regard any nuclear missile launched from Cuba against any nation in the Western Hemisphere as an attack by the Soviet Union on the United States requiring a full retaliatory response upon the Soviet Union.

• Fourth: As a necessary military precaution, I have reinforced our base at Guantanamo, evacuated today the dependents of our personnel there and ordered additional military units to stand by on an alert basis.

• Fifth: We are calling . . . for . . . the Organization of American States . . . to invoke articles 6 and 8 of the Rio treaty in support of all necessary action. . . . Our other Allies around the world have also been alerted.

• Sixth: Under the charter of the United Nations, we are asking . . . that an emergency meeting of the Security Council be convoked without delay to take action against this latest Soviet threat to world peace. Our resolution will call for the prompt dismantling and withdrawal of all offensive weapons in Cuba, under the supervision of UN observers, before the quarantine can be lifted.

• Seventh and finally: I call upon Chairman Khrushchev to halt and eliminate this clandestine, reckless and provocative threat to world peace and to stable relations between our two nations. I call upon him further to abandon this course of world domination, and to join in an historic effort to end the perilous arms race and transform the history of man. . . .

President John F. Kennedy

CATALOG OF VIET CONG VIOLENCE

Colonel Robert B. Rigg, *United States Army*

THE war in South Vietnam is full of contradictions. Both sides are on the offensive at the same time. The Viet Cong's (VC) ultrasimple tactics born of military poverty are working well against relatively modern forces. The Viet Cong are outgunned; they have no air force. Their guerrilla forces are successfully carrying out a cheap war while forcing their opponents to spend millions.

Theoretically, the Viet Cong should be defeated, if only because they are military lightweights fighting against heavyweights. The unparadoxical fact is that the Viet Cong irregulars in most cases thus far are fighting their war by their own special catalog of violence. This well-worn catalog is a rebuttal to machine age war. It provides master templates by which little men can be molded into a military power capable of holding off the most modern armaments short of mass destruction weapons.

The ABC's of this Communist-bloc exported war are more than Arms, Bullets, and Casualties inflicted. The ABC's of Viet Cong success also lie in:

Austerity of force and overhead.
Balanced military-political growth.
Cheap warfare techniques.

The Viet Cong are a scattered army of elusive and mobile units which present almost "no targets" to the opposing forces. VC combat units are either moving, attacking, or hiding. Headquarters of these units are austere, simple, and mobile—a small radio, a handcrank generator, an almost invisible piece of wire strung up in

a tree for antenna. These, plus a few gun-toting men, comprise the tactical nerve centers which are so hard to find.

This is the enemy. Since he has no transport service except for coolie porters, he has no system—except people—that can be attacked. His only ply for weapons and ammunition is the enemy he attacks. He offers no militarily significant logistical complex.

Doorstep Warfare

Sometimes the Viet Cong are everywhere. Too often they are nowhere. They swarm over some canals in a

U.S. Army

Helicopterborne South Vietnam force pursues the elusive Viet Cong

logistical installations worthy of being designated targets are small scattered bases shrouded under jungle canopies. His primary source of supfleet of sampans to overwhelm a lonely government fortress. Then they melt away carrying their own wounded. Planes search for them. Helicopters chase them. Patrols hunt them. Their's is doorstep warfare of countless little battles at villages and armed forts. These militarily poverty-stricken platoons, companies, and battalions disappear like vaporous ghosts when their swift attacks are over.

Setting the science of warfare back a thousand years, some 15,000 to 20,-

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000 Communist Viet Cong forces operate from a series of scattered bases which pockmark a little nation built up out of the wreckage of the Indochina War.

People versus Ground

In Viet Cong minds this is not a classic war, or a series of battles for Hill 209, but a war for millions of people. Thus the VC strategy is plainly one of "people gaining," not one of "ground gaining." The Red irregulars don't believe that they have to stay and hold communities everywhere in order to obtain popular support. But the VC are always marching back, however briefly, to villages and farmers and promising "the better life" —especially one which, if the people side with them, will be a life without war.

On the surface the VC's party line to the populace is not communistic. The Red propagandists' theme is political reunification of the Vietnams —the North and the South. The real Red motives are advanced under the guise of nationalism. At the same time, the Communists promise immediate individual or personal benefits to the peasants.

Among the primitive mountain people—the Montagnards - the VC have long been sowing unrest. Currently, however, the Montagnards are taking a second look at the intruding guerrillas. The VC made a mistake: they kidnapped too many young males from the tribes. It is evident now that Viet Cong efforts among these tribesmen have backfired because there is a reorientation of tribes toward the government.

Not on the highways, but on the byways, the Viet Cong work politically. By persuasion and coercion these gaunt little men work on the people in areas where communications are poor and government power is weak. There is a twist here; the VC have spent years in making certain regions weak. They have ousted, killed, or kidnapped landlords, district chiefs, government officials—any leader or person strongly anti-Red. Once these victims are out of the way, government machinery grinds into idleness. Then the Communists step in to reestablish community and social order, impose officialdom, collect taxes, and reopen schools. This is the strategy of turning the people away from the government.

Twilight Zone Terrorism

Sometimes, plain, individual murder can win a group of Vietnamese people over to the VC cause. Take, for example, the case of a local government official who may—for a variety of reasons, some sound—be very unpopular with the local peasants. The Viet Cong formula is to murder him, take credit for the job, and then tell the people, "We have rid you of an oppressor." Some persons feeling oppressed by the ex-official have fallen into this trap very easily and sided with the Communists. The obvious point is that, if civil or military authorities in the provinces are not able and honest, they are the very persons whom the Viet Cong can exploit in the eyes of the people.

Between the extremes of singular murder and the more wholesale variety of open combat lies the twilight zone of Viet Cong terrorism and persuasion—little techniques like destroying peasant identity cards to confuse or disrupt civil administration and social welfare. There is the government insecticide team, ostensibly official, that enters a village and then turns

out to be a VC goon squad out to confiscate farm machinery.

Along the jungle trails "tiger" pits are dug and the bottoms are floored with sharp pointed bamboo stakes to impale screaming victims. Young men and boys are kidnapped in wholesale lots from villages; marched off, they become porters and hostages. Indoctrinated, some of them become Communists, often without knowing why. Foreigners are kidnapped and held for ransom.

Armed propaganda teams enter the village, assemble the adults, and give persuasive lectures to people tired of warfare amid their yards and rice paddies. Elsewhere, peasants are persuaded by the Red guerrillas to store food supplies in caches. Government forces find these scattered and secretive "depots" hard to detect because the peasants don't talk—they fear reprisals if they don't obey the gaunt little men with guns.

Collecting taxes is not violence per se, but behind the pistol-packing collectors loom terrorism and reprisals if individuals--especially those better off—do not contribute.

Twilight zone terrorism is directed at selected targets, mainly government officials, systems and services, and foreigners. The VC make a studied effort otherwise to present a favorable image to the masses.

Prime Military Targets

In this tormented nation the primary target of Viet Cong military attack is the Self-Defense Corps (SDC), organized from men in the villages for local defense. The SDC is a significant target for three reasons. First, the Viet Cong would perish without the support of people, so they have concentrated on the SDC. Second, because the SDC is scattered throughout the nation in small bodies, it presents targets of opportunity—targets largely sedentary and militarily weaker than army units, for example. Third, the VC seeks to capture weapons, and the SDC is a convenient source. Much smaller than the army, the SDC sustained not only the greatest number of casualties last year, but the greatest number in proportion to its size.

The Civil Guard (CG), a provincial level military organization comparable to our National Guard and not much larger than the SDC, is likewise a prime VC target. It has had 1961 losses similar to those of the SDC.

When the VC guerrillas attack a village outpost system or fortress, they usually have a waylaying force ready to attack army or Civil Guard reinforcement units which will be dispatched to rescue the point under attack. There is nothing new about this pattern, but the guerrillas get away with it all too often.

Web of Intelligence

Find the enemy through the people; deny the enemy through the people.

A South Vietnamese military patrol slips out of a village at night. Suddenly, lights begin blinking from one hamlet to another. The Viet Cong are warned.

The patrol switches its route. A rooster crows, then another. As one US Army advisor put it: "You suspect the crowing rooster is a Viet Cong guard. When the rooster begins coughing, you are sure of it!"

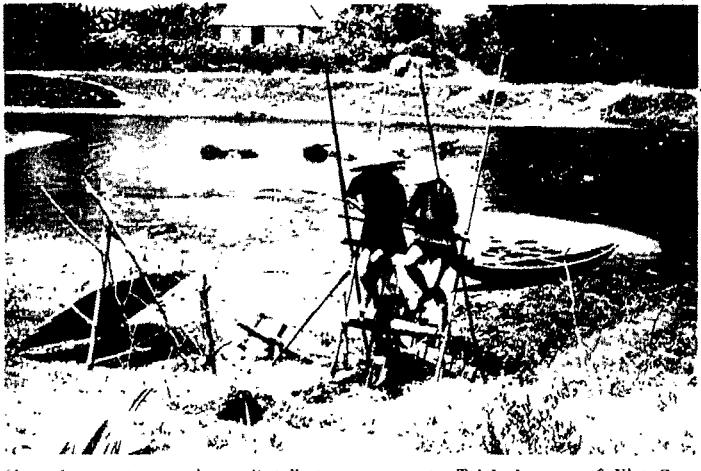
The web of Red intelligence is woven through the populace. In the countryside people talk to the VC, but often they won't talk to officials on the other side because the VC threaten to slit the throats of any informers. Often, government military forces in pursuit of the guerrillas sweep into villages

and find that women are the only persons remaining. Rather silent women, too.

This type of warfare puts a premium on the day-to-day knowledge of the whereabouts, strength, and movements of the opposing side.

Tactics

The calligraphy of the Viet Cong's strategy of violence is clear and concise—it was first written in Chinese.



Often, the country people won't talk to government officials because of Viet Cong threats to kill informers

In fact, the Viet Cong strategy amounts simply to a rerun of an old film entitled, "The Early Stages of the Chinese Civil War." For example, Logistically, the VC are simply adhering to the earlier Red Chinese Ninth Principle of War which reads:

Replenish ourselves by the capture of all of the enemy's arms. . . . The source of the men and materiel of our army is mainly at the front.

The Viet Cong are military parasites feeding on the enemy. They wage combat to destroy the enemy and capture arms, ammunition, and materiel from him.

This is not a modern way to fight, one says. But the Red Chinese succeeded by it and the Viet Cong are not completely failing.

Note also the base selected for revolution. The revolt sparked by the Bolsheviks in Russia was urban based. In contrast, Mao Tse-tung figured his revolution had to be based on a rural foundation. The Viet Cong approach is patterned after Mao's strategy.

At the hard core of current VC operations is a simple principle—"no real estate per se." This principle contrasts with the conventional one wherein territory and ground gaining are regarded as inherent steps to victory. This is not so with the Viet Cong. Except for securing certain opera-

tional bases, they are letting government forces cope and grope over the issue of territory and territorial control. The obvious aim—the destruction of the enemy's fighting strength—is undeniably militarily sound.

Mobility and Quick Battles

Few militarists bother to become poets, but Red Chinese Marshal Liu Po-cheng is an exception. Years back during the China Civil War he put a basic strategical concept into the following poem:

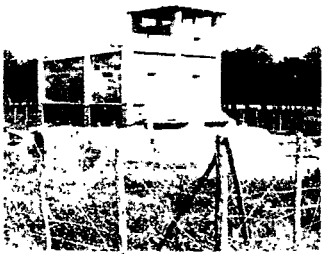
When you keep men and lose land,
The land can be retaken.
If you keep land and lose soldiers,
You lose both.

During the latter half of the China Civil War, Liu was criticized for the loss of some towns he captured. His rebuttal was: "I traded 17 empty cities for 60,000 of Chiang Kai-shek's soldiers." Essentially, Liu had. He had concentrated on killing and capturing; his campaigns were militarily successful in that he destroyed enemy fighting strength. However, he did not divert his own military strength and power by trying to hold onto real estate. The Chinese Nationalist Army was trying to hold territory and defeat the Reds at the same time. Liu—known as the "One-Eyed Dragon"—led one of the most mobile and elusive forces in that war. His command post and ultrasmall staff were a classic model for simplicity and austerity. With about 200 men at his command post he controlled a field army of about 300,000 troops.

The Viet Cong today follow the same austere patterns of organization, fighting according to Liu's poetic principles.

Foot mobility and maneuver make the VC units hard to hunt and pin down. Some guerrilla companies never spend two days in the same place. By their mobility they multiply their tactical effect. This is their prime stock in trade—an old and famous trademark of the Red Chinese. The VC do not present good targets, and they try to fight battles only of their own choosing.

The VC reject positional warfare, and will for some time to come just as the Red Chinese and Vietminh did



Republic of Vietnam

In attacks on outposts, the Viet Cong try for a quick decision so they may disappear as fast as possible

—and succeeded by it. They apply Mao's dictum, "Fight only when victory is certain, run away when (it) is impossible."

However, the VC are likely to defend their primary bases of operation by mobile and positional means, like "Zone D"—the jungle fortress the French never successfully penetrated. Here, again, they are simply following a basic rule of Big Brother Mao.

At the marrow of the Viet Cong's strategy is the long and enduring war concept coupled with the tactics for winning individual battles by "quick decision."

Every week is witness to Viet Cong attacks on outposts and little fortresses wherein these Communists try to—and often do—achieve a "battle

of quick decision." Then the VC melt away to live, and fight another day.

A Protracted War

We may expect this pattern to prevail. In Viet Cong minds this war—their fight—is plainly a protracted war. "Wear Diem's government, his people, and his troops down, then the propitious moment will arrive. People can endure only so long." These are concepts the VC are relying upon.

Some illusions of modern—or conventional—warfare techniques vanish in the jungles, the darkness, and in the monsoon rains of South Vietnam. For example, traditional rules of war leave the civil populace mainly out of the military struggle. These rules are not in the Viet Cong catalog; this war is a struggle centered for and on the people. The struggle is a political-military conflict.

One of the time-honored rules of war is that soldiers wear uniforms. This was designed in part to save the civil populace from indiscriminate slaughter. But the Communists do not adhere to the rules of war. Every person on the Viet Cong side is a fighter—but without uniform. Many VC carry weapons while others carry and gather food, supplies, and military intelligence.

One of the prime Red strategists of this war is North Vietnamese General Vo Nguyen Giap, the victor at Dien Bien Phu. Today, he is directing the Viet Cong by remote control. He is a practitioner as well as an advocate of what he terms "the strategy of long term resistance." As he states in respect to the Indochina War:

Only a long term war could enable us to utilize to the maximum our political trump cards, to overcome our material handicap and to transform our weakness into strength.

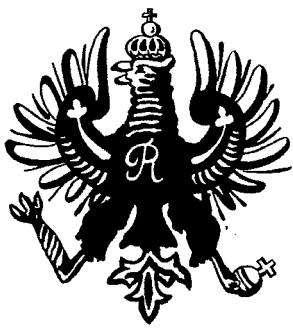
This axiom is being applied in South Vietnam today.

It is easy to forget at a distance that counterinsurgency operations are not 'war'—not even civil war usually—but rather the civil-military action of a legal government confirming its own sovereignty.

Because it is not a 'war,' there are no 'lines.' There is no clear 'enemy territory' where everything is hostile, and no clear 'friendly territory' where everything is secure. The 'enemy' are irregular forces, usually scattered, and forest, swamp, or mountain based, and relying on persuasion, blackmail, and terror to achieve their aims. The loyalty and confidence of the nation's people is the objective.

. . . . A combined military-civil action is necessary to secure the national boundaries, to protect the people, to work among the people to gain their confidence, to search out and destroy the guerrillas, and to maintain public confidence in the justice and stability of the government.

Secretary of the Army Cyrus R. Vance



The German General Staff

PART II: THE REICHSWEHR AND WEHRMACHT PERIODS

General Leo von Geyr, *German Army, Retired*

This is the second of two articles dealing with the German General Staff by an officer who was a member of that distinctive organization and whose service with the German Army covered a span of 40 years and two World Wars.

The first article appeared in the November 1962 issue.—Editor.

THE dragon-seed of the Versailles Treaty prompted one British general to remark at the time that the treaty guaranteed future armed conflicts.

By the terms of the treaty, the Prussian War Academy and the general staff were eliminated. Germany found ways and means to circumvent the military clauses, for it was not pos-

sible to leave a nation as virile as Germany militarily and spiritually unled and poorly armed in an area of Europe which had been fought over for centuries. A remark made near the end of 1935 by a British General Staff officer to the German military attaché in London seems worth mentioning: "What did the Germans do that we would not have done in the same situation?"

In newly established military districts like Königsberg, Dresden, and Munich, other centers took the place of the former Berlin War Academy in the training of general staff officers. Seven such centers were established and each offered a two-year course. Eligible to attend were those officers who successfully passed the so-called "Military District Examination," which, at that time, had to be taken by all officers. The most qualified were assembled in Berlin after the two-year training period for final screening for general staff duty.[1] General Hans von Seeckt, who was assigned the management of the *Reichswehr* under the title of chief of the army command, was responsible for this program, for he realized that general staff officers of high quality could only be produced through an extensive training program.

District Centers

As the *Reichswehr* had no great demand for general staff officers, the classes in the district training centers were much smaller than those formerly in attendance at the Berlin War Academy. Too, the small number of vacancies made for an almost ruthless process of selection. One advantage that the small classes had was that, within the framework of extended and modernized lesson plans, a more direct knowledge of the capabilities of the individual candidates could be obtained.

Instructors in military history and in tactics now worked full-time, and were selected from among the group of older, more seasoned general staff officers. The military history lessons during the first year of training covered the Schlieffen plan and the Marne Campaign of 1914. German operations in Poland in 1914 were discussed during the second year. In addition, the students were instructed in the Prussian campaigns conducted by both Frederick and Napoleon. When General Ludwig Beck was chief of the army command, the American Civil War was discussed in the third, the decisive, year. As a whole, the instruction in military history was rated by the students as excellent.

Unfortunately little attention was paid to foreign policy, the mentality of other nations, and economic planning for war. Bearing in mind the bitter experiences during the British sea blockade, the lack of thought given to the economic planning for war is astounding. As far as I know, foreign operational principles were not covered during the staff training period.

Training in the conduct of war games was good, but training in the command and operation of mobile troops, which had been almost completely neglected in the 1920's, did not start until about 1935, and then only on a modest scale. At first, there was only a general introduction to the subject.

Under Wilhelm List, the training section of the *Truppenamt*, or troop office—the successor to the great general staff—had engaged in serious pre-

[1] The designations "general staff" and "general staff officer" had been officially dropped. The terms *Führerstab* and *Führerstabs-offizier* (leader staff and leader staff officer) had been substituted.

Field Marshal Wilhelm List, chief of the *Truppenamt* from 1925 to 1928

liminary studies in the field of mobile warfare as early as 1928.[2] But when his successor, the tradition-minded, spiritual reactionary Walther von Brauchitsch, then a colonel, took charge of the training section, the old infantry-artillery concept again dominated. The poorly developed training in general operational principles which prevailed until 1939 had dire consequences for Germany during World War II.

Doctrine on air-ground cooperation remained a neglected stepchild because Göring's intellectuality leaned toward Douhet's theories. Much more should have been accomplished both in theory and in practice to further the coordination between the ground and air forces. However, during the war, interservice relations were better than could be expected, and the German Air Force did its best when it was not hindered by Göring.

Finally, there was a growing trend to make the defense concept presentable because of Germany's weakness.

Lack of Quality

Until the onset of war in 1939, a definite line of separation in regard to the training of staff officers during the Weimar Republic and the training offered during the Hitler period cannot be drawn. With the beginning of war, staff officer training became a sort of "rapid manufacturing process" because of the great demand for general staff personnel.

Since both the commander in chief of the army and the chief of the gen-

Field Marshal Walther von Brauchitsch, successor to List in the *Truppenamt*

[2] The *Truppenamt* was one of the two departments created after the provisions of the Versailles Treaty became effective on 1 January 1920. The other department was the *Heeresamt*, or army office, which took over the tasks and powers of the old War Ministry. Both these departments operated under the *Reichswehr* Minister. On 16 March 1935 the *Truppenamt* openly became the great general staff.

eral staff had been eliminated by Hitler in 1938 because of their opposition to his military ventures, the inevitable consequence of a decline in the quality of the younger generation of general staff officers could not be prevented.

After the war had begun, Hitler himself prohibited instruction in the operational principles of armored forces in the accelerated training courses. In his opinion, this area involved too much criticism. He only permitted discussions to be held that covered the campaigns of Frederick and Napoleon. *Quem deus perdere vult, dementat* (God takes the wits from the one He wants to destroy).

Insufficient Interest

Generally speaking, though, the *Reichswehr* period and the early part of the Wehrmacht period did see the restoration of discipline in the German armed forces. This was due largely to Seeckt's guidance. At the same time, the 1920's were dominated by the spiritual reactionary but determining group left over from the former supreme army command, a group that stood on the views of 1918 and was hostile to political and liberal tendencies such as those advocated by General Walther Reinhardt. There was almost a self-righteous seclusion from national and international affairs, and certainly there was insufficient interest displayed toward the developments in foreign armies.

Where there was clear-cut, technical, thorough staff training up to the intellectual requirements of division operations, there was insufficient understanding and an almost total underestimation of the advances made in firepower, particularly that which could be delivered by aircraft. There was a lack of interest in the air force, largely because of a failure to appreciate its significance and the developments in that field. One might say that a series of "Chinese walls" has been erected between the components of the armed forces.

Within the army there was a hesitant attitude and a conservative outlook of the development of motorized and mechanized forces—"oil troops," they were called. This was due partly to an innate conservatism within the general staff, and partly to German national characteristics: not enough pioneer spirit, too much routine work.

It seems to me that the reasons for the decline in the quality of the general staff officer during World War II have been best summarized by a former general staff officer who today holds an important position in German economic activities. He says that the deterioration was brought on by:

- Overworking the general staff officers of all grades during the rapid reorganization of the army and subsequently during the war.
- A deficient top organization during the war which meant that the chief of the army general staff was no longer directly responsible for significant theaters of war.
- The fact that Hitler as military chief generally distrusted his general staff and, therefore, rarely acted upon the advice of his staff.
- Frictions in the political arena and the scruples of conscience which general staff officers had during the Hitler era and especially over the Nazi conduct of war.

The Wehrmacht Concept

The idea of creating an effective Wehrmacht academy (armed forces academy) and a Wehrmacht General Staff (joint staff) was never realized

during the course of the history of the Prussian and German General Staff. One can conclude that the high command should have recognized this weakness and initiated corrective action.

During the imperial period it would have been difficult to establish such a high-level body because of the constitutional prerequisites. The highest chiefs of the military departments reported directly to the emperor. The emperor decided.

General Reinhardt realized after World War I the continued lack of direct cooperation between the highest authoritative bodies of the Reich. It was important to him to raise future, high-level leaders above the tradelike standards of division commanders and to introduce them to a less professional and more national-political way of thinking. When Reinhardt was not given Seeckt's position upon the latter's retirement, he devoted his time after discharge to training courses which he set up in Berlin.

In spite of having the same general staff training, in spite of being successful in high general staff positions during World War I, Reinhardt and Seeckt were poles apart in their way of thinking both in military concepts as well as in national politics.

Seeckt's outstanding merit was his successful effort to restore the stern discipline which both German officers and men had lost toward the end of World War I, and which had not reappeared in the small army that remained during the turbulent days of German revolutionary activities subsequent to the end of the war.

Seeckt established a firm position for his army command and the *Reichswehr* in the new state. By preserving general staff traditions, he laid the foundations for the future.

Reinhardt, the first staunch advocate of the Wehrmacht concept, was well ahead of Von Seeckt—who was justly called the last Prussian general of the Guards—with his flair for national politics and an open mind concerning the realities of postwar Germany and future training require-

General Hans von Seeckt's outstanding effort was restoring the discipline that was lost by officers and men toward the end of World War I

ments. Technological matters were closer to Reinhardt than to Seeckt. Werner von Blomberg, intelligent but not of strong character, said that Seeckt was not very imaginative. As far as this is true, it does involve a certain misjudgment of the crucial role played by Seeckt during a most difficult period.

Confusion

The psychological confusion and the organizational jungle which Hitler brought into the military German High Command were the reasons why

the idea of creating a unified command above the components of the armed forces never grew beyond the embryo state. The internal political conditions did not let the modest beginnings in Germany mature as they did abroad, particularly in England and France.

The so-called *Wehrmachtführungsstäb* (operations staff) created under Hitler understandably approved of the idea of a Wehrmacht academy since it desired to become independent of the other general staffs. The army general staff opposed the concept because it did not want to lend itself to countenancing the Nazistic influence of the operations staff under Field Marshal Wilhelm Keitel and General Alfred Jodl. The Foreign Office under the passive Baron Konstantin von Neurath displayed almost no interest; it confined its role to making its best and most objective minds—State Secretary Ernst von Weizsäcker and Ambassador Uhrich von Hassell—available as lecturers.

And after his first chief of the air force general staff, Wever—a man of distinctive character and a highly efficient soldier—had been killed when the fighter plane he was piloting crashed, Göring only thought of himself and the predominant influence which he felt the German Air Force should have in the armed structure of the country.

The attempts made to create a Wehrmacht academy in the real sense of the name—such an institution was opened in 1935, but it never attracted the top students—were not destined to be fruitful, a failing which was detrimental to Germany in World War II.

Personalities

Ludwig Beck was the most remarkable of Ludendorff's successors. He possessed great operational talents, was deeply interested in foreign policies, and possessed an unusual instinct for action. There was a mental affinity between Beck and the elder Moltke because of the former's sharp intelligence, knowledge, application, and, above all, his tranquility of mind.

Guderian, one of Beck's successors, described Beck as hesitant. This is a

US Army Photos

General Ludwig Beck, a man of sharp intelligence, was the most remarkable of General Ludendorff's successors

misjudgment. Guderian did not know Beck well enough, and the temperaments of the mellow and wise Beck and the intelligent but impetuous Guderian were incompatible. There was no bridge of understanding.

After all, it was Beck who, when chief of the general staff, resolved to stage the generals' strike against Hitler. It was only because of the wavering commander in chief, the later Field Marshal von Brauchitsch, that the

strike was a failure. Moreover, two generals in important positions failed to support the cause. Hitler rewarded them with Marshal's batons.

Beck's military life was overshadowed by personal and professional tragedy. His work in the responsible position of chief of the general staff was too short-lived to be effective, and gave him no chance to instill his spirit into the young general officers. Hitler and his civil and military Corybantes threw insurmountable problems in Beck's way. The living Hitler succeeded just as the fictional piper of Hamelin in beguiling and bringing to ruin the young general staff generation. These young officers saw only the putative patriotism; they were not aware of the political risk.

Upon his discharge, Beck expressed his critical views on the significant decisions of his predecessors, including those of Schlieffen. Beck was not only an intelligent man, as many are, he was a wise man, and their number is small.

The upright and dependable General Franz Halder succeeded Beck. Halder fought a losing and thankless battle from the beginning. But he did not cringe before Hitler. This soldier must be respected for his actions and attitudes.

Interference

A leading general of the German Bundeswehr recently judged harshly but pointedly the military aspects of German grand strategy during World War II, together with Hitler's constant and, in decisive phases, inept interferences, in the following words:

Seen as a whole, the German conduct of war under the leadership of a corporal was hopeless from the beginning. It brought to pass a poor review of World War I. The German Wehrmacht again won battles but lost the war by bleeding to death.

It was meant for Hitler to prove again the truth of the 2,000-year-old cryptic message of the Pythia of the Delphian oracle to an Asiatic King: "If you attack, you will destroy a great empire." Hitler attacked and destroyed the laboriously created Bismarck Reich forever.

Final Comments

The foregoing attempt to shed more light onto fading or misleading historical pictures may call to mind other things such as Rembrandt's immortal work *Anatomy*. In this painting, the physicians stand around the rigid body, questioningly, searchingly, and doubtfully. The painting duskily shines in strange color contrasts in the Mauritshuis in The Hague.

Inasmuch as my representation criticizes the former general staff, it deserves only modest credit—that of a judgment after the events.

All of the periods I have mentioned had one thing in common. Within the principles of selection for general staff duty, they attached great significance to the character of the candidates, and demanded that their traits be well defined. In theory, this clarification was much more important than the mere evaluation of a man's intelligence or outstanding scientific achievements. Before Hitler did away with it, it was traditional in the German General Staff that general staff officers in independent positions shared the responsibility for operational decisions of the division or higher echelon commander, and thus had part in the decision on the life and death of the subordinate troops.

But the belief that superiors can X-ray the characters of young candidates is somewhat utopian. The danger

zone for the test of character is reached much later, generally when advancing to higher positions. The large classes at the Prussian Academy during the imperial era precluded a positive evaluation of character qualities almost from the beginning. Later, when the work groups were smaller, it may have been feasible.

Finally, in distinguishing between a military leader and a good staff officer something else must be mentioned. The experiences of two World Wars have confirmed for me a theory that the capability for rapid decision making and dash on the part of a leader can only be determined in war itself and not by any other—no matter how severe—selective method. It is dangerous to believe that a successful general staff officer is necessarily a good military leader. General Gerhard von Scharnhorst's theory, based on the then prevailing social order, of creating a general staff officer who is also a replacement or substitute for "untalented" commanders is a source of errors.

Late on the night of 24 April 1891 two young officers, assigned to the general staff, left the "Red Den" at the Berlin Königsplatz. They had worked very late. While walking along they claimed to have seen the Field Marshal, the elder Moltke. The guard presented arms, and the officers saluted. The Marshal disappeared in the darkness. This proved to be the hour of Moltke's death.

It does not matter whether it was a vision. The symbolic significance is that the military genius had left the Prussian General Staff, never to return.

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Faulty Intelligence

Mordechai Gichon

ON 19 May 1798, a French fleet crept out of the harbor of Toulon. Unnoticed by the British blockade squadron, the fleet headed in an easterly direction. Crammed on board were the men, the mounts, and the equipment of the French Army of the Levant, its commander, Napoleon Bonaparte, its destination, Egypt, its objective twofold:

- To occupy Egypt so as to establish a firm base for threatening British colonial spheres of interest, including the approaches to India.
- To force the Sultan of Turkey into concluding a long-proposed anti-British alliance.

Napoleon achieved his first goal—that of conquering Lower Egypt within three months (July-September 1798)—and then turned all his energy to the formidable task of transforming Egypt into a firm base, capable of furnishing his army with the provisions and materiel needed to replenish his dwindling stocks.

But even before he could complete this task, Napoleon learned that his political objective, the coercion of Turkey into an alliance with France, had miscarried. Napoleon had hoped that his capture of Lower Egypt, proclaimed by him as executed on behalf of the Sultan of Turkey and accompanied by solemn declarations of returning Egypt to effective Turkish overlordship, would throw the Turkish leader into the French camp.

The weak Sultan, though, who had vacillated up to then between French

and British proposals of alliance, was stampeded into accepting Anglo-Russian aid against the French invaders of *de jure* Ottoman domains. Accordingly, he declared a Holy War on France, and ordered the immediate assembly of two armies, one at Rhodes and the other in Anatolia and Syria.

Pincers

As soon as these armies had been assembled, they would descend on Egypt in a giant pincer movement to drive the French into the sea. The army of Rhodes, ferried by British vessels, would land somewhere in the vicinity of Alexandria. The army of Syria would attack Egypt by way of Palestine and Sinai. To cover these movements, Ahmad el-Jazzar, the Pasha of Acre, would take what Turkish forces were then in southern Syria and Palestine, strengthen them with local levies, and march into Egypt to engage and harass Napoleon's army until the armies of Rhodes and Syria could converge on the Egyptian Delta.

When Napoleon learned of the projected Turkish movements, he reacted with a decision so typical of him: he would attack and defeat his enemies while they were still divided. He decided to invade Palestine, seek out and beat the Syrian armies in a quick and short campaign, and then return to Egypt in time to meet the expected invasion from Rhodes. Following these operations, Napoleon planned to occupy permanently Palestine as well as Egypt.

Why Palestine? Egypt was proving to be a difficult enough task. But Napoleon recognized his exposed position and felt that an occupation of Palestine would enable him to:

- Create a buffer against future dangers from the east in front of his main Egyptian base.
- Deny the British Fleet the use of Palestinian ports, thus curtailing its activities in Egyptian waters, much to be feared since the loss of the French Fleet at Abukir.
- Rally to his flag Christians and Jews for the liberation and the defense of the Holy Land, thereby creating a source of sorely needed and reliable replacements.
- Create a more direct threat to Anatolia and the approaches to the Persian Gulf, thereby diverting immediate Anglo-Turkish attention from Egypt.

Speed

Clearly, the first and foremost commodity needed to carry out Napoleon's plan was speed. He had to occupy the Palestinian coast, and especially the port city of Acre, before any Turkish reinforcements could be rushed in to strengthen the local garrisons. Thus Napoleon had to locate, fight, and destroy the army of Syria before it was upon him, and he had to complete these tasks before the army of Rhodes launched its attack.

In his estimate, Napoleon divided the future theater of war into two spheres: the desert of Sinai, and the coastland of Palestine. For the march through 200 kilometers of arid Sinai Desert, he foretold of two chief enemies—hunger and thirst—besides some harassing of his flanks by the local Bedouins. Napoleon assumed that his forces would encounter their first serious resistance in southern Palestine, resistance that would stiffen gradually as the army moved northward toward Acre. Napoleon also as-

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Mordechai Gichon, a lieutenant colonel in the Israel Defense Force Reserves, now occupies the chair of military history at Tel Aviv University.

sumed that he would take Acre after a full-scale, but not overdifficult, siege.

To protect his flanks against possible Bedouin and Arab interference, Napoleon established a camel corps on 9 January 1799. Moreover, to counter any unexpected and sudden onslaughts of the desert raiders, Napoleon created

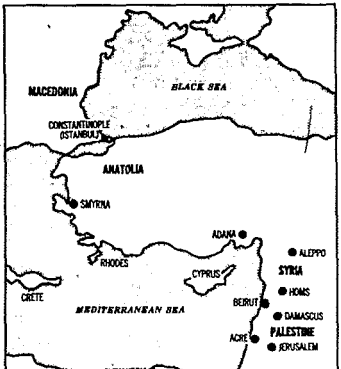

Figure 1.

a new rifle drill. This drill enabled two ranks of the three in the usual company order of battle to fire at the same time and to repeat their concerted volley immediately after the third rank had fired.

But most of the frenzied preparations for the imminent campaign were directed toward combating hunger and thirst. Each of the five divisions (four infantry, averaging 2,500 men each, and one cavalry) designated to take part in the expedition were rendered logistically self-supporting. Each subunit was issued its own mules to carry rations, water supply, and water digging and lifting equipment. Into each divisional park went a small camel-borne field hospital, the litters of which were constructed according to a personal suggestion from Napoleon himself.

Finally, to free the expeditionary force from carrying heavy equipment not deemed necessary during the desert crossing, Napoleon relieved the marching formations of the heavy siege train. This he loaded on two flotillas of French naval vessels to be transported by sea to Acre where its employment was anticipated.

Invasion

The French completed their preparations within five weeks, and Napoleon fixed the departure of his force from Salihia (on the northeast fringes of the Nile Delta) for 5 February 1799. Anticipating a crossing of the 200 kilometers of desert within seven days, Napoleon estimated that his forward troops would reach Rafah on the borders of Palestine no later than 14 February.

The advance guard, under General Reynier and consisting of a reduced infantry division with appropriate attachments of cavalry and engineer troops, crossed into Turkish Sinai on 6 February, followed in four hours by the head of General Kléber's division.

No opposition was met during the first two days of the movement. Reynier pressed forward quickly outdistancing Kléber. At sunset on 8 February, Reynier reached the outskirts of the village of El Arish. On the following morning, while attempting to occupy the village, Reynier's troops met stiff opposition from a Turkish force in the village itself, and even more from a strong, square fort, with protruding bastions, that suddenly

came into French view and which dominated the village from the east.

Reynier rightly judged that his best chance for success lay in speed, and he ordered his troops to rush the enemy positions. French success was only partial. After a sharp encounter with Ahmad el-Jazzar's vanguard, which was [illegible] the defense at El Arish, the French did carry the village, but they were unable to take the fort or to prevent the withdrawal of the Turkish force from the village into the fort. Reynier paid a stiff price for El Arish—200 French dead and another 300 French wounded.

In reality, all this was in vain. The advance guard's light cannon made no impression on the walls of the fort, and Reynier was forced into a fruitless siege of seven days, trying, among other things, to reduce the fort by sapping and mining.

Reynier's advanced position became critical on 14 February when word was brought to him of the approach of 2,500 Turkish cavalrymen, apparently intent on relieving the besieged fort. Luckily, though, the bulk of Kléber's division arrived later the same day. The combined French forces launched a surprise attack the following night, stunned the relieving Turkish force, and drove the remnants in a disorderly retreat north and east. Still, little had been gained in subduing the fort, since even Kléber's divisional artillery was too light to breach the walls.

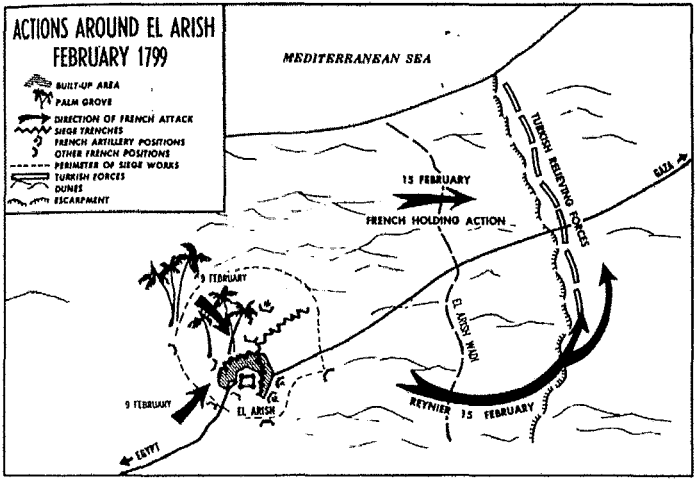

Figure 2.

Disappointment

Napoleon arrived at El Arish on 17 February. He was concerned over Reynier's failure to reach the borders of Palestine before this. Superhuman efforts and a trebling of harnesses within 48 hours brought the few medium artillery pieces which comprised the

"heavy field park" from its leisurely advance in the van of the army into firing positions before the fort. But to everybody's disappointment, the 12 pounders did not pierce the Turkish fortifications.

Since the heavy siege park was by then on board ship heading for Acre, there seemed to be no means by which the Turkish fort could be reduced quickly. Nor could the fort be left unreduced since it straddled the only line of communications with the French bases in Egypt.

At this critical moment, General Domartin, Napoleon's chief of artillery, collected all the divisional mortar batteries as well as his few howitzers, and massed them to give a concerted, continuous, and concentrated barrage of high trajectory fire. He hoped to hit the major portion of the fort's 1,000-man garrison which was encamped in the open courtyard and which could not all squeeze into the scanty shelter provided by the few casemates and buildings within the walls.

Domartin's strategy worked, and at last the hoped for and already twice proposed surrender of the Turkish garrison took place.

But the siege had lasted 11 days, and it was not until 23 February that French forces reached Rafah. From there the army of the Levant fought its way up to Acre—230 kilometers away—within another 24 days, which included two more sieges, two open battles, and days alloted for rest and regrouping. The army arrived at the gates of Acre on 19 March.

Meanwhile, the swift advance of the French after the battle at El Arish, and the inability of his forces to slacken that advance perceptibly, had thrown Ahmad el-Jazzar into complete despair. Deeming further resistance futile, he commandeered a large number of vessels to make good his personal escape. He was about to embark with his household and bodyguard and to abandon Acre when, just at that moment on 15 March, Sir Sidney Smith, commanding the British naval squadron in the eastern Mediterranean, arrived on board HMS *Tiger*.

The British

Sir Sidney, being not less a diplomat than a daring sailor, succeeded in alleviating Ahmad el-Jazzar's worst fears and coaxed the latter (with some deft assistance being provided by Jazzar's Jewish Vezir, Haim Farkhi) into making vigorous preparations for the city's defense. The preparations actually were conducted by Colonel Phillipeaux, a French émigré officer and a former fellow student of Napoleon's at the Paris Military Academy, who was then serving under Smith's command.

Phillipeaux went ashore at Acre on 15 March. With the aid of all those who could be spared from the *Tiger's* company plus the marine complements, he had the town brought to a good state of defense, sufficient, at least, to withstand the first French general assault. The latter took place on 24 March, nine days after the arrival of Sir Sidney, and five days after the start of the French siege.

Simple arithmetical calculation proves that had the French Army arrived at Acre only four days earlier, the town would have fallen either without striking a blow or after a short fight at best. Until Sir Sidney's arrival, Ahmad el-Jazzar had planned to abandon Acre, and had made no serious preparations for its defense. No serviceable artillery and ammunition had yet been landed; no outer works had been manned; and there were yet

no British marines and seamen to bolster the defense.

Failure

Had the French not lost 11 days before El Arish, the army of the Levant would have had a margin of seven days to beat the English to Acre. Its failure to win the race necessitated a major siege. Capture of the first echelon of the seaborne French siege train by British ships enabled the defenders to hold off the French for 40 days, when reinforcements from Anatolia, transported by ship, started to pour into the beleaguered city.

By 7 May, when the remainder of Napoleon's heavy siege artillery (transported overland from Jaffa) went into action, Napoleon had lost his chance to reduce Acre. His sorely depleted and battle-weary troops had not the strength to overcome the fresh and well-armed Turkish reinforcements. Soon, too, he would be outnumbered.

Drawing the only sound conclusion, Napoleon raised the siege on 20 May and hastened back to Egypt, just in time to bring that country into a required state of preparedness to withstand an invasion by the army of Rhodes. Thus the unsuccessful, drawn out siege of Acre had brought to naught the whole of Napoleon's Levantine Campaign and all it stood for.

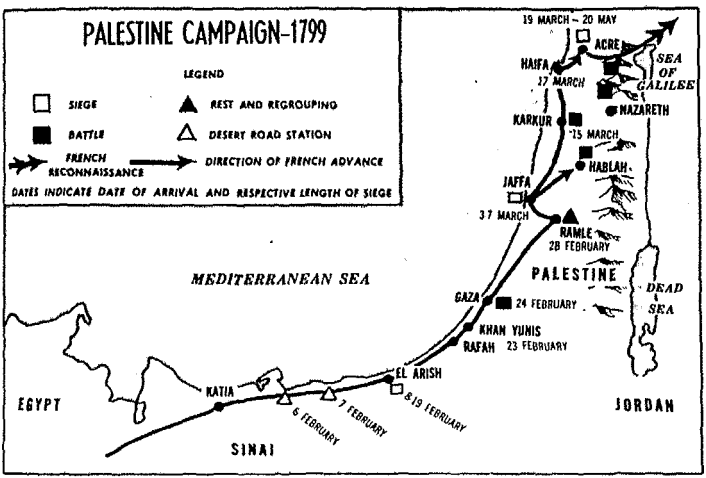

Figure 3.

The Cause

Up to the present day, the chief (and usually the only) cause for the French debacle has been considered the British Navy's command of the eastern Mediterranean waters. It is true that the British Navy not only denied the French the use of the Mediterranean on their advance into Palestine, it also intercepted the first portion of the French heavy siege train,

thereby depriving the French Army a quick, effective means to breach the walls of Acre before Turkish reinforcements could arrive to turn the tables.

In spite of this, it seems almost certain that had Napoleon been permitted to adhere to his original timetable, he could have seized Acre and secured his conquest of Palestine before the British Navy's influence was felt. The affair at El Arish fatally overturned the original staff estimates of time and space laid down for the campaign. The siege of El Arish was a direct, primary cause of the final French defeat at Acre.

The question as to the cause behind the deplorably drawn out siege of the rather secondary fort at El Arish merits some attention.

The answer can be gleaned from the "Journal de Doguereau," meticulously kept throughout the campaign by a French officer. The entry for 29 February 1799 (Doguereau was with Reynier's advance guard) reads:

We were very much surprised . . . about the defenses of El Arish. Nobody ever expected to find any obstacle before Gaza, where one knew a fort to exist. We were much surprised to find such a well-built fort, at least according to the means in our possession, which held us up for several days.

Here is the answer—faulty intelligence! This thesis is sustained by the following order from Napoleon's own hand, directed through his Chief of Staff, Bertier, to General Reynier (then designate-commander of the advance guard), dated 31 January 1799:

Having arrived at El Arish, General Reynier will immediately start to construct a fort, either after the fashion of that at Katije, or by reerecting that which is said to be there. To this effect he shall have with him a senior engineer officer, 300 sappers, stonemasons and all the necessary artisans.

On 27 January, Napoleon had already ordered Cafarelli, his chief engineer, to detail the above engineer personnel to the advance guard, with the explicit aim ". . . to build a fort of stones at El Arish."

From this data it seems that the information in Napoleon's hands on the eve of the campaign pointed either to the complete absence of any fortifications at El Arish, or, at worst, to the existence of ruinous, unserviceable, old works which would be used by his troops for the construction of a defended base. This is also borne out by Napoleon's decision to denude his artillery park of all heavy cannon.

Heavy Artillery

Napoleon's decision, of course, was prompted by his desire to save time and to quickén his march across a difficult desert to his main objective: the coast of Palestine and the key port of Acre. As long as there was no indication of any serious fortifications on his axis of advance, one cannot question the soundness of Napoleon's decision. But it goes almost without saying that if Napoleon had even a slight inkling of the need for heavy ordnance to reduce a fort at El Arish —undetourable and the key to Sinai —he would have seen to its inclusion in his marching columns.

Why, then, didn't Napoleon know of the fort at El Arish? Where were his sources of information? No firsthand evidence exists. We do know that immediately after he established his army in Lower Egypt, Napoleon started—apart from all other undertakings—to build a wideflung intelligence network, part of which operated directly under his control. The

network included many local spies and agents answerable only to Napoleon or to the French commanders in the field.

The more reliable of the agents the French recruited from the local religious and ethnic minorities—the Copts, Maronites, and Druses—who at least partially acted out of a genuine concern for the French cause. The remainder were Arabs trying to make a living out of selling scraps of information or undertaking odd jobs like spying on their own kinsmen.

No one of these was militarily competent. Napoleon was aware of their shortcomings, and he tried to make up for this weakness by sending his own officers on the more important intelligence gathering missions into Sinai and southern Palestine. The short time available—five weeks altogether from the decision to undertake the operation to its commencement—prevented carrying out any comprehensive intelligence plan, even if one had been evolved. Napoleon, therefore, had to decide on what problems to concentrate his limited intelligence gathering facilities, relying for the rest on the basic information accumulated at his headquarters.

Accordingly, from the intelligence missions initiated by Napoleon, we learn that true to his general appreciations, he concentrated his main intelligence effort on the solution of the logistical problems of the operation. Thus an officer by the name of Sicard reconnoitered the coastline, anchorages, and routes between Katije and the sea, looking toward the possible maintenance of the marching columns by sea. For the same reason, a Lieutenant Meunier was dispatched to investigate the coast as far as El Arish. Generals Caffarelli and Lagrange received precise and long orders to reconnoiter routes, water sources, camping sites, and the like along the prescribed axis of advance through Sinai. The pattern was repeated throughout the five weeks of preparation.

For information about the state of Turkish defenses along his route of march, Napoleon seems to have relied chiefly on the excellent, lucid reports of travelers like De Tott, Savary, and especially Volney, who gave special attention to matters they considered militarily important. But Volney's *Travels in Egypt and the Levant* had been published 13 years before. This was a period during which even in the Orient matters could change—such as the rebuilding of a masonry fort at El Arish from a ruinous heap of stones, a heap so insignificant that Volney (who described even the most ruinous works of defense along the Palestinian coast) apparently did not deem it worth mentioning.

In the final analysis, then, it was Napoleon's preoccupation with the logistical side of the campaign which proved to be his undoing. By concentrating on these problems, though, even to the point of neglecting a major intelligence effort to collect information on the enemy and the enemy's defenses, Napoleon brought about the failure of his Levant Campaign.

The lesson to be drawn, then, valid even today, sounds rather like a truism. It might be formulated as:

Never, and even under the strongest pressure from otherwise urgent problems, neglect your effort to obtain the fullest possible, up-to-date intelligence about your actual enemy and his defenses.

Napoleon's Levant Campaign of 1799 proves that, from time to time, even this basic rule merits a firm restating.

Brigadier General Washington Platt,
United States Army Reserve, Retired

GUIDANCE FROM UNCERTAIN EVIDENCE

In the area of uncertain evidence:

Where human reactions are of prime importance,

Where many of the data are scanty, of uncertain reliability, uncertain pertinence, and uncertain significance,

Where it is necessary to penetrate the fog of the future.

• • •

And especially in those parts of this area pertaining to intelligence, international relations, and national defense:

Where experimentation is impractical,

Where the time for drawing conclusions and making decisions is limited,

Where, nevertheless, conclusions must be drawn, the best possible answer to the problem given without delay,

Where the outcome may be of great importance to sound international relations and national security.

• • •

What helpful general principles and methods can be found or developed?

What practical guidance in usable form can be found in such disciplines as:

Logic, probability, semantics, the social sciences, psychology, gaming, and decision theory?

What new methods can be developed to meet the special needs of this area?

How can applications be made to specific situations?

• • •

IT IS helpful to divide the regions where problems must be solved in any activity into three domains.

Domain of Practical Certainty

An outstanding characteristic of problems in this domain is that every honest man, skilled in the science concerned, must arrive at the same conclusion. Prejudice or ideology has no place in the conclusions.

This domain includes the many hard facts of universal experience—self-evident but important elements of any situation. This is also the domain of all deductive disciplines—such as mathematics and deductive logic—where the meaning of the premises can be greatly extended by fixed and consistent rules.

It is the domain of the well-worked-out and relatively exact parts of the various sciences, including most of classical chemistry and physics. In these fields controlled experiments can be carried out, conditions are reproducible, and results can be checked objectively. It also includes a smaller part of the biological sciences, where conditions are less perfectly understood, and are usually less exactly reproducible. It includes a much smaller, but definite part of the social and behavioral sciences. Here, the reproducibility and precision are usually less clear, but may be sufficient for the practical purposes of the problem.

Domain of Probability

When a true six-sided die is honestly rolled, what is the probability that any given face will turn up? When a machine is stamping out parts, and we have statistics on its past performance which show the percent of defective parts which it has made, then what is the probability that in the next 1,000 parts, made under closely similar conditions, the percent of defective parts will not be more than a given number? In athletic contests, what is the probability that Yale will win the next Yale-Harvard football game? In international relations, what is the probability that Franco will remain in power for the next three years?

In all questions of this kind no amount of research can ever provide

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an answer which is practically certain. The answer can only be stated in words or figures which indicate the odds in favor of or against a given outcome.

Questions which can never have more than a probabilistic answer are very common in foreign relations and national defense activities. A knowledge of such probabilities is a matter of great importance.

Evidently in the domain of probability there is often relative "safety in numbers." In operations where large numbers are involved and where somewhat similar procedures are repeated from year to year, our knowledge of the over-all results to be expected (like the annual death rate, for example) may be highly reliable; whereas our knowledge of the fate of any given individual may be very slight. Unfortunately, for our use here, major military and international events occur in small numbers.

Problems which will always involve an important probabilistic factor can be divided for convenience into two kinds. In the first class, like the rolling of dice and many production problems, repetitive events and measurable statistics can be used in the formulas to give a large part of the answer. I have called this kind statistical probability.

By contrast there are many events, like a large military operation or a major political or international event, where the event itself cannot be repeated, and the influential factors are not all clearly known or practically measurable. If the probability of the success of a second Normandy landing is to be estimated in advance, the foundations of the estimate of this probability cannot rest upon "results of previous repetitions of this situation under closely similar conditions"—a statement which is practically meaningless here. It can rest only in part on measurable statistics. Such an estimate of probability has been called a personal probability. It is derived largely from personal judgment.

Domain of Uncertainty

Uncertainty is the hero, or perhaps the villian, of this article. It is by drawing upon the principles and methods of this theoretical domain that most of the final practical conclusions and decisions must be made in our international and defense problems. Such conclusions and decisions are subject, of course, to the limitations imposed by the hard facts and other certainties which are always part of any situation.

The essence of this domain, closely related to personal probability, is a shortage of specific data and of information about our data, a shortage which cannot be directly overcome with the time and means available. The available data are not sufficient in themselves to provide a basis for firm conclusions or for a solution "beyond a reasonable doubt." Uncertainties of all kinds abound. With these shortcomings in the data go a consequent deficiency of our understanding of the situation as a whole and of the relative importance and interrelation of the various parts.

Unlike situations governed by practical certainty or statistical probability, there are no formulas by which over-all conclusions may be reached. Human judgment must always play a large part in guiding the study and in making the final decisions.

In this article our interest lies in problem solving under uncertainty. The domains of practical certainty and of statistical probability are men-

tioned for contrast with that of uncertainty, and because subproblems from these other domains commonly occur as parts of the larger problems which are uncertain in their over-all aspects.

Uncertainty Area as a Whole

We have used the term domain to refer to theoretical problem situations where conditions of practical certainty, or of probability, or of uncertainty exist, unmixed with one another. Such "pure" situations where the problems are all from one domain are seldom found in practice.

We now come to the real life situations which I call areas, in distinction from the ideally pure domains. In these areas a given large problem contains within itself many subproblems. We find subproblems from each of the three domains existing side by side as parts of the large problem.

We also find that the area of uncertain evidence has important elements of unity, regardless of the particular activity in which we may be working. Problem solving in the uncertain area should be considered as a unified discipline with its own characteristics, needs, general principles, methods, limitations, and opportunities for usefulness.

Obstacles

One of the obstacles to the achievement of top quality results is the presence of good excuses. In most of the problems given here it would be reasonable to say: "How can I possibly tell? I am not a mindreader"; or "No one can answer that with the limited time and information available"; or "One guess is as good as another. Why waste time studying the situation, when no one can be sure? I will try this guess." So as a result of the pressures of such readymade excuses, full diligence is sometimes not exerted to exploit the available data just as far as possible, and to gain a real understanding of the problem situation.

All of these excuses might be called reasonable, but they all amount to surrendering without a real struggle.

A second shortcoming is the common lack of an ultimate showdown as to the value of plans drawn or of the forecasts made. Here is a plan for the defense of Iran if the USSR attacks. It may be drawn by a military genius, or it may be superficially clever but fundamentally unsound. The Soviets never attack, so the plan is never tested by actual results. We seldom have a healthy practical showdown. (The plan for systematic criticism mentioned later would correct this in part.)

A third and related shortcoming of work in this area is the lack of competition. If a company's sales fall off this year the sales manager could easily find an excuse in poor over-all business conditions, were it not for the fact that another company's sales increased.

Such obstacles and shortcomings make high professional standards within each department, self-criticism, objective tests like war gaming, and a progressive spirit essential as means for recognizing excellence and for showing up achievements which are less than the best available under the circumstances.

There are, of course, certain general requirements—such as knowledge, industry, integrity, and courage—which are always necessary for obtaining solutions in any study of plans or operations. These homely, basic virtues are just as essential in the uncertain area as elsewhere. There

are several other general principles, however, which have a peculiar importance, or have unusual applications, in the uncertain area.

Purpose

Although the purpose is an essential factor in all investigations, its unusual importance in our area justifies emphasis.

The principle of purpose permeates every aspect of every exploration in the uncertain area. Both the form of the attack and the type of solution must be influenced by the use to which the study is to be put.

Most problems in this area have no self-evident boundaries as to what data should be considered pertinent, what degree of reliability is required, what risks are justifiable. A consideration of the purpose of the study provides a rational basis for deciding these questions, and a common ground for discussions and coordination of effort.

The purpose is often called "the problem," and in military parlance the "mission" or the "objective."

Often it is important to distinguish between our immediate or short-range purpose, and the more important long-range purpose. The long-range purpose should be a stable objective.

The area of uncertainty is often an area of confusion. In such a situation there is tremendous advantage in knowing one's own mind, and having a fixed long-range objective.

Alternatives

If, in an uncertain situation, there are several possible outcomes or decisions, each one with a fair probability, it is a mistake to give all our attention to the one which seems the most probable. In an uncertain situation the dark horse may win.

Similarly in considering the means at our disposal in a military operation, what would happen if a certain one of our means of transportation should fail? Possibilities of this kind make it necessary for us to give some advance consideration to alternative means. Then we are not left helpless in the face of a breakdown.

Mobile Reserve

Related to this is the principle of a mobile reserve, so familiar to military men. Appropriate provision for some reserve power at the disposal of the man in charge of an operation is always worthwhile in uncertain situations.

The reserve is much more than a static factor. By providing a "force of maneuver" it enables the man in charge to retain the initiative. He can use this force either to exploit success or to repair weaknesses.

Watchfulness

Finally, the principle of continued watchfulness points out that, in the uncertain area, watchfulness of the situation must be continued even after a good solution to a problem has been found, a good plan made, or a wise decision taken.

This might be called the principle of eternal vigilance, which is the price of liberty and also the price of good foreign relations and of national security.

The principle of continued watchfulness illustrates an interesting difference between planning under conditions of practical certainty as compared with planning under uncertainty. In the first case we make a good plan. Then our planning responsibilities are over. We can say, "Carry out this plan." By contrast, under uncertainty the plan must include alter-

natives. More important, in many military operations firm decisions pertaining to the later stages should not be made at the beginning. They are better made later. We thus retain flexibility and proceed by a system of informed sequential decisions.

This principle requires workers in this area to view the world as dynamic rather than static. It requires a certain proportion of men who are young, wide awake, progressive, men who have creative imagination and who have the courage to take a new look at old problems—supposedly solved and out of the way.

Approaches

Constructive research and considerable experience—principally in the last 20 years—indicate, though they do not yet prove, that significant advances over present practice could be made in the results obtained when attacking problems in the uncertain area, specifically those pertaining to foreign relations, intelligence, and national defense.

The following approaches seem to be the most promising. Each of these approaches is adapted to reducing some element of uncertainty or to providing guidance in the uncertainties which cannot be eliminated. By the vigorous, practical utilization of these approaches our information can be extended, our understanding deepened, and our chances for success improved.

Definitions and Assumptions

Every study should include a statement of the definitions of any terms which might be misunderstood and a listing of the assumptions upon which the conclusions are based. This makes for clear thinking and facilitates the exchange of ideas. Experience shows that words like "capabilities," "disengagements," and "missile gap" can be, and are, in fact, frequently misunderstood. In many estimates, the unstated assumptions often play a critical but hidden role in the success or failure of a plan. In the uncertain area a meaningful exchange of ideas is a necessity. Ideas cannot be profitably exchanged where important definitions and assumptions are subject to serious misunderstanding.

Deductive Logic

From a few reliable data many additional facts which cannot be directly observed may be deduced by logical principles. By this means we can greatly extend the facts at our disposal and can often arrive at some new ones which are highly important. As a simple example, suppose our aerial photographs show us a large enemy force encamped in a desert. We have no other information about it. However, we can deduce that these men must have a considerable source of water (which we cannot observe). We can deduce further that if we could cut off the water supply, this enemy force would be at our mercy.

Exploitation of Sources

In the physical world one of the best means of gaining information of the position and nature of some terrain feature which we cannot approach is to look at it from several points of view. This is called triangulation. In the intellectual world and in a closely similar way, cross-checking of data derived from independent sources adds to our knowledge of its reliability and contributes perspective to our body of knowledge. An example is checking statements from prisoners of war, which are numerous but mostly unreliable, against aerial

photographs of the enemy position which usually disclose little but are highly reliable as far as they go.

Search for Significance

Isolated facts mean little. However, when we can understand something of the mechanism of the organization under study, then we know something of cause-and-effect and the relation of one fact to another. A bare fact may become one hundred times as useful to us if we know its significance.

For example, if we learn that a certain individual has been appointed to an important position in a shaky foreign government, this bare fact does not contribute much to our understanding. But if we also know that this person is the leader of a secret revolutionary party, we can see the significance of the appointment.

Categories and Uniqueness

When a situation is uncertain, the use of categories and analogies will often suggest many profitable avenues of investigation which would otherwise have been overlooked.

Many important political, international, and d e f e n s e situations are commonly described as unique. Many of these can be more profitably studied if we consider each one as "a unique combination of familiar events or categories." Analysis shows that we can gain an enormous amount of useful information about any event, however unique, by examining its familiar elements.

In spite of the "purists," it is useful to consider the degree of uniqueness of any event. Then even the most unique, such as the landing in Normandy, or the Castro revolution, is seen to contain many familiar elements.

Full quantification of any statement occurs only when the factors involved can be counted or measured by fully objective methods. However, many of the calculations used in studies of the uncertain area are filled with figures which are not derived in this way. This statement applies to many of the figures which appear in the so-called game theory and other matrices. The appearance of figures often gives the appearance of a sound mathematical foundation to our calculations which may be misleading.

Much benefit can be derived from various degrees of quantification, but we should make a critical study of the basis of the figures presented. We thereby learn the capabilities and also the limitations of much that passes for quantification. In some of these the degree of reliability is very low indeed. On the other hand, semiquantification and the use of nonparametric statistics may yield rich rewards if pursued with understanding.

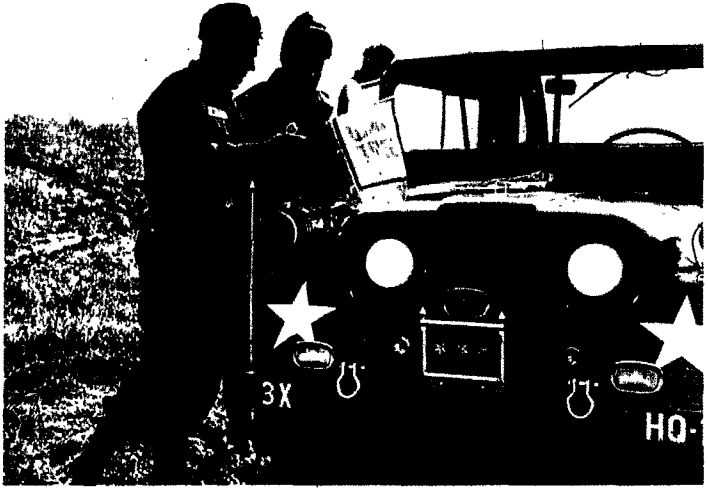
Probability, Certainty, and Precision

The theory of probability and its related disciplines such as statistical analysis apply specifically to the uncertain area. In foreign relations, intelligence, and national defense we spend very little time discussing either certainties or impossibilities. Nearly all of our statements, conclusions, and decisions have a probability factor—expressed or implied. Probabilities are usually expressed as fractions between 1, meaning certainty, and 0, meaning impossibility.

Suppose we are considering a given venture. If the venture turns out successfully, we stand to win an important battle. If unsuccessful, we stand to lose the battle. Our decision will be very different if we estimate the chances of success at eight-tenths as c o m p a r e d with estimating the

chances of success at one-tenth. In other terms, this amounts to odds 4 to 1 in favor of success as compared with the chances of success only 1 in 9.

Recently, there have been some practically useful developments of sequential analysis which are particularly adapted to international situations and to those of national defense.



US Army

Judgment is most important in reaching the final decision

These activities necessarily deal with developing situations. Recent studies in this field have shown the application of the Bayes Theorem to such situations. By means of this theorem, personal and other probabilities may be put together to show the best posterior probability, all things considered at any point of time.

In short, the recent developments in probability study are particularly useful in coping with the specific kind of difficulties which we encounter in the uncertain area.

Development and Use of Judgment

Even after using the methods just described, they will seldom be sufficient in themselves for solving any given over-all problem or for reaching a decision pertaining to a large problem. The data must, in fact, usually be supplemented by professional judgment. Judgment provides guidance at every stage in the collection and analysis of the data, and is most important in reaching the final decisions.

In military terms the exploitation of the data may be compared to staff work at its best—although it is that and very much more besides. Guidance and control by judgment corresponds

closely to leadership and command which should control at every stage from the beginning of the study up to the end of the active operations.

When speaking of professional judgment, I mean the judgment of an officer of one of the armed services, a professional in one of the branches of national defense, or a foreign service officer. I do not mean that of a professional mathematician or logician. In the international and defense problems here considered, mathematicians, logicians, and experts in the other sciences may contribute to the over-all decisions; but they do not make the final decisions.

To obtain men known to have good judgment requires selection of the men, the development of professional judgment, objective testing of judgment, and the use of such judgment in making decisions. A necessary part of such testing is the subsequent systematic searching criticism of conclusions and results. In these procedures the armed services are ahead of other departments of the government. Map problems, war games, and field maneuvers have provided the judgment and objective testing which is needed for solving military problems under conditions of normal uncertainty.

Judgment is evidently much more than mere knowledge of facts. Judgment can be developed only by the activities which require the active exercise of judgment in solving problems and in the control of operations --real or simulated. One activity which certainly develops judgment is real life experience. This is highly desirable, but it is expensive and the results are often inconclusive. If you fail, maybe the job was so difficult that no one could have succeeded. If you succeed, maybe any ordinary man could have done as well under the favorable circumstances which you enjoyed.

In the matter of judgment any individual has his own strengths, weaknesses, and prejudices all based upon his personal characteristics, education, and experience. The problems encountered in the activities covered here usually include large geographic areas, and may involve political, military, economic, and other disciplines. No one person can know it all, hence the value of group judgment where your strengths may make up for my weaknesses.

Attempts to reach decisions by group judgment have advantages, but also bring up many new difficulties. These difficulties can, however, be solved in part by special techniques. Expert leadership is always required. At its best the consensus of opinion of a group of experts, representing the areas, disciplines, and departments concerned, provides one of the firmest foundations for decisions that has been developed for obtaining guidance in the area of uncertain evidence.

Summary

Thus we see that problem solving and decision making in the uncertain area constitute a special unified discipline which has general principles, methods, and achievements of its own. The best attack on problems in this area will include both a vigorous exploitation of data by modern methods, and guidance from leadership and judgment based on experience, training, and demonstrated ability.

In spite of the uncertainties, a systematic, coordinated attack upon problems in this area, if carried out in accordance with modern methods, will greatly increase our chances for eventual success.

PEACE IN OUR TIME—FACT OR FABLE?

Lieutenant Colonel Fielding L. Greaves,
United States Army

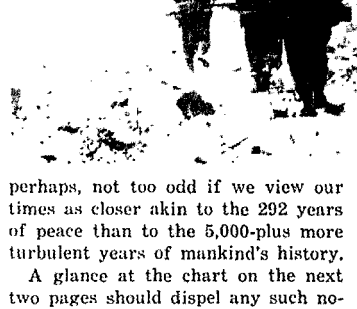
SINCE 3,600 B. C. there have been 14,531 wars, great and small. In all the centuries of recorded history the world has known only 292 years of peace. Such were the findings of a Norwegian scientist who applied an electronic computer to the study of conflicts throughout history.*

Statistics such as these are always open to question. How accurate, for instance, is the figure on the number of wars? Is it possible that reporting in ancient times was less than thorough? Have the records of the 292 peaceful years come down to us incomplete?

Regardless of how accurate and complete, history is the only record we have, so let's accept the figures as reliable. Using these data in a few simple calculations, we can quickly determine that throughout history, each year has, on the average, seen the birth of 2.61 new wars. We can also calculate that we might expect one year of peace for each 19 years of conflict.

These are factors which may cause US citizens to think of the post-World War II period as being a relatively peaceful era. True, the US was deeply embroiled in a major (albeit limited) war in that period, but that conflict is now nine years in the past. East-West tensions continue to plague us; but at least no nuclear holocaust has ensued.

Contributing to the image of peace is the constant flood of news items about the United Nations and its peacemaking activities; endless disarmament conferences; and summit conferences between chiefs of state. It is,



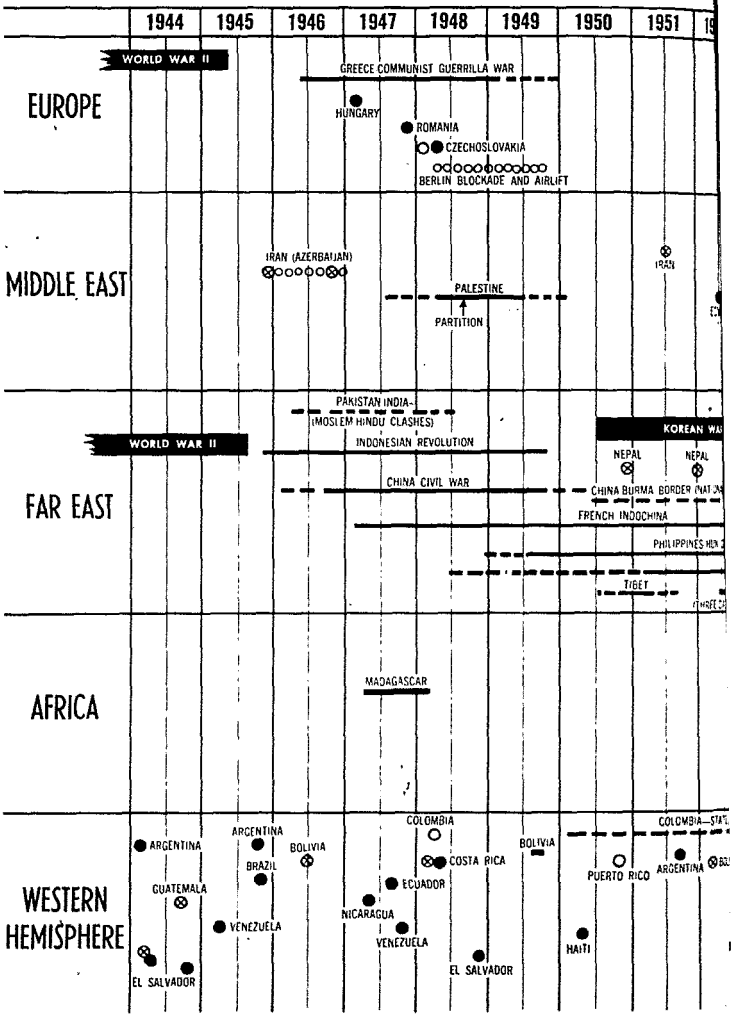
perhaps, not too odd if we view our times as closer akin to the 292 years of peace than to the 5,000-plus more turbulent years of mankind's history.

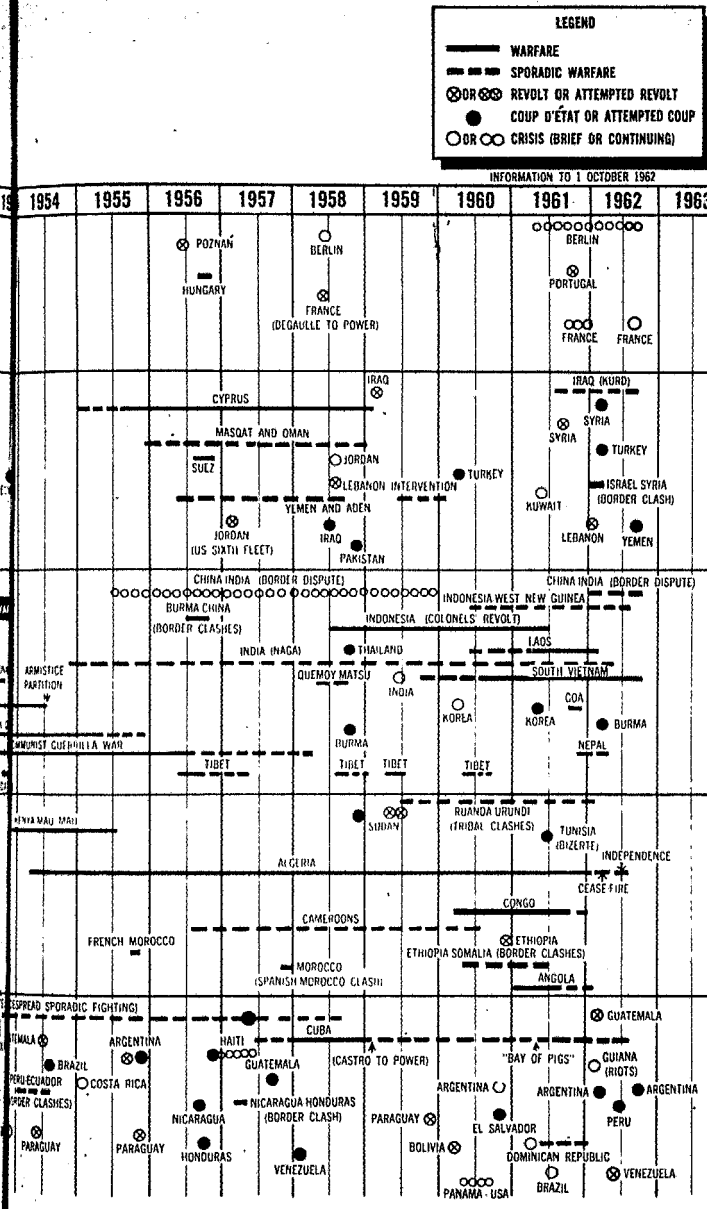
A glance at the chart on the next two pages should dispel any such notion. The chart shows, by time and place, the incidents, crises, coups, clashes, uprisings, revolts, conflicts, and wars which have plagued the world in the 17 years since the end of the Second World War.

Lieutenant Colonel Fielding L. Greaves is a member of the faculty of the U. S. Army Command and General Staff College. His assignments include duty in Europe during World War II, and subsequently in Germany, China, the British Crown Colony of Hong Kong, and Turkey. He is a graduate of the 1961 Regular Course of the USA CGSC.

* *Military Review*, June 1960, p 72.

PEACE IN OUR TIME?




LEGEND
WARFARE
SPORADIC WARFARE
OR REVOLT OR ATTEMPTED REVOLT
COUP D'ÉTAT OR ATTEMPTED COUP
OR CRISIS (BRIEF OR CONTINUING)
INFORMATION TO 1 OCTOBER 1962
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
POZNAN
HUNGARY
BERLIN
FRANCE (DEGAULLE TO POWER)
BERLIN
PORTUGAL
FRANCE
FRANCE
CYPRUS
IRAQ
MASQAT AND OMAN
SUEZ
JORDAN
LEBANON INTERVENTION
TURKEY
YEMEN AND ADEN
JORDAN (US SIXTH FLEET)
IRAQ
PAKISTAN
IRAQ (KURD)
SYRIA
SYRIA
TURKEY
KUWAIT
ISRAEL SYRIA (BORDER CLASH)
LEBANON
YEMEN
CHINA INDIA (BORDER DISPUTE)
BURMA CHINA (BORDER CLASHES)
INDONESIA (COLONELS' REVOLT)
INDONESIA WEST NEW GUINEA
CHINA INDIA (BORDER DISPUTE)
LAOS
INDIA (NAGA)
THAILAND
ARMISTICE PARTITION
QUEMOY MATSU
INDIA
SOUTH VIETNAM
KOREA
KOREA
COA
BURMA
NEPAL
BURMA
TIBET
TIBET
TIBET
TIBET
MALAYAN MALI
SUDAN
RUANDA URUNDI (TRIBAL CLASHES)
TUNISIA (BIZERTE)
INDEPENDENCE
ALGERIA
CEASE FIRE
CONGO
CAMEROONS
FRENCH MOROCCO
ETHIOPIA
ETHIOPIA SOMALIA (BORDER CLASHES)
MOROCCO (SPANISH MOROCCO CLASH)
ANGOLA
(SPREAD SPORADIC FIGHTING)
GUATEMALA
CUBA
HAITI
ARGENTINA
BRAZIL
COSTA RICA
GUATEMALA
(CASTRO TO POWER)
"BAY OF PIGS"
GUIANA (RIOTS)
ARGENTINA
ARGENTINA
ARGENTINA
PERU
NICARAGUA
NICARAGUA HONDURAS (BORDER CLASH)
PARAGUAY
EL SALVADOR
PARAGUAY
PARAGUAY
HONDURAS
VENEZUELA
BOLIVIA
DOMINICAN REPUBLIC
PANAMA - USA
BRAZIL
VENEZUELA

To bring the record up to date, it is appropriate to point out that the number of wars mentioned in the opening sentence was a figure reported in 1960. To that number should be added: the Kurdish revolt in Iraq; the abortive revolts in Portugal, Ethiopia, Lebanon, Venezuela; the revolt in Angola; Communist guerrilla warfare in South Vietnam and Laos; sporadic fighting in Nepal; conflict in Dutch West New Guinea; and the conquest of Goa. With these 11 additions, the figure would now be 14,542 wars since 3,600 B. C.

A comparison of the post-World War II period with the historical long view is revealing. Disregarding on the chart all the crises and *coups d'état*, and depending on the size conflict selected as the cutoff point between a mere incident and a bona fide war, it can be seen that in the 17 years since the end of the Second World War our planet has been the scene of some 30 or more minor revolts, civil wars, and other relatively small conflicts, and no less than 21 fair-sized wars.

The reader may find it both an interesting and an instructive exercise to plot these conflicts on a map of the world. This will demonstrate most graphically how little of the earth's area has enjoyed relative tranquility

In spite of man's vaunted advancing "civilization," and regardless of his multitude of efforts to negotiate peace for the world, he has not been able to curb his destructive and sanguinary tendencies. He has apparently not improved over his barbaric and belligerent ancestors. In fact, he has retrogressed: the total of 50 or more conflicts in the 17 enlightened post-World War II years provides us a statistical average of 2.94 new wars per year.

Thus in the past two decades, not only has man managed to upgrade his ability to make war on an ever more massive scale; he has also succeeded in increasing the density of new conflicts per annum.

The conclusion is inescapable: peace in our time *is* a fable.

Lest we despair, however, let us remember that a year of peace is due for every 19 years of conflict. Since there has been no year without war in this century, we are obviously long overdue, and peace may be expected —statistically—to break out at any moment.

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THE CHINESE-INDIAN BORDER PROBLEM

RENEWED conflict along the Indian-Red Chinese boundaries has attracted the attention of the world to this area. The following is a selective list of recent MILITARY REVIEW articles on this critical area and the countries involved.

O'Ballance, Maj Edgar, Territorial Army, Great Britain. THE STRENGTH OF INDIA

India's military power; the organization, origin, and background of her armed forces; and her industrial base are evaluated. The article contains a comparative analysis of the strength of Red China and India, and is particularly applicable to the current conflict. *Jan 1962, p 25.*

Clubb, O. Edmund. PATCHWORK ON THE SINO-SOVIET ALLIANCE

A retired Foreign Service officer and student of Chinese affairs analyzes the relationships between Red China and the USSR and the internal factors of Chinese economy, ideology, and nationalism. *Aug 1962, p 2.*

Chopra, Wg Cdr K., Indian Air Force (Ret). HOW CAN RED CHINA BE CONTAINED?

An appraisal of Communist China's war potential and the factors which may serve to deter use of that potential to support her expansionist aims in Asia. Discusses India's position, the role of the United States in Asia, and the effectiveness of collective security in holding back the Red tide. *Nov 1962, p 33.*

Beaton, Leonard. THE CHINESE AND NUCLEAR WEAPONS

An estimate of the Communist Chinese ability to produce nuclear weapons in the foreseeable future; the military problems faced by the Reds, should they decide to use them; and the political ramifications of such use. *Nov 1962, p 50.*

Field, A. R. BHUTAN, KHAM, AND THE UPPER ASSAM LINE

A comprehensive background study on the current border dispute in northeastern India. Discusses the historical establishment of the generally recognized borders, the part played by the British prior to their withdrawal from India, and the subsequent claims and actions of the Peiping Government. *Jan 1960, p 92.*

Grandchamp, René. CENTRAL ASIA—MELTING POT OF THE WORLD OF TOMORROW

This study covers the imposition of Communist ideology on the central Asian regions of China and the USSR and provides the background for the Communist push from central Asia to the south. Discusses the threat posed to China's neighbors with particular emphasis on the Buddhist province of Ladakh in Kashmir. *Jan 1960, p 101.*

Clubb, O. Edmund. ON THE ROOF OF THE WORLD

An excellent study of the Communist takeover in Tibet. It points up the impact that Red China's control of the border areas will have on Tibet's neighbors to the south and the course Chinese expansionism can be expected to follow. *Feb 1960, p 4.*

Labin, Suzanne and Christopher Emmet. IS THERE A SINO-SOVIET SPLIT?

Basically a discussion of Soviet-Communist Chinese relations, this article provides an excellent analysis of Red China's influence on Asia. The background of the Sino-Indian dispute, Soviet influence on the development of that dispute, US policy toward China, and the probable course of Chinese expansion are covered. *Sep 1960, p 81.*

Cultural Engineering

Theodore R. Vallance
Charles D. Windle

IN EARLIER days individual combat skills frequently played the decisive role in warfare. But war has grown in size and magnitude, evolving from conflict between individuals to battles between tribes, to combat between nations, to global warfare between alliances. Technology has developed more effective mechanisms for firepower, communications, and mobility. Man has had to mediate his skills through larger organizations, and by means of more complex equipment.

Almost since the end of World War II, the United States has been in a technological race with the Soviet Union, a race that has focused primarily on the development of equipment with ever-increasing capabilities.

Unfortunately, the improvements in equipment were not accompanied by similar developments in the utilization of human beings. The increased complexity of weapons systems aroused dismay that the skills required to operate the systems might exceed the capabilities of the available personnel. A new type of specialist, the human engineer, has emerged to cope with these problems.

Just as human engineering arose in response to the increasing complexity of military equipment, so a new function—cultural engineering—is today being required because of the growing complexities involved in the worldwide Military Assistance Program. The complexities stem less from an in-

crease in the extent of the military assistance operations than from a shift in the character of those operations.

Military Assistance Program

In general, the Military Assistance Program has gone through five distinct phases since the end of World War II:

- Immediately after the war, from 1945 to 1947, foreign aid was directed largely toward providing countries relief from wartime damage. The first of the military assistance postwar programs was begun in the Philippine Islands in 1946, and this was only a modest program designed to complement the war damage aid.
- The intensification of cold war hostilities during 1948-50 led to the extension of foreign aid from relief to recovery, from consumption to productivity and investment. Geographically, the program centered in western Europe. Due to the spread of communism for reasons which seemed primarily nonmilitary, the economic aspects of foreign aid were emphasized. Thus the Mutual Defense Assistance Program was designed primarily to furnish tangible support for NATO.
- The beginning of the Korean War saw a great rise in the military assistance aspects of foreign aid. In contrast to the mainland China experience, our vulnerability in Korea seemed to indicate that economic aid was in itself insufficient to counter external attack. Therefore, the Mutual Security Act of 1951 gave primacy to military considerations, still mainly to the European Continent.
- From 1955 to 1961 we saw the era of "competitive coexistence." There was a reduction in the level of military aid. Throughout this period, too, there was a shifting of emphasis from Europe to the underdeveloped countries of the world, and from advanced weaponry to materials usable by those countries for conducting limited wars. In 1961, some 8,400 United States military personnel were involved in the Military Assistance Program.
- Since the advent of the present administration, greater emphasis has been placed on counterinsurgency and other unconventional warfare capabilities, including the use of military forces for civic action. The Military Assistance Program itself has shifted to give a larger role to civic action. Much of the change in orientation, though, seems reflected by a buildup of special, unconventional warfare forces which advise and train in matters similar to Military Assistance Advisory Groups (MAAG's) and military missions. This includes those personnel sent to countries in southeast Asia after six weeks' training in the Military Assistance Training Advisor Course at Fort Bragg, and a more than doubling in the authorized size of Special Warfare Forces to serve as "paramilitary support forces" throughout the world.

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Dr. Charles D. Windle is Advisor on Program Development on the staff of the Special Operations Research Office. He was a paratrooper with the 82d Airborne Division during World War II, and has served as Advisor for Psychological Research and Program Development, Human Resources Research Office, Washington, D. C.

Changes in Requirements

There has been, then, a reorientation in the objectives of the Military Assistance Program and of relationships with foreign troops. The reorientation is sometimes difficult to distinguish from the providing of military assistance alone. And this evolution has changed the job requirements of the Army officers who are, or will be, involved in providing the requisite military assistance.

The task of constructing conditions to encourage the security of less-developed nations differs greatly from that involved in assisting European countries to rebuild their military strength. Establishment of new institutions is a much more complex process than merely providing funds and equipment to rebuild, or just to modernize. Too, the major long-range task in the underdeveloped countries appears to be less that of the development of military capabilities than the promotion of conditions of general material and psychological well being and satisfaction with Western political approaches to economic development. The latter goal requires a need for a combination of internal security, technical development, and political development.

US Army

Emphasis is now given to unconventional warfare capabilities

These needs are closely interrelated in the minds of the peoples of the underdeveloped countries, and military personnel influence all three areas as they attempt to provide military assistance.

Proper Understanding

One must understand the novelty of the functions involved in rendering military assistance if he is to understand those functions as being a part of the larger strategic picture of nation-building toward democracy rather

than as small efforts designed only to communicate particular military skills.

Western cultures have many social as well as equipment systems to export. But few of the Western systems can be incorporated into underdeveloped cultures without major modifications of both the indigenous cultures and of the Western systems themselves.

It is generally agreed, even by the citizens of the underdeveloped countries, that many of the traditional indigenous customs, capabilities, and values should be changed, that is, low educational levels and low standards of living. There is also general agreement that it is unrealistic, and probably undesirable, to make their own cultures into mirror images of Western societies.

Cultural Adaptations

With different religious and historical backgrounds, it is fairly certain that different cultural adaptations will occur. Accordingly, the social and technological systems which serve our society should also be subject to redesign, a redesign that must go beyond merely adapting equipment to match the anthropometric and educational characteristics of the peoples of the underdeveloped countries.

It is not enough to make weapons more appropriate for men of smaller stature; to provide vehicles that can be better operated in terrain with more jungles than roads; to minimize the dependence on manuals and on other written material. It is also necessary that we recognize the implications which characteristically different social relationships and values may have on the functioning of all types of systems.

To illustrate ways in which foreign cultural values may require differently designed systems:

- Roger Hilsman has described how the mountain tribes of Burma, because of their seminomadic way of life, see no point in taking or holding ground in war.* During World War II, Office of Strategic Services tactics and weapons had to be adapted to the Burmese customs of ambush and lightning raids.

- The problem of face-saving, so notorious in oriental cultures and not unknown in the Western World, often impedes instructors from discovering how well students understand the subject matter. Tests which could damage prestige are not tolerated, or they are reduced to being a mere formality. New instructional systems must be developed in which an individual's "face" may be "saved" without loss of efficiency. Self-instruction systems, as represented by teaching machines which minimize the opportunity for error, may have special value in oriental cultures.

- Westerners prefer personnel systems which treat employees as individuals, each of whom must demonstrate job competence. Nepotism is viewed as a violation of efficiency. In underdeveloped countries, however, family, clan, and tribal ties are close. People cannot live in relative economic independence but must, as a part of the social security system, help to care for members of their extensive families. Nepotism represents one of these security mechanisms. Because members of the same clan are interdependent, they cooperate on jobs to an unusual degree, and, perhaps, achieve more effective subsystems. But these same people often lack broader iden-

*Roger Hilsman, "Internal War—The New Communist Tactic," *Military Review*, April 1962, pp 11-22.

tification than with their clan or tribe. Members of different tribes may be too antagonistic to work together cooperatively. These considerations of group identification suggest that personnel systems devised for use in underdeveloped countries may be more efficient and less disruptive of social relations if hiring and assignment includes the factor of group cohesion, even at the expense of individual abilities.

• It is often easier to introduce new ways of doing things than to reeducate people concerning the basic ideas which underlie a new procedure. New techniques may be introduced most easily by grafting them onto existing beliefs. Medical treatment may be designed and explained in terms compatible with folk medicine. Herbal teas may be prescribed when large quantities of boiled water are to be ingested.

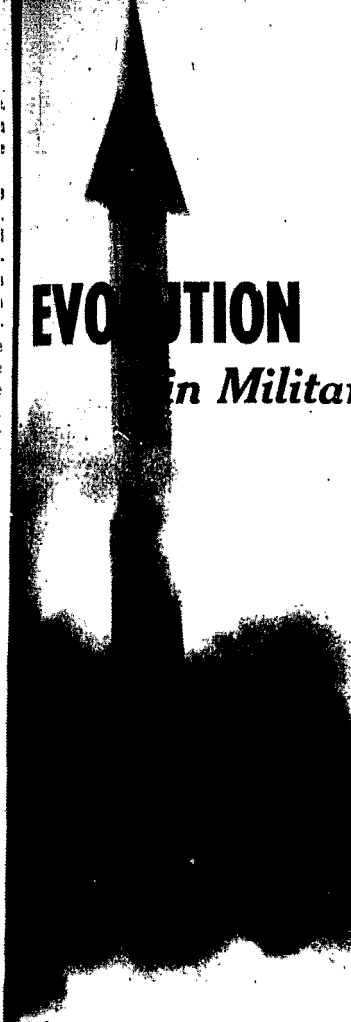
The task of cultural engineering is difficult even for specialists in the field. To military personnel oriented toward direct applications of military technology, the subjectivity of the bases for action and the indirection often necessary to accomplish change presents a considerable challenge. But the needs of the times, rather than the ease of accomplishment, define the missions of the military establishment.

Cultural engineering is now being added (at least as a requirement, if not yet an accomplishment) to the already extensive repertoire of military skills.

US MAAG's and the Military Assistance Program are the backbone of mutual security. A major portion of this mutual security requirement rests on the capability of Army forces, US and allied, since . . . the key to Free World success in Pacific-Asia is winning in Asian land areas. I think we sometimes underestimate the amount of US *Army* effort and strength that is necessarily—and desirably—committed to military assistance for our allies.

General James F. Collins

Captain Clinton E. Granger, Jr.,
United States Army



EVO TION
in Military Thought

MILITARY ideas and practices evolve as a result of historical and individual experience, interpreted in terms of future operations. Continuous, logical evolution of thought assures the currency of military doctrine at the outset of any conflict.

This process is not automatic; it requires attention and professional dedication. Most career soldiers devote some attention to the future of the art of war. Far too often, though, their considerations are unbalanced by overemphasis on personal experience—which is naturally limited in relation to the whole.

Perhaps an improved process of evolution would be achieved if we would eliminate individual experience? Personal experience does tend to limit the injection of the lessons of over-all historical experience. After all, "idea 'X' can't work because we have done it another way"—"idea 'Z' can't work because we tried something like it in Korea."

But to exclude personal experience is to eliminate realism, and ideas evolved purely in an ivory tower environment usually are lacking in prac-

tical ability. Knowledge of the ordinary problems of combat operations is essential for rational planning of even the most fundamental changes.

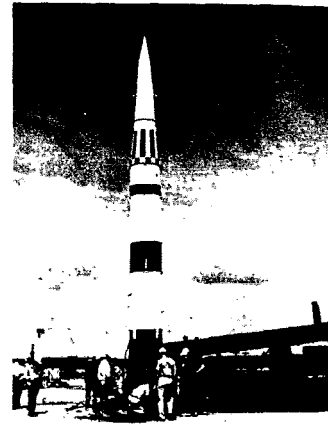
On the other hand, evolutionary development based purely on personal experience suffers for want of the insight gained by the military thinkers who faced variations of our present problems, from the beginning of recorded history. To base future concepts only on the limited scope of present experience would be woefully lacking in the strength of wisdom.

Both historical experience and individual experience must be integrated in the thinking of those who would change doctrine, organization, and techniques to create something better. The balance between the two sources of understanding—and the limitations each places on the full exploitation of the other—must be carefully considered if the results are to be valid.

Environment

The rational development of future rules and tools is further complicated by our dynamic environment which, in itself, is both the cause and product of the evolution. Thus the evolution of any one aspect of the military art is influenced in some other aspects—and the military complex as a whole.

Think of the rapid changes in weapons systems since the end of World War II. These radical transformations in weapons capabilities have required a reassessment of all other factors considered in the conduct of war: personnel, intelligence, logistics; not to mention the more obvious shifts in emphasis in basic operational concepts. To have considered a question in any of these fields of military activity, while ignoring the changes in destructive capability, would obviously be negligent and incompetent. Yet examples of such compartmented thinking easily come to mind.



The Martin Company

Since World War II a reassessment of all factors in the conduct of war has been necessitated by rapid advancements in weapons systems

A subtle change can have broad military implications—and the change need not even lie in an area usually associated with the military profession. Consider basic psychological research—an effort to effect a better understanding of the human mind; look at sociology—the study of human relationships in social communities; or

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perhaps economics—that science dealing with the use of resources and the production, distribution, and consumption of wealth. All are "academic" subjects, yet all represent deadly weapons in the spectrum of conflict.

Steps forward in any one of these areas—evolution, if you will—represent not only an academic advance, but a further development in a "weapons system" as well. There are many examples, but all bear out the dynamic nature of our environment, and our inability to divorce any portion of the happenings within that environment from any other.

Opinion

Since any evolutionary development of the military art must take place in this dynamic environment; since realistic changes in concepts must reflect some degree of personal experience; and since changes for the better must be based on the broader understanding of historical experience as well, it seems clear that those who bear the responsibility of ensuring that the United States is abreast of, or ahead of, the other military powers of the world should enter into any considerations of change of any portion of the military art with a careful balance of all the factors bearing on the problem. In spite of this, analysis of changing conditions cannot be based on absolutes alone—for in projecting ideas into the future who can say what the boundaries of the problems will really be in a few years? Much is a matter of opinion.

The differences in opinion, not only in the military, but in all facets of life, fall into two general categories: differences where the essential element of variation is only a matter of error in the logic of one position—and this is easily resolved; or—not so easy—differences in opinion based on perfectly logical thought processes in which the basic *assumptions* differ. Many differences of opinion can be reduced to useful terms if, instead of establishing complex supporting positions, the differences are reduced to a comparison of assumptions.

The variations in professional opinion that occur on almost any issue of importance are of great value. A dissident opinion precludes the unconditional acceptance of any one line of logic by the group as a whole, and thus offers alternatives to stimulate thought and action.

Professional military opinions are not only academic matters pertaining to the profession of arms. They serve as a catalyst to stimulate progressive change—to further the process of evolution of the military art. The formulation of opinions can thus be implied as an inherent responsibility of the professional officer.

Of course, opinions and individual concepts must be tempered with logic and based on fact—both personal experience and historical experience as interpreted by the individual—to possess any validity.

Objectivity

To attain the necessary objectivity for the creation of valid opinion requires much more of the officer than the day-to-day performance of duties. Considerable attention to an analysis of individual experience, evaluated and reevaluated to integrate new considerations bearing on older ideas, and a careful program of professional historical study to take advantage of the experiences of the past, will pay large rewards.

Some of the foregoing views are exemplified by the remarks of the

Commandant of the U. S. Army Command and General Staff College, Major General Harold K. Johnson, when he said to the assembled student body: " . . . challenge the assumptions." In order to do so, it is first necessary to determine just what the current assumptions may be. Then you may challenge as you see fit—and in so doing you will enter into the process of evolution yourself, with profit to both you and the Army.

To accept the present as perfect is absurdity; to predict the future with certainty is ridiculous; to accept the past without some reservation is unwise. Yet each of us can contribute to future success by aiding in this process of evolution of the military art within our individual limitations.

Somewhere in the area of intangibles, lost between the cynical compromises of the dogmatic and the indifferent indulgence of the lazy, lies an area of progress. It is the responsibility of every professional soldier to seek that area, no matter how difficult the approach, for this balanced area of progress is the road to ultimate victory.

Knowledge, **of course, is a foundation stone of command. The scope of military responsibilities, and the rapid pace of military development, obviously demand a continuing effort by every officer to keep abreast and ahead of professional advances. However, the requirement for knowledge includes far more than narrow technical proficiency. Our profession has the special characteristic that there is no field of knowledge whose application to our tasks, at one time or another, will not be called for.**

But beyond the accumulation of even the broadest type of information, when I speak of knowledge as a foundation stone of command I am referring to what is, in essence, an outlook—the devotion to an unceasing, endless effort which is never content with the obvious and the trite, but which is searching, penetrating, and tireless.

Imagination **makes the difference between the merely reliably competent and the outstanding. To be worthwhile, it must be soundly based on knowledge, but imagination cannot survive if knowledge that something has never been done *before* leads to the notion that it cannot be done *at all.* Knowledge supports imagination; it must not restrain it. Imagination makes it possible to see an opportunity and visualize how it can best be exploited. The most brilliantly successful military commanders have been those with the imagination to operate in new and better ways, and not remain tied to the hackneyed and the stereotyped.**

Like knowledge, imagination is a matter of a deliberately cultivated attitude. That is the attitude of the open mind, the habit of speculative thinking. It stems from an unwillingness to accept the status quo simply because it exists, and is marked by a desire to make things better.

General Lyman L. Lemnitzer

IT'S NEW!

A Plea for Independent Professional Thinking

Major H. L. Bell, *Australian Army*

To meet ambushes which usually take the form of a volley followed by flight—which, in very dense jungle, it may be impossible to discover or guard against by means of flankers—the Commander in Chief would wish the following plan to be tried; Supposing the fire of the enemy to be delivered from the right, a portion of the force in front should be ready to dash along the road for 100 yards or so—the party should then turn to the right and sweep round with a view to intercepting the enemy in his flight. A party in rear should similarly enter the jungle to their right with the same object. The different parties must be previously told off, put under the command of selected leaders, and must act with promptitude and dash.

"IT'S new—so it must be good!" This is the motto of our century. Yet a new product isn't necessarily good. Like all new things, it must be tested, compared with others, and evaluated before a verdict can be fairly pronounced. Yet the average citizen blindly accepts the rash claims for a new product until its failure proves them wrong.

The world won't stop because a new brand of soap is a failure. But when army officers, who lay claim to being professional men, think along the lines of the gullible housewife, then we are headed for real trouble. If an army

blindly seizes on something merely because it happens to be new, then the failure of the product could result in defeat and disaster. And yet, the army officer of today, more and more is tending to march in step with the herd mentality of modern society.

The Military Mind

Probably the most common criticism of the military mind is its record of resistance to change. This criticism, while often unfair, has, in the past, been based on strong grounds.

Through the centuries soldiers have tended to resist new ideas, to cling to outmoded concepts, and to let their hearts rule their heads in their attitude toward professional problems. Even as late as the 1940's an eminent general was heard to say: "The horse still has its place on the battlefield." Even if the horse had been supreme on the field of battle, there probably weren't, by that time, sufficient mares and stallions in the British Empire to keep a mounted arm in horseflesh for the duration of a major war!

General Sir Ian Hamilton, in his memoirs, makes excellent reference to the military mind of his period. As a subaltern, he applied to attend a school. This provoked a thrill of horror among the officers of his regiment for it was, at that time, a proud boast of the Gordon Highlanders that they had never sent an officer to a school or course.

Also famous was the outcome of Sir Hiram Maxim's offer of his invention, the forerunner of the *Vickers* gun, to Denmark, an offer made in the hope that that tiny country, by possession of the gun, could defend itself against its powerful neighbor. The Danish authorities replied that such a tiny country as theirs could not afford such a device—its consumption of ammunition would make the cost prohibitive!

Today, all this has changed as the rapid acceleration of technological progress erodes the bastions of conservatism and hidebound tradition. So much, that, far from being resistant to change, the military mind is tending to go to the opposite extreme—change for the sake of change.

Whereas in years gone by, courageous indeed was the officer who introduced a new idea, now almost the same courage is needed by the officer who opposes it. He has to fight the 20th century custom of blind acceptance of everything that is new and has to oppose his fellow officers who observe this custom.

These officers, the ones who push the new idea, but have given it little independent thought, can be placed in several categories. Look around your own group—at least half of these categories will be represented. There will, of course, be a minority of people who do really think for themselves professionally and perhaps there will even be the odd human vegetable who doesn't even think at all. Let us, then, examine these categories.

The Panacea Thinker

To the panacea thinker, the new idea comes as a curer of all ills. He really never understood the old idea. He is usually too lazy to bother learning it; sometimes he just simply isn't capable of learning it. To him, the new idea comes as a ray of hope. Perhaps it will solve his problem with one clean sweep—"It's new—so it must be good!"

Examples? There are many, but two current ones stand out above all others

This article was digested from the original, published in the AUSTRALIAN ARMY JOURNAL, *August 1962.*

—the pentropic (pentomic) organization and trainfire. In 1942 Liddell Hart propounded a theory in favor of a five-sided organization. In his further writings on this subject after the war, his ideas seem to have profoundly affected many US military thinkers, and the American adoption of the pentomic system cannot unreasonably be attributed to Liddell Hart's influence.

Yet how many of the people who loudly acclaimed the arrival of our new organization had ever even heard about it prior to the army reorganization? Precious few, I would guess, and even if they had, they would probably have dismissed it as "not so good as the present system which has been tried and proven in war" (the exact words used by one officer circa 1953).

I find it significant to note that every officer of my acquaintance who has any original tactical thought has expressed misgivings about many aspects of this organization. Most of the doubters have objected on minor points, but some officers have been radically opposed.

In contrast, I find that many of the officers who accept the new organization without reservation tend to be those who, far from being expert on the new organization, weren't much good on the old one either. Why should this be so? Because the fellow who couldn't master the old idea will always seize upon the new, hoping that with its success he will succeed too.

As for trainfire, long articles on this subject were published in United Kingdom and American military literature for some years, yet how many of the present trainfire enthusiasts ever read them? As an army we seem to have lost interest in small arms training which, until someone invents a death-ray gun, will surely remain our bread and butter for years to come.

The old musketry training system, with its requirements of plenty of time and first-class instructors, was not really geared to the mass production training needed for mobilization. Yet to have suggested then that the system was inadequate was to have invited rebuke by officers who probably are now trainfire devotees. Why? Because they didn't ever really understand the old system, knew (but would never admit) that it wasn't getting results, and now hope that perhaps trainfire might be the answer.

The Fashionable Thinker

The fashionable thinker is a very abundant species. Before the Boer War he thought that squares were hot stuff. After it, however, he was an enthusiast for open-order fighting, but by 1916 had been converted to the mass tactics of that day. He is a progressive or likes to think he is; he often, in fact, reads military literature. Whenever some new technique or weapon crops up he will be in the front rank of those selling it. Yet observe him closely. You will notice that he never sells the new until it has become the official gospel.

Remember when we all turned tropical a few years ago? The fashionable thinkers certainly went wild then and the infantry broke out into a rash of contact drills and perimeter defenses. To have suggested the inclusion of open warfare tactics in a syllabus was unthinkable; it simply just wasn't the fashion. The mere fact that many areas of southeast Asia have about as much jungle as Hyde Park did not enter the heads of many people and it has taken about five years for the army as a whole to realize that one

must train in both close and open conditions, if one is to survive.

Go back 10 or 15 years. It was fashionable then to orient one's thoughts to the United Kingdom, so the fashionable thinkers tended to pursue a course which suggested that the British Army could do no wrong. The fashionable thinker dismissed the army of the other great democracy, the United States, as rather poor stuff. Yet anyone who has had dealings with the British Army knows full well that, like any other army, far from doing no wrong it can do plenty of things wrong. And, may I add, I take as much pride in British military tradition as anyone.

Today, it is different—it is now fashionable to think American so the fashionable thinkers slavishly pursue a devotion to all things originating from the United States. The amazing part of it all is that very often the same fellow who was a British enthusiast 10 years ago is now the very same fellow who is a pseudo-American.

But the fashionable thinker doesn't stop at new methods and ideas; he also pushes the new weapon. Witness the enthusiasts for our new US 105-millimeter gun. New did you say? Well, I think it must surely be a contender for one of the oldest pieces of military equipment in use today by the major armies of the world.

Far from being an outstanding improvement on its predecessor (the 25 pounder), the 105-millimeter gun is possibly, all factors considered, not as good. Yet we had to adopt it for several very sound reasons which in our likely theater of war outweigh the others. But do the fashionable thinkers reason on these lines? No, they seize upon and become devotees of the new gun. Why? To prove that they are up to date. It's new—so it must be good!

The Gospel Spreader

One of the most unbalanced, but enthusiastic, thinkers is the gospel spreader. His very enthusiasm can be dangerous, for it may sway the thought of other officers in his own misguided direction.

When an officer is taught a new method at great expense or has been sent overseas to learn it, it is a natural reaction for him to become an enthusiast. Apart from this many officers feel a need to justify this lengthy training on an overseas trip.

Perhaps John Masters summed up these gentlemen best in his book, *Bugles and a Tiger*:

Susceptible young men would go back to their Regiments—they would tell their colonels victory could be achieved only by men who could do six handsprings (Physical Training School) or that no one need worry about anything except gas—one whiff, and the war would be over (Gas School); or that the rest of the battalion existed merely as coolies and bodyguards for the sacred, all conquering machine-guns (Machine-Gun School); and so on. The colonels were not impressed; life in the battalions went on as usual in spite of 'The Word' that had been brought to them.

That, however, was in prewar years. Today, as society reels under the blast of high-pressure salesmanship, many officers seem only too eager to believe the first smooth talking purveyor of the new idea who comes along. What we need are officers who accord the salesman a full hearing, but then make up their own minds as to the quality of his wares.

The Woolly Thinker

Not too abundant is the woolly thinker, fortunately, but he is in sufficient numbers to make himself felt. This one grasps the new without really understanding its implications. Very often, even if the new is successful, he uses it incorrectly through woolly thinking. Perhaps one or two samples will illustrate the point.

Once upon a time a very junior platoon commander stood on a hill in Korea and complained that due to the poor construction of his platoon's bunkers, the fields of fire had been restricted. He suggested that perhaps some open weapon pits could remedy this defect. To this suggestion he received the answer: "But one of the 'new' developments of the Korean War was that we can only defend from bunker systems."

Here was a classic example of the woolly thinker. Because the Korean bunker systems were new, then, hey presto, it must be a development of modern war. But was it? These systems only developed because the line was static, giving time for their construction and giving time for the aggregation of firepower which made bunkering essential for survival. Had the war remained one of movement, the bunkers would never have been constructed.

Why was the line static? For no tactical reason, but for political reasons while the truce talks dragged on at Panmunjom. Without the talks the line would have shifted, their way or ours, but shifted most surely. And here we have an officer accepting a situation as the correct one solely because it was new, without applying his reasoning power to an examination of the situation.

A few years ago in a certain command, a brigade covering force exercise was studied at exhaustive length and performed by the major units in that command. Admittedly, the story had a limited nuclear threat thrown in (you know, the limited threat which is there so we'll think about it but isn't used because it would have ruined the exercise!) but, by and large, it was a good old conventional open warfare exercise. It envisaged the various parts of the brigade delaying the enemy on a series of obstacles along the road systems. This brigade was spread out over many miles of ground, as covering forces usually have been, and doubtless will continue to be.

As a result of this excellent exercise many officers got into their heads the idea that "this is the 'new' way of defense"; for example, battalions several miles apart. What these woolly thinkers never realized was that there was very little new in the whole thing but that this was the very first time for years that an extensive study was given to the role of a covering force. For years it had been something that we always trotted out for five minutes' discussion but never really considered. I would not be surprised if in the years ahead some fellow sites his battalion on a 10-mile frontage merely because he went to this exercise. "It was new—so it must have been good!"

The Simple Truster

The simple truster comes in two varieties. First, there is the fellow who is too lazy to think for himself and accepts the new on the grounds that "it must have been worked out by someone with more brains than I." The second is the really simple fellow who not only takes this view, but believes it too.

Now please do not misunderstand me. I am not inciting officers to collec-

tive disobedience. But loyal implementation of a policy is one thing; blind acceptance of something merely because it was written in a higher headquarters is another.

The simple truster will always offer up the line that "the book" must be right because it was written by an expert. Was it? We have an officer career plan which is a very good one. But it would be wrong to assume that every officer assigned a specific function is necessarily an expert in that field.

How do we get experts? Usually by putting them in the job so that they will gain the experience and knowledge necessary to become one. Instructors posted to the Jungle Training Center are not necessarily experienced veterans of jungle service. People have instructed at the School of Infantry who have never commanded a rifle platoon.

Therefore, it is very dangerous to assume automatically that because something new comes from above, its author is necessarily an expert. To be fair, on most occasions the new offering is being circulated for trial, criticism, and experiment. But the simple truster doesn't usually realize this, he just blindly accepts.

The Gadget Man

The gadget man is a true son of the 20th century, with its ever-accelerating production of new machinery designed to replace the hand of man. He seizes on the new gadget, and assumes that because it is new it replaces all other gadgets that preceded it, including human beings.

He has a golden future ahead of him with the ever-accelerating rate of new inventions. As soon as infrared ray equipment comes into general usage, as one day it must, he will assume that the need for good night training is no longer vital. As portable types of surveillance radar come into use, he will assume that the need for patrols will have passed.

In his eagerness to push the new, he will overlook the fact that these devices—war winners though they may possibly be—are a supplement to the really trained soldier and not a replacement for him.

Conclusion

All this may sound rather exaggerated, yet all these types exist—some extreme, some mild. But they are all present and I have met the lot, and you too will have done so. Once the greatest threat to military efficiency was the soldier's resistance to change—now we have just as great a threat in this mad rush toward change for the sake of change. We must keep up with the Joneses—it is our modern way of life and to be different, or to have a doubting mind, is to bring troubles on oneself.

It is not suggested that we oppose new trends—rather the reverse. What is needed, however, are officers who will not accept something because someone else told them, or because someone else wrote it, but because they, as thinking individuals, reasoned it out for themselves.

Look back to the beginning of this article and you will see a quotation. Read it again. It is a pretty good description of what is obviously a jungle contact drill. The author? A fellow called Roberts, Field Marshal Lord Roberts. When and where?—*Instruction for the Guidance of General and Other Officers Commanding Columns in Burma*, paragraph 17, November 20 1886.

What's new?

ARMY TACTICAL MOBILITY

Major Robert L. Erbe, *United States Army*

NOW as never before in its long and battle-scarred history, the United States Army finds itself the front runner in the struggle to preserve mankind's most cherished belief—the freedom and dignity of the individual man. In this task the Army faces a serious challenge from a hardened and aggressive antagonist who has capable leadership, equal mobility, nuclear parity, and greater manpower.

We can no longer delude ourselves by claiming that we have a decisive edge in training and in leadership. Since we can do little to change the nuclear parity which now exists, or to shift the manpower picture in our favor, we must, if we are to stand up to the challenge, increase our mobility.

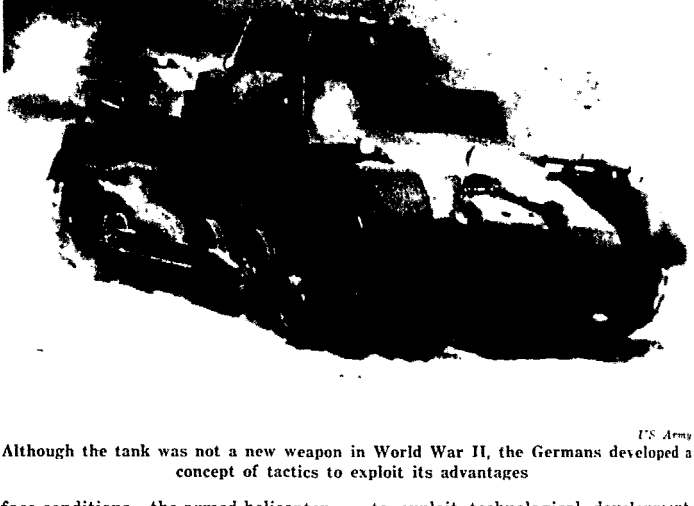
Everyone probably will agree that greater mobility will be highly desirable in any war in the future, particularly since nuclear weapons have increased firepower a hundredfold, while mobility has remained relatively the same. The question, then, is how do we increase our mobility to offset the tremendous rise in firepower?

Generally speaking, there are two ways by which we can increase battlefield mobility. We can keep our present tactical doctrine intact, modifying and improving existing vehicles and developing some new type of surface-bound carrier. We might also make numerous substitutions of air vehicles for ground vehicles. Efforts in this direction probably would not produce spectacular results, but with enough persistency they might provide us a slight tactical edge over our antagonist *if* he is also willing to limit his

thinking to current tactical concepts based primarily on surface-bound vehicles.

A second way of increasing battlefield mobility seems to offer the greater advantage. This is to develop a new concept of tactics, based on a faster and more versatile vehicle now available, which is not bound by surface conditions—the armed helicopter. And in the near future we can look for better and more versatile vertical takeoff and landing (VTOL) vehicles.

For reasons best explained by psychologists, there is a reluctance to drop a proved and successful concept for a new and untried theory. Our reluctance in changing military doctrine to exploit the potential of new equipment has many precedents in our military history. Two of the best-known recent examples are the airplane and the tank. Not only is the tank a good example of our reluctance to exploit technological development, it also provides an example of the decisiveness of superior mobility when coupled with a new tactical concept. The development of the blitzkrieg illustrates both of these points.



U.S. Army

Although the tank was not a new weapon in World War II, the Germans developed a concept of tactics to exploit its advantages

Major Robert L. Erbe is with Headquarters, United States Military Assistance Advisory Group, Pakistan. He is a graduate of the University of Michigan, and completed the Regular Course of the U. S. Army Command and General Staff College in 1959.

On the Western Front in World War I, a series of trenches and well-sited machineguns had brought the war to a stalemate. To break through the lines of trenches, German General Ludendorff introduced his "soft-spot" tactics in 1918, tactics which proved

highly successful and which permitted his armies at one point to penetrate the Allied lines to a depth of 35 miles. But there was no way for Ludendorff to exploit his opportunity. The German infantry, still on foot, could not move fast enough to keep the Allies from establishing new defensive lines. "The mobility differential between the components of land forces had disappeared," said General James Gavin. "The defense completely dominated combat. . . ."

After World War I, it appears that only the Germans fully realized the necessity for developing greater mobility. The Polish, French, and Russian campaigns of World War II attest to the validity of their foresight. Basically, what the Germans did was to recognize the tank as offering a mobility differential, and they designed a new concept of tactics to exploit that differential. Sufficient infantry and artillery units were mechanized to provide ground support, while aircraft were employed to provide long-range support and to hinder the enemy's defensive reactions.

Concepts

Today, we have available an aerial vehicle, the armed helicopter—not bound by surface conditions—which provides the means for a signal change in ground combat. While not ideally suited for the role, the helicopter does give us a most satisfactory mobility differential.

Our concept of Army aircraft utilization, unfortunately, is still limited to the aircraft performing in a support role. Our most recent division reorganization incorporates an aerial cavalry troop and an aviation battalion which considerably increase the amount of aviation support. What we are really doing is substituting. We are simply inserting into our organization a faster vehicle to take the place of a slower vehicle, while our tactical concepts remain those developed and refined during World War II. We seem to be content to settle for an assured minor improvement rather than to risk a bolder change.

Army aviation was conceived to support the Army's ground mission; there can be no argument with this. It should continue on that basis. But we need a new tactical concept to take full advantage of the increased capabilities of a new weapons system.

Parturition

The logical outcome of the VTOL development program now underway is the parturition of a large helicopter strike force—*not a large ground force that is helicopterborne*—combining a new tactical doctrine and the logistical support required for a mile-a-minute cross-country mobility. This airmobile strike force, varying in size, would take over the principal roles played by armor units in World War II: exploitation and mobile reserve.

Composed mainly of two types of VTOL aerial vehicles, attack and the transport, the air strike force would give the Army the mobility differential it so urgently requires to counterbalance the antagonist's superior manpower resources.

The main ingredient of the strike force would be the attack vehicle, small but heavily armed with machine-guns, missiles, and rockets.* The transport vehicle would be lightly armed; its primary reason for existence would be to transport ground troops to the place of action. Elements of such a strike force could be dispersed a hundred miles behind the

* Colonel Jay D. Vanderpool, "Aerial Vehicles in the Ground Role," *Military Review*, October 1958, pp 59-65.

line of contact, and in less than two hours could be concentrated to exploit an offensive advantage.

It is not expected that the air vehicle will make the tank obsolete. Because of its armorplate, only the tank can provide adequate and timely support to the infantryman. It is only in the concept of the "armor strike force," where the tank is the primary ingredient and moves at its own relatively slow speed, that the aerial vehicle is superior and offers us the opportunity to devise a new tactical concept.

US Army

The logical outcome of vertical takeoff and landing development is a helicopter strike force. The *HU-1* shown here is experimentally equipped with *SS-11* missiles.

Limitations

To assess this new concept accurately, we must consider the limitations as well as the advantages. The four major limitations of air mobility are vulnerability, inclement weather, logistical support, and initial cost.

Without a doubt, the most serious limitation to helicopter or VTOL employment on the battlefield is vehicle vulnerability. By its very nature, an aerial vehicle can afford only limited protective armor. Self-sealing gas tanks, tough plastics, dual-control linkages, simpler and more rugged designs, light armor, transistorized radios, light navigational equipment, and more firepower are just a start in reducing the vehicle's vulnerability.

Air defense weapons pose a serious threat to aerial operations regardless of protective measures that may be taken. This is a risk we must accept. Being lightly protected, helicopters must depend on mass, proper employment, speed, and maneuverability.

While inclement weather will not ground aerial vehicles, it does restrict their action and negates their primary advantages—speed and agility.

High fuel consumption and maintenance requirements are definite limitations, but certain improvements have been noted in recent years in both respects. Today, the helicopter has an availability factor equal to that of a tank or an armored personnel carrier, and fuel consumption per mile of operation is less.

Even the high initial cost of helicopters may not continue to be a major limitation. Production of the same aerial vehicles in great quantities should reduce the initial cost per unit considerably.

Luxury

In World War I, and again in World War II, we could copy and improve upon the weapons and doctrines. We no longer enjoy that luxury. We must initially field an Army more effective than our foes.

We must not be content with our present mobility standards, or delude ourselves into thinking that we can substantially improve those standards by a series of minor technical changes of our present tactical doctrine.

The VTOL aircraft will give us the mobility needed to win on the nuclear and the nonnuclear battlefield. Armed VTOL-borne strike forces, combined by number and type to suit a tactical situation, give us the forces to exploit breakthroughs and to provide us with mobile reserves.

Air mobile forces with speeds of at least a mile a minute will give us true fluid warfare and will provide more than adequate battlefield mobility. All that is needed is to dig ourselves out of the rut of World War II tactics and to develop, before our chief enemy does, a concept of tactical operations for the battlefield of the future.

True professionalism demands that we seek constantly for new concepts in organizing, equipping, and employing ground combat and supporting forces; that we challenge and be ready to discard old ways if better ones are developed. Initiative, combined with clear thinking, is the fountainhead of progress, as well as of economy, efficiency, and flexibility. The mark of the professional soldier of our Army must be a constant reaching out toward the future, initiating as well as anticipating military developments. It is equally important that these efforts be based upon thorough analysis and grounded in a sound professional background.

General Earle G. Wheeler

THE TIDE TURNS

Béla K. Király

FROM the time of the abortive 1956 revolution, until just recently, the Hungarian People's Army (HPA) under the Soviet-imposed Kádár regime has played largely the role of an auxiliary force. But the USSR's 22d Party Congress reassessed Hungary's role in the Warsaw Pact and Hungary has again been elevated to the level enjoyed by the other member pact countries. With this political turn, the HPA is now being transformed from an auxiliary force to an effective and combat-ready force.

The political promulgation of this change started with the December 1961 speech made by János Kádár, Hungary's Prime Minister and the First Secretary of the Hungarian Socialist Workers' Party (the HSWP). Speaking to the workers of the Csepel Steel Works in South Budapest, Kádár said:

Comrades! Today, under the prevailing circumstances, an up-to-date army is still necessary. Therefore, we equipped our soldiers with the most up-to-date airplanes and rockets. . . . The spirit in our army is adequate. . . . Our soldiers are not only prepared morally for the protection of the Socialist achievements and peace of the people, but also in respect to military knowledge. The army carries out very difficult and modern maneuvers with excellent results.

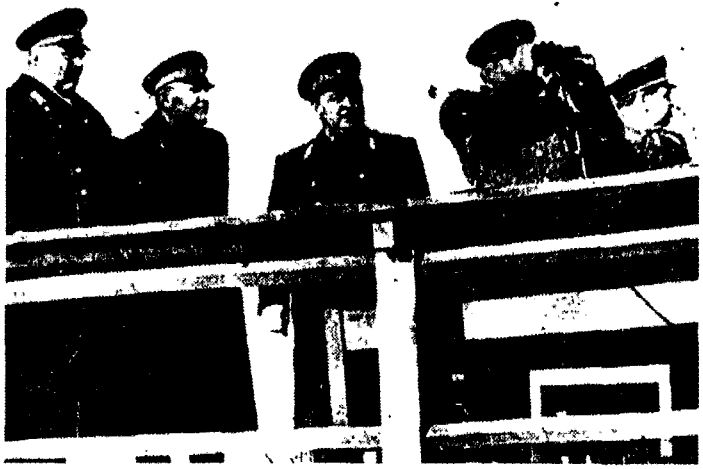
During the spring maneuvers of 1962, the Hungarian Army's new status was confirmed by no less than the Soviet Marshals Rodion Malinovsky and A. A. Grechko, the former USSR Minister of Defense, the latter Deputy USSR Minister of Defense and commander in chief of the Warsaw Pact forces. To emphasize their interest in the new satellite army, the Soviet Union also sent to the Hungarian maneuver area General Aleksandr Rodimtsev, former commander of the 13th Guard Division, which had defended the center of Stalingrad in 1942; General Mariu Arogneva, one

of the commandants of the Romanian Army, who had participated in the liberation of Hungary in 1944 and 1945; and Colonel Vasile Bocinca, member of the Tudor Vladimirescu Division, which was organized in the USSR from Romanian prisoners of war.

To boost the morale and prestige of the HPA, Kádár and his Soviet military visitors emphasized three factors:

- Soviet and Romanian troops co-operated closely with the units of the HPA, thus demonstrating to the Hungarian people and to the world the newly gained equality of the HPA.
- The maneuvers were conducted using the latest weapons, including tactical nuclear weapons, which demonstrated the new found capabilities of the HPA.
- The units of the HPA were placed on the offensive side. They had to carry out the crossing of the lower Danube River under combat conditions, a maneuver which is considered as difficult a task as any army might have to conduct.

There remains, however, the less glittering and far less glamorous task of reorganization to be performed. The HPA had been almost completely neglected during the years immediately following the 1956 uprising.



The presence of Soviet Marshal Malinovsky (left) and other top military leaders at the 1962 spring maneuvers was evidence of the Hungarian Army's new status. General Lajos Czinege, Hungarian Minister of Defense, is third from left.

Béla K. Király, as a major general in the Hungarian Army, served as military commander of the Budapest area in October 1956. Exiled to the United States in 1957, he is now president of the Hungarian Freedom Fighters Federation and is working toward a Ph. D. degree at Columbia University.

Although the army had been partially reorganized in 1960 and again in 1961, it needs considerably more than the maneuver "knighting" ceremony to turn it into an effective fighting force. Generally speaking, the HPA needs an increase in its manpower, almost total rearmament, and a strong boost in the morale of its rank and file members.

Manpower

Certain steps had been taken in 1961 to increase the strength returns of the HPA. The age group which was to be demobilized during the fall of 1961 was retained on active service, with no indication given as to the length of time these men will serve. Beginning in 1962, large numbers of reservists—instructors as well as technical specialists—were called back to the colors to help solve the training problems brought about by the increase in both manpower and armament. Finally, just this past October, the Hungarian Government announced that two age groups (1942 and 1943), instead of the usual one, would be called to active service. The government also announced that these recruits would serve for a minimum of two and one-half years.

Rearmament

The terms of the definitive peace treaty signed in Paris on 10 February 1947 limited Hungary's defense forces to a land army of 65,000 personnel. Just a year later the Hungarian Government, under Soviet pressure, decided to reorganize the army.

From January 1949 a rapid growth took place, and within four years the HPA, with Soviet advisors directing the buildup, jumped from a 1948 structure of four poorly equipped divisions to an army of some 165,000 men and at least 300 tanks.

By 1953, when the buildup leveled off, the HPA had been almost totally equipped with modern weapons and equipment, and numerous military installations had been constructed.

Beginning in 1954, the maintenance

Photos courtesy of author

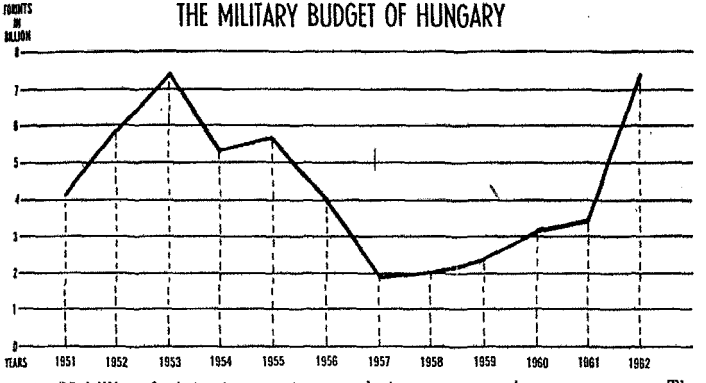
With Soviet advisors directing the buildup, the Hungarian Army jumped from four poorly equipped divisions in 1948 to 165,000 men and 300 tanks within four years

of the army as it then existed, as well as its routine renovation, became the order of the day, and Hungary's military budget showed a gradual decline until the year of the revolution. The 1956 October-November uprising, for all practical purposes, did away with the previous seven years' labor, and the HPA was almost totally disbanded. A small auxiliary force was kept in being, but only politically dependable officers, noncommissioned officers, and specialists had any sort of opportunity to maintain their training and knowledge of military matters.

The HPA remained in this status until 1960; the principal Hungarian defense force became the Workers' Guards, a paramilitary organization

equipped with automatic weapons and numbering about 35,000 personnel.

Another reorganization took place in 1961. The big change occurred in 1962, with the military budget rocketing to the peak it had reached nine years before. The fluctuation of the Hungarian military budget is graphically illustrated in the chart. The considerable sum allotted for rearmament—25 billion forints (a monetary unit instituted in July 1946)—will come from a reduction in the current five-year industrial investment plan. Five billion forints will be added to the military budget each year for the next five years.



Gyula Kállai, a Hungarian Politburo member and the Deputy Prime Minister, announced the rearmament program to the press in Budapest in December 1961. At his news conference, Kállai said:

Hungary has been forced by certain capitalistic elements who want to unleash war to strengthen her defenses. Her planned industrial investments for the next five years had to be cut by about 840 million dollars to meet the cost.

Since industrial investment in all Communist-planned economies is of primary importance, its cut in Hungary by some 12 percent expresses the extraordinary political importance the Soviet Union attributes to the HPA's current buildup.

Morale

The increase in manpower is an administrative matter. Rearmament is but an economic measure. The "knighting" of the HPA by the Soviet marshals was a political affair. All of these could have been solved by simple decision-making and a little prior planning.

But the morale of the rank and file members of the HPA remains a complex psychological, social, and political problem for János Kádár. His major obstacle to breathing life into the organization is that military service for a majority of the Hungarian youth is a loathsome and unpopular proposition. In its present extended form, active military service is particularly unattractive.

The Hungarian youth consider a long period of military service with the active army to be a heavy, useless

burden. They hold that the time they spend in the HPA is lost. In spite of heavy indoctrination, the youth believe that both Hungarian participation in the Warsaw Pact and the new campaign for rearmament are diametrically opposed to the party's words. The youth object to the seeming contradiction between the party's slogans of a "peace movement" and the painful requirements of rearmament.

It seems safe to assume that the strength of the HPA does not increase parallel with the increase in the numbers of soldiers on active duty. The Hungarian Government is trying through every communication media it possesses—radio, television, party, youth, and other organizations—to offset the youths' attitudes. For this very reason, the Organization of Communist Youth (KISZ) held a meeting on 28 May 1962, in which it launched a national campaign "to enlighten" the Hungarian youth on national defense and the youths' obligations to national defense. To boost the morale of those already on active service, the Hungarian Government acclaims the achievements of the Soviet armed forces; time and time again the "everlasting merits of the Soviet Army" are praised.

General Lajos Czinege, Hungarian Minister of Defense, travels to the paramilitary summer camps explaining the necessity and importance of military service. At one of the major rallies, Czinege told his young gathering:

My young comrades! Foster the revolutionary military traditions; be proud of your predecessors' fight for freedom; make use of every opportunity to get acquainted with modern engines, radio, and aircraft. Work, learn, and create, because our country requires cultured, all-round, well-trained, brave, and determined citizens.

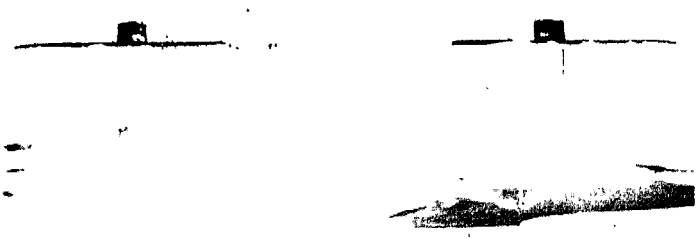
Thus the campaign to turn the tide of the history and the role of the Hungarian People's Army has been launched. It is a major, joint effort by the Warsaw bloc and the Soviet-imposed Hungarian regime.

During the present period of worsening international relations, with the Berlin problem in the foreground, the political stability of the Kádár regime and the combat readiness of the HPA are important figures in the Kremlin's chess game. Too, Hungary's importance as a link to Yugoslavia cannot be exaggerated at a time when the economic-psychological effect of the European Common Market radiates through the Iron Curtain. The growing Yugoslav economic depression slowly pushes that country's leaders into harsher, Soviet-type measures, and they may well lead Yugoslavia closer again to the Soviet orbit. Hungary—the "link"—must be, according to Soviet desires, as well organized as possible.

It should also be noted that in different fields—security of the individual, limited freedom of speech, intellectual endeavors, standards of living in the cities—a considerable "thaw" exists again in Hungary. The extensive strengthening of the HPA vis-a-vis a "thaw" could well be interpreted as constituting the stick and carrot of the present Hungarian regime.

THE ARCTIC

STRATEGIC CENTER OF THE WORLD



Gerhard Baumann

THE strategic significance of the arctic region has been recognized by military leaders and statesmen for the past two decades. More recent developments in military technology have highlighted the importance of this area to international security.

United States nuclear-powered submarines have demonstrated their ability to operate under the ice floes and on the arctic seas. The ballistic missile with which these underseas craft are armed and those in fixed installations in both the US and the Soviet Union have the capability of traversing the Arctic to reach the key industrial and military targets on either side of the Iron Curtain. Thus the Arctic assumes renewed strategic significance.

The US determined the outcome of the last two wars essentially through her reserve capacities. The Soviets must eliminate these potentials if they want to be victorious in any future major conflict.

The shortest distances between the two major powers pass over the Arctic Circle. There are 5,200 miles between

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Vladivostok and San Francisco, 4,700 miles between Leningrad and Chicago, and 4,200 miles between Moscow and Boston. (See Figure 1.) The ranges of the US *Atlas* and *Minuteman* are quoted as approximately 6,300 miles. Soviet missiles launched in 1959 from bases near the Caspian Sea and the Balkhash Lake in central Asia are known to have covered ranges up to 5,000 miles.

The American pioneer work in the field of nuclear power must also be taken into consideration. In October 1957 the atomic-powered submarine *Nautilus* cruised five and a half days under the arctic icepack, navigating 1,300 miles without being detected. Other atomic submarines—including the *Skate, Sargo,* and the *Seadragon* —have surfaced at the North Pole.

The strategic significance of these accomplishments rests in the fact that the northern coasts of the Soviet Union, hitherto nearly unassailable because of the icepacks, suddenly became vulnerable. This is more significant because the Soviets are building a giant industry in their northern region which is now vulnerable.

From the edge of the icepack near Spitsbergen, the distance in miles to Murmansk is 400, to Arkhangelsk 880, to Leningrad 1,180, to Moscow 1,420, and to Kiev 1,780. These distances pose no problem for modern rockets.

Demilitarization Efforts

On 18 April 1958 Andrei Gromyko, Soviet Minister for Foreign Affairs, suddenly announced that he would, without delay, request a meeting of the Security Council to protest against flights of the US Strategic Air Command (SAC). He stated that the aircraft which are incessantly in the air and armed with nuclear bombs represent, literally, "a play with fire which is too dangerous to be tolerated by us." He alleged that bombers flying near her borders frequently brought the Soviet Union on the verge of releasing a counterstrike.

The US immediately agreed to a discussion of the problem before the Security Council. Yugoslavia refused to support the Soviet protest, and the Czechs, as well as the Poles, did not fall into line. Sobolev, the Soviet delegate to the United Nations, sharply pressed the issue, but Moscow's proposal suffered a quick defeat.

The American delegate to the United Nations presented a motion proposing that the three Western Powers—the Soviet Union, Denmark, and Norway—agree upon a demilitarized, controlled inspection zone north of the Arctic Circle. The Soviet reaction was a vehement veto:

The appeal of the American delegation in the Security Council for an air inspection in the arctic region has nothing in common with the mission of preserving world peace. It is merely a propagandist action.

Sobolev withdrew his motion as abruptly as he had presented it. The American proposal was also unsuccessful because the Soviets demanded the reduction of US security measures without offering an equivalent in return.

In September 1952 the Soviets published a governmental decree declaring the East Siberian Sea and the Chuckchee Sea Soviet inland seas. A little later, the claim was extended to the Bering Sea and the Seas of Japan and Okhotsk. The west did not protest. As a result an American meteorological plane was shot down over the Barents Sea in the summer of 1960, although there was no doubt

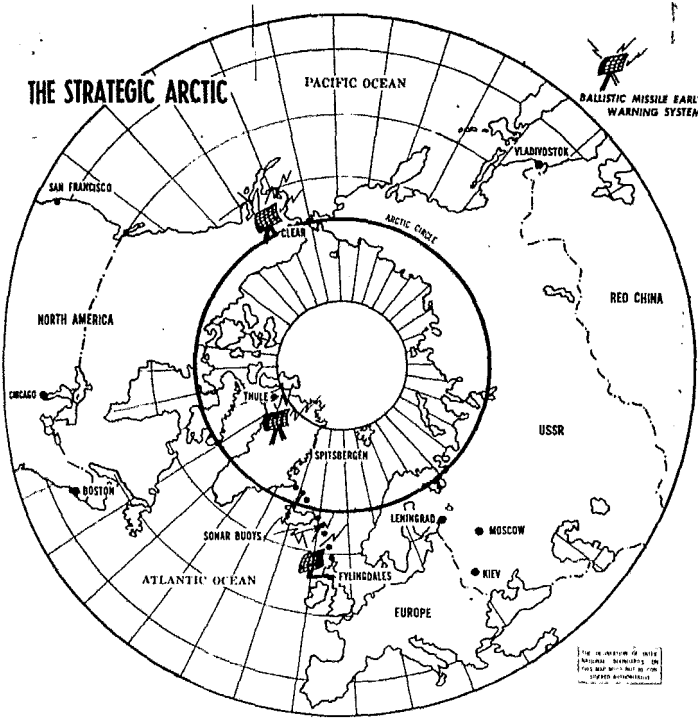


Figure 1.

that it was over international waters.

Developments in the arctic region are in the offing which can make themselves deeply felt in western and central Europe. The technological-scientific revolution has given man the capability radically to change the face of the earth, specifically the arctic region and the adjoining areas. Since strategic requirements and the war potential are interrelated, the significance of the Arctic can only be grasped if we understand its war potential.

Geographic Factors

The arctic region begins north of the limit of tree growth, covers roughly 18 million square miles, and embraces a sea covered by ice, Greenland, the Arctic Archipelago, Jan Mayen Island, Spitsbergen, Bear Island, Franz Josef Land, Novaya Zemlya, Severnaya Zemlya, the New Siberian Islands, the Wrangel Island, and parts

of the Eurasian and North American mainland masses. Vegetation is scanty. Only mosses, lichen, and low shrubs grow there. Profitable industry is possible only at the edges of the region. Major commercial activities are raising reindeer, hunting fur-bearing animals, and fishing.

Politically, the area is divided among the Soviet Union, the United States, Canada, Denmark, and Norway. The US has been a part owner since 1867 when she purchased Alaska from the Russians. During the last World War when Fairbanks, Alaska, became an airfreight port for the transshipment of lend-lease material from America to the Soviet Union, the Soviets repeatedly pointed out that the czar had sold Alaska against the interests of the people. They contended the "illegal" transaction could not be considered as final and must be revised.

Climatic Conditions

The polar regions of Siberia, Alaska, and Canada are beset by ice and snow more than half of the year. Temperatures of minus 45 degrees centigrade and below prevail, making habitation impossible and precluding extensive economic exploitation. Only the port of Murmansk in the Barents Sea is kept free of ice for several months by the warmth of the Gulf Stream. For economic as well as military reasons, the Soviet Union and the United States are studying the climatic factors in an attempt to open these regions.

The Soviets started to improve their meteorological stations in this area

Commanders of the US submarines *Seadragon* and *Skate* meet at the North Pole on 31 July 1962

soon after World War I. In 1937 they established their first observation post on a drifting ice floe. *Red Star* reported on 19 April 1960 that the personnel for the ninth drift station had been landed 1,200 kilometers north of Tiksi.

In October 1961 the atomic icebreaker *Lenin*, carrying 14 researchers and 400 tons of equipment, sliced its way through the icepack on a route allegedly traversed for the first time to set up Station "North Pole 10." Plans, partially implemented, call for 16 automatic meteorological stations and 15 unmanned weather stations with radio equipment.

The total number of Soviet observatory stations is estimated at approximately 500. There is also a Hydropower Institute in Novosibirsk. All of the research carried out is obviously military in nature even though the Soviets camouflage it as purely scientific effort.

Similar efforts are being made by the United States. The most extensive project, Camp Century, a town constructed completely within the ice of Greenland 220 kilometers east of Thule Airbase, was started on 12 May 1959. This installation makes year-round meteorological research possible. Formerly, such information could only be gathered from May to October.

A Measure of Success

The success of all these efforts is indicated by the fact that presently more than one million people live north of the 62d degree of latitude in the Soviet Arctic. There are 100,000 in Alaska. That the score on the Soviet side is higher is a consequence of a dictatorial government which can direct its people anywhere it seems profitable regardless of the living conditions.

Two factors resulting from the climatic conditions are important for strategic appraisal. Not all of Siberia's population came there on an obligatory basis; many responded to the challenge with the enthusiastic spirit of pioneers which, coupled with the severe conditions, molded them into hardier and considerably freer people than those living in central Russia. Moscow is so far from Novosibirsk that orders from the Kremlin are criticized and interpreted in conformity with local ideas. This certain measure of independence has, without a doubt, affected the military attitude.

On the other hand, the military units almost exclusively comprise soldiers temporarily assigned there—that is, soldiers who were not born there, have not taken root, and do not intend to stay. These soldiers are much more susceptible to the realities of the locale. They do not endure the climate and other conditions as well as the natives. The rigid duty in the isolated and desolate area provides no diversion.

The Soviet Arctic Seas Fleet frequently assembles the secretaries of the party organizations for discussions, training courses, and seminars. Problems concerning morale and discipline are always issues on the agenda; however, few changes in the living standard are made and no material incentive is offered.

Climate Modification

The Soviets have plans for climate control in the Arctic. Being Communists they proceed from the concept that nature is imperfect and that science alone is the supreme authority which can effect the changes neces-

CANADA
ALASKA
PROPOSED DAM
BERING STRAIT
NORTH POLE
ICECAP
GREENLAND
SPITZBERGEN
ARCTIC OCEAN
SEA PASSAGE
NOVAYA ZEMLYA
MURMANSK
KANDALAKSHA
Kolyma River
Lena River
Yenisei River
Ob River
LAKE BAIKAL
IRKUTSK
NOVOSIBIRSK
Irtysh River
MONGOLIAN PEOPLE'S REPUBLIC
RED CHINA
LENINGRAD
Dvina River
SAINT LAWRENCE SEAWAY
MOSCOW
Dnieper River
VOLGA RIVER
EUROPE
BLACK SEA
CASPIAN SEA
LAKE ARAL
THE DELINEATION OF INTERNATIONAL BOUNDARIES ON THIS MAP MUST NOT BE CONSIDERED AUTHORITATIVE

Figure 2.

sary for the good of man. All projects are directed toward the exploitation of natural resources, the opening of new communication routes, and strategic development. Completion of these projects is expected to take several decades. However, in view of the available technical capabilities, they are by no means utopian.

Partly projected, partly under construction, and partly completed are hydroelectric plants which are potentially capable of generating millions of kilowatt hours of electricity. These are to contribute decisively to the control of the climate. Work started in 1959 on a reservoir on the Irtysh River for the Bukhtarma powerplant. This reservoir will have a capacity of 53 million cubic meters and "will effect a change in the economic structure of a vast area."

Two parallel projects are planned which will produce a radical change in the natural order. In 1949 a Soviet engineer devised a plan to deflect the waters of the Ob and Yenisei Rivers. Instead of flowing into the Kara Sea, the water masses are to be stored by building dams to create two lakes of 250,000 square miles each. The Siberian Sea, which thus would be created, would be 70 meters above sea level. This body is to be connected with Lake Aral and the Caspian Sea by a large canal.

The moisture content of the Siberian air would thus be so substantially increased that the temperatures would be raised to a level which would permit habitation. The scheme is not expected to be realized before the year 2000; nevertheless, the project has been initiated with forced labor. Similar projects are planned for the Pechora, Vychegda, and Sukhona Rivers.

The second plan, proposed in 1957, calls for a dam across the Bering Strait from the East Cape of the Chukotski Peninsula to Cape Prince of Wales. The stretch is only 74 kilometers long and the water is 50 meters deep. The scheme visualizes melting the polar ice by pumping the cold water out of the Arctic Ocean and exchanging it for warm water from the Pacific. Nuclear power would be used.

Calculations of meteorologists show that the mean temperature at the North Pole would rise about 15 degrees centigrade, making the rivers of Siberia, Alaska, and Canada navigable. However, scientists have also pointed out that the warming of the Arctic Ocean might set off a sequence of changes in atmospheric conditions which could produce an eight-meter rise in mean sea level thus flooding vast coastal regions.

The Natural Resources

Of the natural resources at the disposal of the Soviet Union, a large proportion is found in Siberia. This includes 90 percent of the hydraulic energy, 90 percent of the nonferrous metals, 80 percent of the bituminous coal, 80 percent of the arable land, 70 percent of the forest stand, and 60 percent of the iron ore.

In addition, there are oilfields and gold deposits not yet fully explored. The Soviet Ministry for Geology is presently working out a general scheme for geological research covering the next 20 years.

Immense coalbeds have been found at the mouths of the Lena and Indigirka Rivers, opposite the New Siberian Islands. Mineral oil has been discovered in the area of the Pechora River, not far from Arkhangelsk. Iron ore, nickel, and copper are found

in the basin of the Ob River and gold in the Kolyma district (Magadan).

Metallurgical plants under construction or completed ultimately will produce one million tons of steel annually. A heavy waterworks has been built at the mouth of the Yenisei. Nikkeli, a mining town in the Pechenga area with a population of 10,000, produces the best nickel of Europe if not the world.

Based on an agreement between Norway and the Soviet Union, construction of powerplants on the Pasvig River has begun. They are to supply electricity to the Kirkenes district on one side and the Murmansk dictrict on the other. In Novosibirsk alone there are 240 factories. Industrial communities which are not yet recorded on any map mushroom all over Siberia.

Communication Routes

The economic development of the arctic region is effectively supported by the rapid development of communication routes. However, a look at the plans shows that the support of military operations has been the principal consideration.

The most significant passage from a military as well as an economic point of view is the arctic seas route stretching from Murmansk to the Far East. In 1958 about 80 merchant ships and icebreakers with a total of 35,900 tons traveled this route.

For further development of arctic shipping the Soviets pin their hopes on the atomic-powered icebreaker *Lenin* completed in 1959. In 1961 she was used for the first time to keep the route from the Kola Peninsula to the Chuckchee Sea free of ice in the fall and winter.

The Soviets recognize the strategic importance of the northern route and have explored and developed this seaway to the extent that the Soviet Admiralty now can combine the Arctic Seas and Pacific Fleets relatively quickly.

Even more significant is the network of inland waterways which practically link the Arctic with all parts of the country and the oceans adjoining the Soviet Union. In 1960 the total length of these waterways exceeded 137,000 kilometers of which 13,000 kilometers are artificial canals. The Arctic Seas Canal joins Leningrad with the Barents Sea. A canal extending from Kandalaksha to Murmansk is reported to be under construction. This means the submarines based in the Baltic Sea can become an operational element of the Arctic Seas Fleet.

New Icebreaker

Naval architects of the Soviet Union are now working on plans for a second atomic-powered icebreaker, using experience gained in the operation of the *Lenin*, an officer of the *Lenin* recently announced. The *Lenin* can break a passage through arctic ice up to 18 feet in thickness.—Editor.

The Maria Canal, branching off from the Arctic Seas Canal, links Leningrad with Moscow, a great inland port, from where the waterways are open to the Black Sea. The locks are fully developed and the navigation channels have been improved to a depth of five meters which makes them navigable for destroyers. A project to raise the water level of the Caspian Sea, now in the planning stage, will, when completed, further enhance the operational capabilities from the Black Sea to the Arctic.

All these measures increase the sig-

nificance of the arctic region as a strategic base. The four Soviet fleets —the Baltic, the Arctic Sea, the Black Sea, and the Far East—are far apart: from Murmansk to Vladivostok the distance is 8,500 kilometers and from Murmansk to Nikolaev 3,500 kilometers. Moreover, three of the fleets are in seas which are icebound for a part of each year. But the development of the network of waterways is expected to make mutual support between the fleets possible.

Military Factors

Many factors influence the military importance of the northern regions of the USSR. The Soviets have developed the area between the mouth of the Lena River, the Chukotski Peninsula in the Bering Strait, and the Kamchatka Peninsula into steppingstones to Alaska, Canada, and the United States.

The 200-kilometer Norwegian-Soviet border is the only place where NATO troops directly face Soviet territory. If Khrushchev were to succeed in establishing bases in Finland, the ports of Narvik and Bodö would be endangered. Possession of these ports by the Soviet Union would clear the way for her submarines into the Atlantic and thus endanger the vital communication routes within the Western alliance.

On the other hand, because of the extensive industrial and agricultural efforts, the natural resources, and the increasing density of the population, this region has become one of the "softest" spots of the Soviet Union, particularly because the coastal line of the arctic seas extends over 8,800 kilometers.

Ground Forces

The use of regular infantry units in the arctic regions is limited by the rigorous climate and the difficult terrain. The Tundra is traversed from Tiksi toward the Chukotski Peninsula by a mountain range, much of which is steep rock formations rising up to 1,500 meters; those on the Kamchatka Peninsula rise to 5,000 meters.

In the south the Tayga, the swampy, coniferous forests between Tundra and steppe, covers thousands of square kilometers. Only highly qualified special units can operate in that partially unexplored area. Immense distances will complicate the supply of units.

Alaska has a well-developed system of railway lines and roads, but the Soviet bases, on the other side of the Bering Strait, depend chiefly upon a few railroad lines and waterways which freeze in the winter and are only partially passable on the ice. The Siberian Tundra is frostbound from September to June and, in the summer, it turns into a swamp area. The temperatures fluctuate from minus 60 degrees centigrade to 60 degrees centigrade within the course of a year.

According to a well-known military writer, Ferdinand Otto Miksche, there are 35 Soviet divisions in the arctic region specially trained for warfare under the extraordinary conditions prevailing there. In addition, there are a substantial number of discharged soldiers assigned to duty in Siberian industry and agriculture. In the Murmansk district there are eight Soviet divisions opposed by the same number of companies in the Kirkenes district on the other side.

Missiles and the Air Force

The reliability of estimates of Soviet air and rocket weapons, airfields, and launching facilities in the arctic region is questionable. The effort expended to maintain and develop the

Soviet strategic air arm casts doubts on the statements of Soviet military experts that aircraft will be completely replaced by rockets within a measurable space of time. The Soviet "SAC" is commanded by Marshal Sudets whose headquarters is in Moscow.

The Soviets began to develop their arctic airbases in mid-1959, and they have since established about 25 airfields between Murmansk and Anadyr. Between Kola Bay and the Norwegian border alone, the number of Soviet airbases is estimated at 20.

The bomber command is equipped with *Bear (TU-20)* and *Bison* aircraft. Both types are capable of delivering atomic and hydrogen bombs to American targets and can be refueled in the air. *Air Force* reports that 1,700 jet fighters and from 800 to 1,000 bombers organized in three air armies are based in east Siberia.

The extensive publicity given to the launchings of satellites and the firing of missiles indicates that the Soviet armament industry is concentrated on the development of rockets. Rocket development centers and rocket construction plants are in Irkutsk, Kazan, Omsk, and Novosibirsk. In addition, there are construction plants in Tashkent, Shcherbakov, and Komsomolsk, and another development center in Tomsk.

Anadyr, a base for intermediate ballistic missiles and air-ground rockets, is located at the northeast coast of Siberia and only 600 miles from Nome, Alaska. The Japanese report heavy construction activities throughout the Kamchatka Peninsula.

Sakhalin Island harbors several launching installations in Okha, Nikolaev, Ochiai, and the port of Korsakov.

Other bases are located at Vladivostok and at Komsomolsk in a widely industrialized area on the Amur River. A base for intermediate ballistic missiles on a high plateau at Irkutsk is being developed into an intercontinental ballistic missile base. Japanese reports state that the Soviets have completed the construction of 22 rocket bases on the Kola Peninsula. Tests with intercontinental ballistic missiles launched toward the Pacific area were supposedly made from Murmansk; allegedly a mobile railroad platform was used.

The bases at Okha on Sakhalin Island, Nikolaev at the mouth of the Amur River, Milkovo on the Kamchatka Peninsula, Anadyr, Omsk, and the bases at the southern tip of Lake Baikal constitute a threat not only toward Alaska and northern Norway, but also toward Japan and Red China.

All strategic rocket systems have been combined into a separate arm of service under Marshal Moskalenko. According to a report of The Institute for Strategic Studies, all factories and plants engaged in the construction of nuclear weapons, test stations, and factories manufacturing rockets are under a single command. The total strength of rocket troops is estimated at 200,000 men.

The recent comprehensive series of nuclear tests were made in the arctic region on Novaya Zemlya. The granite island is ideal for such testing. Underground testing at a depth of 2,000 meters and large caliber tests are feasible.

Navy

The maritime emphasis in the arctic region is definitely on submarines. Estimates of Soviet naval power in the Arctic under the command of Admiral A. T. Chabanenko are conflicting. However, a German authority estimates the strength of the Arctic

Seas Fleet at six cruisers, 70 destroyers, and 100 large oceangoing submarines. From an operational point of view, the 150 submarines in the Baltic Sea must be added.

The threat to Western security posed by the Arctic will increase as the Soviets develop a nuclear-powered submarine fleet. In 1960 Khrushchev declared that the Soviets have nuclear submarines with rocket weapons. A recently published report which stated that a correspondent of *Izvestiya* made a training cruise on a nuclear submarine lends certainty to the availability of such weapons. Exact figures on Soviet nuclear vessels are not available.

After the sensational accomplishment of the *Nautilus* in the arctic region, Moscow bolstered its efforts materially with respect to the development of the Arctic Seas Fleet, ports, and coastal defenses. Ports of major significance are Murmansk, Polyarny, Severomorsk, Arkhangelsk, and Beljuscha on the southern part of Novaya Zemlya. During World War II, the Soviets procured another arctic port in the Finnish region of Pechenga.

The American maritime potential is greater than that of the Soviets, especially in view of recent developments. The US nuclear submarine program and the *Polaris* missiles make this fleet a powerful deterrent.

The first US nuclear submarine, the *George Washington*, left Charleston in October 1960 armed with 16 *Polaris* missiles to patrol the arctic region and to close the so-called missile gap. One month later, the *Patrick Henry* took the same course, The ships were relieved by the *Theodore Roosevelt* and the *Robert E. Lee* to maintain a constant patrol of the arctic seas region.

Several years ago the US and Canada jointly developed the Distant Early Warning line, a radar warning system with 60 stations. The Ballistic Missile Early Warning System, a more powerful and more advanced warning system at locations further north, has also been developed. This system comprises only three stations; however, it is of gigantic dimensions. One is located 20 kilometers north of Thule, Greenland, the second near Clear in Alaska, and the third near Fylingdales in Scotland. The system is expected to provide a certain measure of security until it is replaced by a system of satellites.

A warning system against submarines—a 4,000-kilometer chain of buoys forming an automatic fence—is planned between Greenland and the British Isles. The buoys fitted with highly sensitive sonar-sound detector devices are to be anchored at 80-kilometer intervals on the bottom of the ocean. Their function is to report the distance and course of approaching submarines.

Soviet Problems

It has been pointed out that servicemen and noncommissioned officers of small units—particularly those stationed at a distance from larger garrisons—and personnel of industrial and other services are often far removed from daily politico-ideological training. A substantial number of units have no party organization.

The success of Soviet political efforts in the Arctic is below average, partly because of the extraordinary climatic and training conditions, partly because of the remoteness and lack of contact with the outside world, and partly because of the attitude of the population toward ideological

problems and Moscow's regimentation.

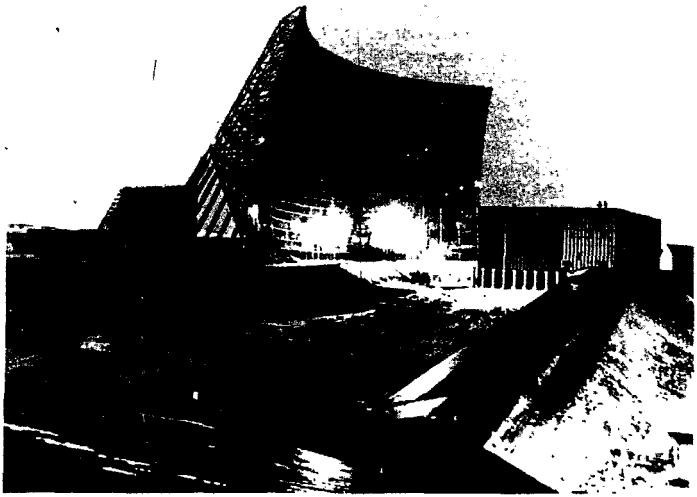
The viewpoint of those who settle in Siberia—either by choice or by coercion—is changed. The people become less inhibited and more independent. They criticize Moscow's directives in talks as well as in the local press, and they adhere to them much less than the functionaries in the other republics of the union.

During recent years more than 10 million hectare of new ground have been broken in Siberia. Such projects present administrative problems that cannot be solved with dictatorial methods.

The turbogenerator plant in Novosibirsk regularly pays high penalties for the delayed return of packing materials. The tannery there has been fined 250,000 rubles for improper treatment of the hides and failure to meet deadlines. Even Khrushchev complained bitterly before the People's Economic Council in Kazakhstan that the industrial plants do not meet their five-month plans, and that the construction establishments did not use 200 million rubles of the allocated funds during the past two years.

No housing and not even the most primitive comforts are available for the cadre of mechanics deployed on the virgin land. As a consequence, 120 of 160 young mechanics sent to a settlement in the spring had run away by fall.

Observers conclude from such occurrences that the population is not very pro-Soviet. This may be true, but the fighting spirit of the troops



US Air Force

Giant antenna of the BMEWS at Thule, Greenland, during construction

stationed there should not be underestimated. Unmistakable pride echoes from the statement: "I am a Siberian."

The West is not faced with the same political problems but it must cope with the same psychological problems in the arctic region. Unlike the Soviets, the Americans fight these problems with diversion which indicates that they care for the individual.

Final Remarks

The arctic regions assumed their strategic significance chiefly because of four factors: the short distance between the United States and the Soviet Union; the icepack which offers modern submarines outstanding operational advantage; the opening of communication which expands the hinterland to a nearly unlimited degree; and the rapid progress of economic development upon which the Soviets pin their highest hopes.

Some observers are convinced that the West can bring Soviet aggression under control, no matter where it occurs, by counterstrikes against Siberia. As a consequence, the Sino-Soviet alliance would collapse and China would be compelled to neutrality. Be that as it may, the developments indicate that the strategic significance of the Arctic will increase.

OTHER ARTICLES ON THE ARCTIC

Kabelac, Otakar W. MAXIMALIZATION OF SOVIET WATERWAYS

A study of the strategic significance of water transportation within the Soviet Union. Compares the rail and water transport systems as they now exist and discusses Soviet plans for the development and expansion of the waterways network. *Oct 1962, p 37.*

Walton, 1st Lt Joseph A., US Army. LEAD DOG 60

A report on a successful scientific exploratory journey across the northern part of Greenland. Includes a brief evaluation of vehicles and equipment used in arctic conditions. *Apr 1962, p 61.*

Kassell, Cdr Bernard M., US Navy. SIBERIA—GROWING SOVIET ARSENAL

A survey of Soviet industrial development in the remote regions of the interior as a strategic measure just prior, during, and subsequent to World War II. Highlights several key problems which are being encountered by the USSR in the development of industry and transportation facilities to support her world power objectives. *May 1961, p 59.*

Pearson, Col Willard, US Army. ALASKA—GIBRALTAR OF THE NORTH

Depicts the Arctic as the Mediterranean Sea of a theoretical world war III, with Alaska serving as a Gibraltar to control the exit at the Bering Strait. Attributes new significance to the Arctic due to the development of high-performance aircraft, long-range missiles, and missile-carrying submarines. Outlines the Army's role in arctic operations and the capabilities required to fulfill that role. *Feb 1961, p 44.*

Lahdenpera, Lt Col Erkki, US Army. WINTER WARFARE

This article, written by one of the United States Army's recognized specialists in cold weather operations, discusses training, organization, and operational methods for winter warfare. *Jun 1960, p 42.*

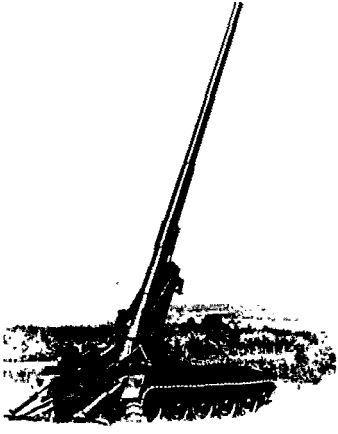
MILITARY NOTES

UNITED STATES

Artillery Weapons In Production

The Army has accepted the first production model of the new *M107* self-propelled artillery weapon (MR, Dec 1961, p 96). The *M110* eight-inch self-propelled howitzer is also in production.

The *M107 Long Tom* is a new 175-millimeter gun with a 30-foot barrel



US Army

M107 artillery piece

which can hurl a shell accurately to ranges in excess of 20 miles. It weighs about the same as the *M55* self-propelled 155-millimeter gun which it replaces, but delivers a much heavier projectile nearly twice as far.

Particularly significant is the vehicle on which these two weapons are mounted. The same chassis can carry the *Long Tom* or the *M110*, or it can be finished as an armored wrecker. Its new features constitute a breakthrough in the design of combat vehicles.

A "lockout" device is used when the guns are fired. This eliminates the spring in the tracks and, in effect, converts the tracks to solid platforms which transmit the recoil force directly to the ground. This permits the weight of the vehicle to be cut almost in half without impairing the action of the gun.

The gun control system uses recoil energy to adjust the tube and to operate the powerloading devices, saving tremendous wear on the battery of the vehicle.

Both the *M107* and *M110* are air-transportable in a *C-133* aircraft and their diesel engines are capable of cruising 450 miles on 300 gallons of fuel. A gasoline engine would require 450 gallons of fuel for the same distance.

Both have a top speed of 34 miles per hour, can negotiate a 60-percent grade, bridge seven-foot trenches, and cross vertical obstacles of up to 40 inches.—DOD release.

'Chinook' Production

The first production models of the US Army's new *Chinook* transport helicopter are expected to be received soon. Current contracts call for production of 40 of the new aircraft.—News item.

Intelligence And Security Branch

An Intelligence and Security Branch has been established as a new basic branch for US Army personnel. Army Intelligence and Army Security Branches have existed in the US Army Reserve but no counterpart has existed in the Active Army. The new branch will consolidate approximately 5,000 officers serving in a wide variety of intelligence assignments under a single personnel management authority.—Army News Service.

Air-Transportable Radio Station

The Army Signal Corps has contracted for a powerful broadcasting system designed to be airlifted by helicopter.

The miniature radio studio will be constructed so that it can be landed anywhere in the world and go on the air to the civilian population or to enemy forces in a matter of hours. Delivery of the first system is expected by mid-1963.

The broadcasting system will equal the facilities of two high-powered radio stations. One transmitter will be a 50,000-watt standard broadcast unit, equal in power to the largest commercial radio stations in the US and with a possible area coverage of 12,000 square miles. The other is a 50,000-watt shortwave transmitter with a possible range of 6,000 miles.

The air-transportable broadcasting system is housed in 21 packaged units and will include telescoping antenna towers, fully equipped studios with tape recorders, turntables, and teletypes. Diesel-powered electrical generators and a sensitive receiving station that can monitor hostile broadcasts or pick up the Voice of America, Armed Forces Radio Service, or other US programs for retransmission will be included.—DOD release.

Jet 'C-123'

The Air Force is testing a *C-123 Provider* cargo aircraft which has been modified by the addition of two lightweight jet engines. The jets will

General Electric

C-123 with jet auxiliary engines

improve the short takeoff characteristic of the aircraft and thus add to its usefulness in limited war situations where only minimum standard airfields are available.—News release.

Special Staff Agency

A new Army special staff agency, the Office of Support Services, recently became operational.

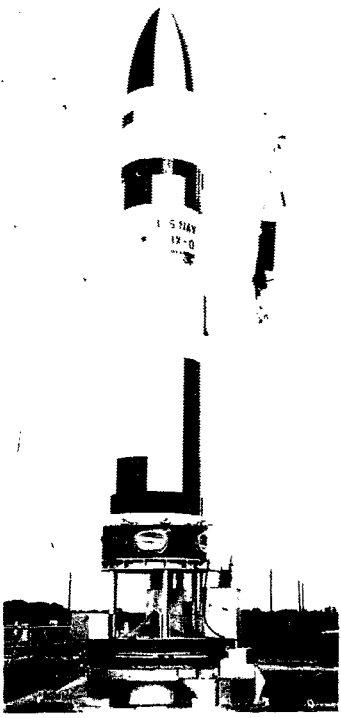
The agency is charged with operation of the national cemetery system and supervision of Army food service.

The support services activation followed the 31 July dissolution of the Office of the Quartermaster General under the current Army reorganization program.—Army News Service.

The MILITARY REVIEW and the U. S. Army Command and General Staff College assume no responsibility for accuracy of information contained in the MILITARY NOTES section of this publication. Items are printed as a service to the readers. No official endorsement of the views, opinions, or factual statements is to be implied.—The Editor.

New 'Polaris' Being Tested

The US long-range *Polaris A-3* missile is now undergoing test firing. The *A-3* is a third generation *Polaris* with



US Navy

A-3 Polaris **on launch pad at Cape Canaveral, Florida**

an announced design range in excess of 2,500 miles.

The *A-1*, now operational with the fleet, has a range of 1,400 miles and the range of the *A-2* is 1,700 miles.—News item.

CBR Directorate

A Directorate for Chemical-Biological-Radiological Operations has been established under the Army's Deputy Chief of Staff for Military Operations as part of the current Army reorganization.

The new Directorate will provide the focal point at the general staff level for CBR matters for the Department of the Army. It also performs this function for the Department of Defense and the Joint Chiefs of Staff when so directed.

The CBR Director serves as principal advisor to the Secretary of the Army, the Chief of Staff, and other agencies of the Department of the Army on chemical, biological, and radiological matters.

The Directorate coordinates and monitors the CBR program at the Army staff level, and participates in the development and approval of CBR portions of plans, policies, doctrine, programs, budgets, and operations.

The remainder of the chemical, biological, and radiological organization formerly under the Chemical Corps has been distributed to other agencies of the Army.—DOD release.

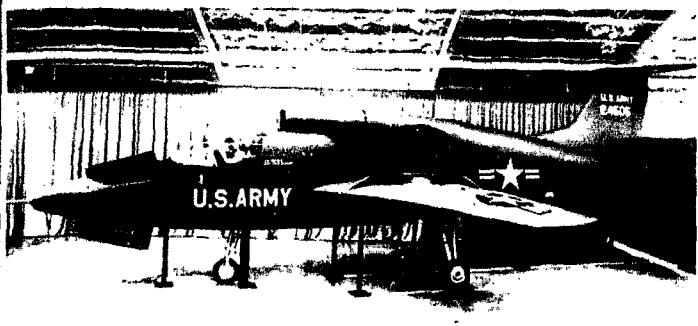
Military Blood Program

The Department of Defense has directed the Army to coordinate and integrate the plans, policies, and procedures of the military departments and the unified and specified commands for the collection, processing, and distribution of blood and blood products for medical use.

The Army Surgeon General has been charged with establishing and operating the Military Blood Program Agency, a new organization which has been established in Washington, D. C. —DA release.

VTOL-STOL Aircraft

Both the Army and the Air Force have recently released additional information on vertical takeoff and landing (VTOL) and short takeoff and landing (STOL) aircraft development projects. The Army has released photographs of a full-scale mockup of its *VZ-11* research aircraft now scheduled for flight tests in mid-1963. The *VZ-11* is a fan-in-wing model which will be capable of taking off vertically, converting to conventional flight, and operating at speeds of more than 600 miles per hour. The *VZ-11* concept combines limited battlefield support requirements with high performance to provide a practical air vehicle that would be instantly responsive to the ground commander's requirements.



Army News Service

Army's *VZ-11* VTOL

Powered by two *J-85* turbojet engines, the new aircraft uses two five-foot-diameter fans mounted in the wings for vertical lift, and a smaller fan in the nose of the plane to provide pitch trim and control.

For forward flight the diverter valves cut the power off from the fans and the aircraft operates like a conventional jet. The design is expected to provide good control in hover and slow flight.

The Air Force's *X-19 VTOL* is a twin-engine, tandem high-wing aircraft with four tilting propellers mounted in nacelles at the wing tips. It is of all-metal construction and has fully retractable landing gears. The two *T55* engines, installed within the fuselage, drive four propellers. The propeller nacelles tilt from the vertical position, used for takeoff and landing, through 90 degrees to the conventional position for high-speed flight. —News item.

US Air Force

Air Force's *X-19* VTOL

Nerve Gas Alarm

The Army's new nerve gas detector and alarm system (MR, Oct 1962, p 99) can be operated from a lightweight, rechargeable battery pack or it can be operated from the electrical

Army News Service

Field nerve gas alarm

system of an armored vehicle. Each unit weighs 30 pounds. Several units can be linked to a single remote-control unit to act as "chemical warfare sentries" around command posts or defense installations.—News item.

USCONARC

Under the recently implemented Army reorganization plan, the US Continental Army Command has become, in effect, a theater army-type command for the tactical Army Establishment within the continental United States. USCONARC controls 73 active and 22 inactive military installations with a real estate value of 3.8 billion dollars. Under its jurisdiction are 500,000 members of the Active Army, 78,000 civilian employees, and approximately two million trained Reserve personnel.

Some of the specific functions assigned USCONARC are to:

Provide ground defense for the continental US.

Prepare and execute emergency plans for both military and domestic emergencies.

Support the US Army Air Defense Command and the Civil Defense program.

Recruit and process new military personnel.

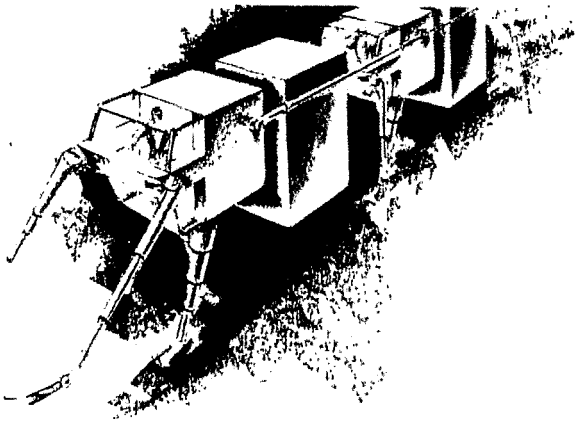
Train and supervise the Reserve components.

Conduct individual and unit training of military forces.

In the execution of its training mission, USCONARC operates 27 service schools with an annual enrollment of 150,000 resident students and a current nonresident enrollment of approximately 210,000 students. Approximately 7,000 allied students attend these schools annually. USCONARC also operates 16 training centers with an annual output of 300,000 trained enlisted personnel.

The Commanding General, USCONARC, also wears a second hat as CINCARSTRIKE, the Army component of the US Strike Command. The tactical forces under CINCARSTRIKE include two corps headquarters, eight combat-ready divisions, and the supporting units necessary to maintain a force of this size.—USCONARC release.

'Pedipulator'



General Electric

Three walking machines joined together to carry heavy loads

The US Army has awarded a contract for feasibility studies leading to the development of a manned walking vehicle intended to replace wheeled or tracked vehicles under certain conditions.

Designed primarily for off-the-road locomotion, it would have legs 12 feet long. With the human operator inside, it would be able to walk at 35 miles an hour and pick itself up if it fell down. Agility and power over rough terrain, not speed, are its main design goals.

The walking vehicle is one of a series of applications envisioned for a new concept of man and machine in which the human operator is coupled directly to the machine he operates. Movements of the machine are dictated by like movements of the human operator inside it.

The technical name for the unit is *Pedipulator*. It would be used primarily to furnish access to locations which may be inaccessible for wheeled or tracked vehicles and to provide a means of carrying out such tasks as transportation of men and supplies, or possibly firefighting or rescue work. —News release.

'Goer' Wrecker

A new, highly mobile wrecker mounted on a *Goer* vehicle is under development to replace the standard *M62* five-ton wrecker now in use. The vehicle will mount a boom with a 10-ton capacity.

The new equipment is designed to support the eight-ton cargo *Goer* and the 2,500-gallon *Goer* tanker. It will be used in performing maintenance tasks on tracked vehicles—such as the lifting of powerplants—and will be capable of limited recovery operations. The *Goer* wrecker will have much better cross-country ability than its predecessor and will be able to swim inland waterways.—News item.

'Airgeep II' Now Flying

Airgeep II, developed under contract with the US Army Transportation Research Command, is now flying at the manufacturer's Philadelphia plant.

A successor to *Airgeep I*, which was first flown in May 1958 and completed its flight test program in 1959 under contract with the Army, *Airgeep II* is powered by two turbines. It has powered wheels for self-contained ground mobility and for extension of its range when terrain or tactical situations permit it to travel over the ground.

The *Airgeeps* make use of the ducted propeller principle. Without wings or conventional propellers, they are a departure from most vertical takeoff and landing designs. Lift is derived from two 3-bladed ducted rotors, one at the front and one at the rear of the machine. The pilot's and copilot's seats are in the center section between the rotors.

While the *Airgeep II* will have additional payload capability when flying close to the ground, it is not a ground effects machine. It is designed to be capable of flights at altitudes of several thousand feet.

All major components—dual turbine engines, rotors, and controls—are housed compactly in the low silhouette chassis, thus eliminating the large overhead rotor of the conventional helicopter. Since the rotors are completely enclosed, the hazards of conventional helicopter rotors to personnel on the ground, and to the aircraft itself, are reduced.

Piasecki Aircraft Corporation

Airgeep II in flight

Compact design and protected rotors enable the vehicle to thread its way down narrow roads and between trees and other obstacles. It can be wheeled into large cargo aircraft without disassembly.

Its ability to travel over any terrain, with or without roads, could make possible a great variety of military applications. Among these applications would be reconnaissance, supply, evacuation of wounded, command, communications, observation, and survey missions.—News release.

USSR

Pipeline Development

The Czechoslovakian segment of an oil pipeline being built to interconnect the USSR and her satellites has been completed.

The line ultimately will extend over 2,500 miles from Kuibyshev on the Volga to Bratislava near the south-

central border of Czechoslovakia. The recently completed portion runs from Bratislava to the Ukranian border town of Uzhgorod, a distance of 500 miles, and connects with a segment built by the USSR from Uzhgorod to Brody, in the west Ukraine. The USSR plans to complete the construction to Kuibyshev in 1963.

The pipeline is already in use. Soviet oil has been delivered in rail tankers to Brody and thence by pipeline to previously constructed refineries and storage facilities at Bratislava.—News item.

NATO

'Bullpup' Production

Great Britain, Norway, Denmark, and Turkey have formed a consortium to produce the US *Bullpup* missile in Europe.

The *Bullpup* is an air-to-surface missile now in use with the US Navy and the US Air Force.—News item.

NORWAY

'F-104's' For Norway

The Norwegian Air Force will start receiving US-built *F-104* jet fighter aircraft by mid-1963. The aircraft are to be furnished under the US Mutual Defense Assistance Program.—News item.

Plastic Pipeline

A 6,720-foot-long, 10-inch polyethylene pipeline has been towed in one piece along the Norwegian coast from Porsgrunn to Tromsö and laid across the Tromsösund narrows.—News item.

AUSTRALIA

Helicopter Squadrons

The Australian Minister for the Navy has announced plans for the formation of two new helicopter squadrons for the Australian Fleet Air Arm. Both will use *Westland Wessex* antisubmarine helicopters.

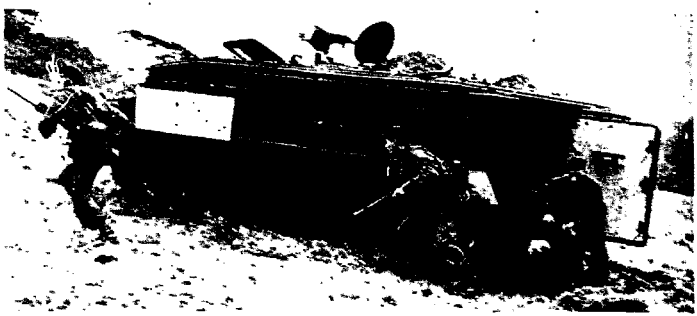
The first squadron will be a training squadron and the second, to be

British Information Services
***Wessex* helicopter**

formed in July, will be an operational squadron of 10, and later 16, helicopters which would be embarked on the aircraft carrier *Melbourne*.—News item.

GREAT BRITAIN

'FV432' Personnel Carrier



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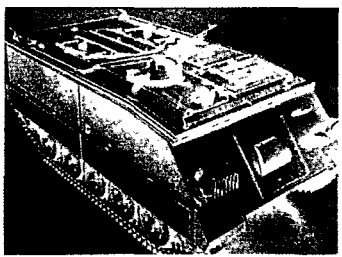
The *Trojan* APC in action

British infantry units are now being equipped with a new armored personnel carrier (APC) designated the *FV432 Trojan*. The full-tracked carrier is amphibious and has the cross-country capability of a tank. It



Oblique view of the *Trojan*

has a road speed of 30 miles per hour. Fully enclosed when the hatches are shut, the vehicle provides crew protection against nuclear fallout.

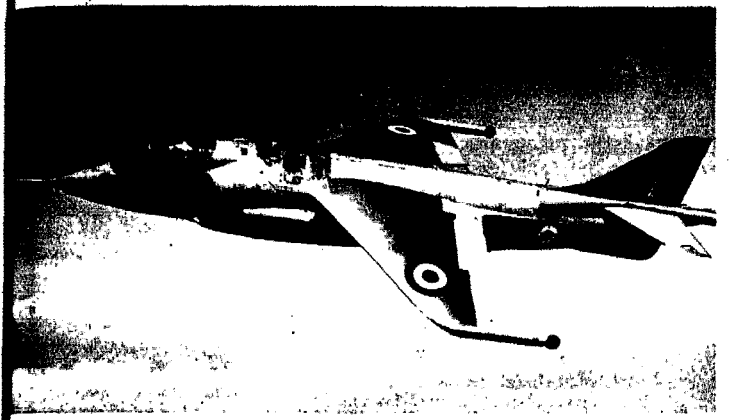
The steel armor is adequate to protect the crew from shell fragments, flash burns, and small arms fire. Heaters or an air conditioner can be provided for extreme weather operation. A commander's cupola mounting a machinegun has a 360-degree traverse.

The new APC will be the basic vehicle of a new family of light-tracked vehicles and will be capable of conversion to mount a *Wombat* or a mortar, for use as a command vehicle, an ambulance, or as a cargo carrier.

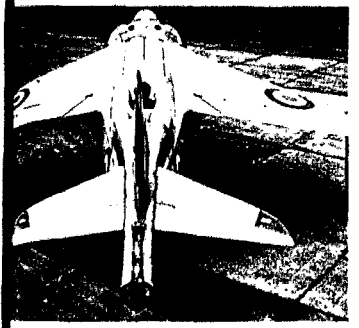
The *FV432* is air transportable, will float when loaded, can negotiate inland waterways, or can be used to transport troops and materiel from landing craft to shore. Water propulsion is furnished by the tracks.—News item.

Air-Cushion Aircraft Carriers

A major British manufacturer has proposed the construction of a nuclear-powered aircraft carrier which would use the air-cushion principle of flotation. Such a carrier would be in the 1,000 to 1,500-ton range and could carry a number of conventional aircraft, or helicopters, or missile launchers. Estimated cost of the air-cushion craft would be around 14 million dollars.—News item.



VTOL-STOL *P.1127* in forward flight



Hawker Siddeley Review Photos

Aft view of *P.1127* on the ground

The Royal Air Force and the Royal Navy are continuing development work on the *Hawker P.1154* vertical takeoff and landing (VTOL) and short takeoff and landing (STOL) aircraft. The *P.1154* is an interceptor and attack aircraft developed from the *Hawker P.1127* (MR, Apr 1962, pp 106-107 and Aug 1962, p 101).

The *P.1127*, in which several NATO countries—including the US and West Germany—have demonstrated an interest, made its maiden flight in October 1960. Since that time it has repeatedly demonstrated its ability to take off and land on either sod or hard surface landing pads and to make the transition from vertical to horizontal flight and back.—News item.

New Boots

The traditional leather-soled, steel-studded boot used in the British Army will give way to a new rubber-soled model in the near future. The new boot is expected to be more economical and to wear better.

As a concession to tradition the members of the Brigade of Guards will each retain one pair of the old-type boots for ceremonial guard duty. —News item.

MILITARY BOOKS

THINKING ABOUT THE UNTHINKABLE. By Herman Kahn. 254 Pages. Horizon Press, Inc., New York, 1962. $4.50.

BY COL JOHN E. DWAN II, *Inf*

When Herman Kahn, now director of the Hudson Institute and formerly of Princeton and RAND, wrote *On Thermonuclear War* in 1960, he stirred up a great deal of controversy due to what some considered his clinical, cold-blooded analysis of thermonuclear war. Many of the book's critics seemed to assume that because Kahn was taking a close look at what a thermonuclear war might be like and what we would do to avoid it if possible or to survive it if it came, he was somehow advocating such a war, or at least was trying to make Armageddon look palatable.

In *Thinking About the Unthinkable*, Kahn responds to his critics and continues his analysis in a no less incisive but more readable way. His first chapter challenges the viewpoint that thermonuclear war is "unthinkable" by pointing out some obvious facts:

. . . that thermonuclear bombs now exist in the hands of at least four powers; that at least one of these powers has announced it is interested in the destruction of our society, albeit by peaceful means if possible; that the number of thermonuclear powers may grow; that the power most likely to obtain these weapons next, China, stands on the thesis that war with us is inevitable; and, finally, that the possibilities of an immediate solution by negotiation are indeed slim.

He concludes that even if one considers thermonuclear war unthinkable, that does not make it impossible; and, accordingly, it behooves us to do some hard thinking about it.

Among the subjects Kahn thinks about are how war might come, how a war might be fought, alternative concepts of deterrence, and the problems that may result from a greater diffusion of nuclear weapons arising from the spread of new technology.

Two aspects of the book are of particular interest. One is Kahn's series of scenarios about how a thermonuclear war might start—a sort of war-gaming approach full of novel and stimulating ideas. The other is his discussion of possible uses of strategic forces during war in a bargaining role. This concept tends to be viewed currently in military circles with great skepticism, if not disdain.

It does suggest, however, that should thermonuclear war come, accidentally or otherwise, alternatives to a "spasm" response by both sides would be worth seeking. One might predict that in the years to come the concept of "controlled war" at the strategic nuclear level could be a central focus of strategy that will increasingly engage the military professional, whereas until now the field has been left largely to the civilian strategist.

The reader of this book will be rewarded if he is looking for some searching analyses of many of the key strategic issues of the day.

CIA. The Inside Story. By Andrew Tully. 276 Pages. William Morrow & Co., Inc., New York, 1962. $4.50.

BY LT COL DANIEL B. ADAMS, *Inf*

This interesting narrative takes the reader on an around the world tour of events behind the headlines of international crises since 1947.

Mr. Tully credits the Central Intelligence Agency (CIA) with worldwide achievements in the making of modern history. The reader is impressed with the accomplishments attributed to the organization and cannot help but be amazed at the details of its operations which are disclosed.

In 1947, Allen W. Dulles set the guidelines for CIA with his statement, "The Central Intelligence Agency should have nothing to do with policy. It should try to get at the hard facts on which others must determine policy." This book reveals that the agency has encountered difficulties in adhering to this principle.

THE FORTUNES OF WAR. Four Great Battles of World War II. By Andrew A. Rooney. 241 Pages. Little, Brown & Co., Boston, Mass., 1962. $6.95.

The campaigns of Tarawa, Stalingrad, and the Bulge, and the D-day invasion of Normandy constitute the basis of this pictorially supported narrative of World War II. Each operation is covered in text and pictures.

The outline of this book comes from four half-hour television programs produced for the Columbia Broadcasting System's series, "The Twentieth Century." The narrative is skillfully written to combine historical fact and personal anecdotes into a colorful account. Part of the photographic presentation suffers from the poor quality of reproduction which can be expected in enlargements of motion picture film taken under less than ideal conditions.

Despite this weakness, *The Fortunes of War* is a concise, highly readable account of four major operations which, taken together, present the difficult-to-capture human side of war.

UNOFFICIAL HISTORY. By Field Marshal Sir William Slim. 242 Pages. David McKay Co., Inc., New York, 1959. $4.95.

BY LT COL WILLIAM N. MARTASIN, *AGC*

As Lord Slim points out, this is not one of those "fashionable keyhole chronicles of what went on behind closed doors in the councils of the great." It is, however, an excellent collection of the stories behind the scant official recognition of some of the smaller battles and skirmishes in which Lord Slim was involved—from the banks of the Tigris in 1917 to the British meeting with the Soviets in Iran in 1941.

Each episode—whether battling the Turks in Mesopotamia, restoring order in India, or fighting in North Africa—is a literary gem. From his early days as a subaltern to his entry into Tehran as a general, Slim was always sympathetic and mindful of the needs and capabilities of his troops. The leadership traits illustrated are well worth the attention of the military reader.

Those who have read Slim's *Defeat Into Victory* will find in *Unofficial History* additional clues to the character of the brilliant commander who defeated the Japanese in Burma. Throughout his career, Lord Slim has faced difficult situations with a sense of humor and an understanding of his men which made him a "soldier's general."

POWER AND POLICY IN THE U. S. S. R. The Study of Soviet Dynastics. By R. Conquest. 485 Pages. St. Martin's Press, New York, 1961. $7.95.

BY LT COL FIELDING L. GREAVES, *Arty*

Accurately described on the dust jacket as a "highly original, boldly interpretative piece of political detective work," this book by a former Webb Research Fellow in the London School of Economics and Political Science is almost a day-to-day study of the struggles for power among the leading figures of the Soviet Union.

The period covered is, essentially, the decade after 1949, but the book should not be considered as a history of that decade. Rather, it is a thorough and penetrating analysis of the shifting balance of personal power, alliances and intrigues, and of the ups and downs in the political fortunes of the various Soviet leaders and their proteges in their never-ending struggles for supremacy. Only incidentally, as the background environment of those struggles is described, can this be called a history of current affairs in the USSR.

Relying almost exclusively on official Soviet publications as his sources, the author has undertaken to unveil the machinations going on behind the facade reported in those documents. By the nature of things Soviet, it is often difficult to determine the facts, even long after the event: secrecy, government control of information media, together with the Soviet penchant for distorting history for political purposes, make the task formidable. The author's effort to overcome this difficulty gives evidence of a monumental amount of research. He has provided both a fascinating and a convincing interpretation of the materials he investigated.

Because of the handicaps mentioned, a work of this nature must be conjectural to some degree. In many cases where the information was incomplete or conflicting, the author has drawn on his judgment and imagination to extrapolate what transpired. His judgments are based not only on what is said in the various official publications, but also on what is *not* said. He alerts the reader whenever his conclusions are tenuous, speculative, or unsupported by available official documentation.

The book is well indexed, and the extensive appendices include such items as rosters of Politburo, Presidium, and Central Committee members during the period covered; lists of Central Committee plenums and Party Congresses since 1952; extracts from Khrushchev's February 1956 secret speech denouncing Stalin; official government announcements concerning the trials in the cases of Beria, Abakumov, Bagirov, and others; and an extract from the criminal code of the Russian Socialist Federal Soviet Republic.

In addition to the chapters on the so-called doctors' plot, Malenkov's premiership, Beria's downfall, and the rise of Khrushchev, the military reader will find especially interesting the chapter on Marshal Zhukov's fall from favor and the role of the Soviet Army in the struggle for political power.

KILL OR GET KILLED. Riot Control Techniques, Manhandling, and Close Combat for Police and the Military. Fifth Edition. By Lieutenant Colonel Rex Applegate, United States Army, Retired. 421 Pages. Military Service Division, The Stackpole Co., Harrisburg, Pa., 1962. $3.95.

THE DESERT REVOLUTION: Baja California, 1911. By Lowell L. Blaisdell. 268 Pages. The University of Wisconsin Press, Madison, Wis., 1962. $6.00.

This book is a colorful account of a little-known episode in Mexican history. Ricardo Flores Magón sought to overthrow the dictator Porfirio Dias in 1910-11, and to bring about far-reaching social and political reforms. His forces were, however, unable to assert themselves except in Baja California, along the boundary separating Mexico and the United States.

Although aided by some American adventurers, the campaign failed. Flores Magón (whom the author considers a potential, early-day Castro) fled to the United States where he ran afoul of the World War I sedition laws. He eventually died under mysterious circumstances in the Federal prison at Leavenworth.

EUROPEAN & AMERICAN ARMS. Circa 1100-1850. By Claude Blair. 134 Pages. Crown Publishers, Inc., New York, 1962. $25.00.

Claude Blair has assembled in this volume a comprehensive study of European and American personal weapons which will be of considerable value to the collector as a catalog, and to the historian and the student of military history as a reference document.

Coverage includes swords, daggers, sling weapons, the bow, staff weapons (axes, lances), firearms, and other hand guns and shoulder guns used in the Western World from 1100 to 1850.

The volume is profusely illustrated with more than 600 photographs of pieces from nearly all the major weapons collections in Europe, the United States, and the USSR.

Superior art, typography, and layout make this book a collector's item.

MEN AND DECISIONS. By Lewis L. Strauss. 468 Pages. Doubleday & Co., Inc., Garden City, N. Y. $6.95.

BY MAJ STANLEY L. FALK, *USAR*

Financier, naval officer, aide and advisor to Presidents, and Chairman of the Atomic Energy Commission, Lewis Strauss has led a full and fascinating life. In the course of his unusual career, he has met a variety of important men and has participated in or witnessed many far-reaching decisions. The volume is the record of this career as Admiral Strauss sees it.

The book is full of eventful chapters that describe the author's work on European relief under Herbert Hoover, his experiences as a partner in a great banking house, his unusual naval career, and the vital role he played in the establishment of a long-range detection system to monitor Soviet nuclear tests, and in the American decision to build the hydrogen bomb.

As a memoir, *Men and Decisions* leaves much to be desired, for the reader is left in darkness about much of the admiral's life. Moreover, in attempting to describe his own role in history, Strauss frequently gives an overextended description of events that goes far beyond his immediate personal experience. Perhaps the two most important chapters in the book—covering the Oppenheimer security hearings and the refusal of the Senate to confirm Strauss as Secretary of Commerce—are more lawyer's briefs than either dispassionate history or personalized, self-revealing autobiography.

Despite these drawbacks—or perhaps because of them—the book makes fascinating reading. Well written, tightly drawn, provocative, and controversial, it throws considerable light on many important people and events.

THE INCREDIBLE 305TH. The "Can Do" Bombers of World War II. By Wilbur H. Morrison. 181 Pages. Duell, Sloan & Pearce, New York, 1962. $3.95.

This is the story of the 305th Heavy Bombardment Group of the United States Army Air Force in World War II. The exploits of the group, originally commanded by (then Colonel) Curtis E. LeMay, are told in easy-to-read narrative style.

WOUND BALLISTICS. Medical Department, United States Army. Edited by Colonel James Boyd Coates, Jr., MC, and Major James C. Beyer, MC. 883 Pages. Office of the Surgeon General, Department of the Army, Washington, D. C. $7.50.

This work is the 19th of the military medical historical series to be published by the United States Army Surgeon General. It is a comprehensive study of battle casualties in World War II and Korea.

Starting with a brief survey of enemy casualty causing ordnance materiel, the work follows through with discussions of the ballistic characteristics of wounding agents, the mechanisms of wounding, and the effect of body armor on wounds in Korea.

A number of individual studies of casualty causes, treatment, and effect in specific combat areas are included.

The liberal use of charts and illustrations plus nine extensive appendices permits the presentation of a large volume of statistical data and a variety of significant case studies.

This book is unique in that it brings together laboratory data and data collected in combat in a highly specialized analysis of an important aspect of military medicine. The conclusions presented may provide guidelines for the solution of the mass casualty problems to be expected in a future war.

GENERAL EDMUND KIRBY SMITH, C. S. A. By Joseph Howard Parks. 537 Pages. Louisiana State University Press, Baton Rouge, La., 1954. Second Edition 1962. $7.50.

General Edmund Kirby Smith is credited with being the last Confederate general to surrender at the close of the Civil War. This volume is a critical biography of his life and service from his childhood in Florida, to attendance at the United States Military Academy, subsequent service with the US Army, and ultimately, to assignment as a full general in the Confederate forces. This is a reissue of a book published originally in 1954.

EDWARDS: Flight Test Center of the U.S.A.F. By John Ball, Jr. 166 Pages. Duell, Sloan & Pearce, New York, 1962. $4.50.

A great deal of aviation history has occurred at the United States Air Force Test Center in the Antelope Valley of California. This book is a compact recounting of the events which have taken place there, with emphasis on the people who participated.

Written in a narrative style, this work exploits the color of such air vehicles as the *U-2* and the *X-15* to produce a lively account of activities at Edwards Air Force Base.

THE TWENTY-FOURTH MICHIGAN. Of the Iron Brigade. By Donald L. Smith. 312 Pages. The Stackpole Co., Harrisburg, Pa., 1962. $6.50.

This is a regimental history covering the slightly more than two years of participation by the Twenty-Fourth Michigan in the Civil War. Obviously the product of extensive research, this study provides a wealth of detailed information of individuals and small units as well as an almost day-by-day account of the regiment's combat operations.

THANK YOU!

With this, the last issue of the 40th Anniversary year, the Commandant of the U. S. Army Command and General Staff College and the Editorial Staff of the Military Review wish to express their sincere appreciation to you—the readers and authors—for your outstanding support of the US Army's professional military journal.

This has been another successful year. Total circulation has reached a new high, hemispheric subscription in the military services has increased, the name of a former President of the United States has distinguished the roll of authors, the number of worthwhile original articles offered for consideration has approached a record.

With your continued support, aided by the resources of the U. S. Army Command and General Staff College, the U. S. Army War College, and the other institutions of military learning, we will continue to bring you the best in military ideas and evolving military doctrine.

COMING NEXT YEAR:

- Refinements of format.
- Continued emphasis on subjects of current importance.
- A wider selection of items from foreign sources.

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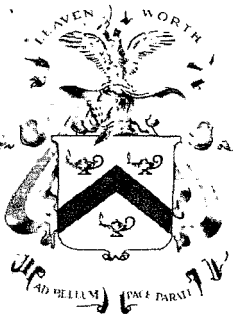
MILITARY SERVICE



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