Military Review

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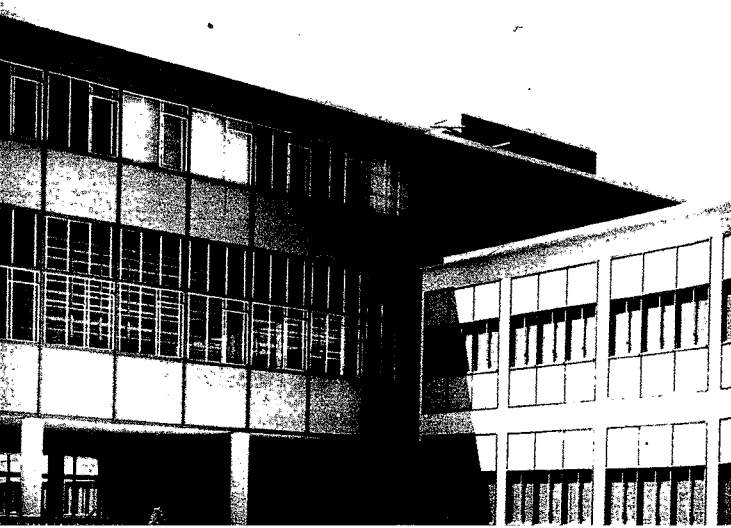

Military Review

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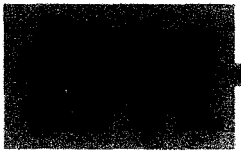

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Military Review Award Article

The Military Review announces the selection of the following article from the September 1965 issue as a MILITARY REVIEW AWARD ARTICLE:

"How to Shoot a Duck"
Major Donald J. Haid, USA

Today, every major power in the world is experimenting with helicopter armament. The author, a veteran Army aviator now in Vietnam, believes now is the time to develop the weapons, tactics, and training to be used on some future battlefield when an armed helicopter meets an enemy armed helicopter.

★ ★ ★

COMING:

Lieutenant Colonel Frank B. Case, in "Red China's Seapower," warns that constant vigilance and quick effective response by the Free World will be needed in the future to keep Red China from exploiting her growing seapower in ways that would imperil world security.

In "How Many Men to Vietnam," Otto Heilbrunn examines the degree of numerical superiority needed by counterinsurgency forces to defeat a guerrilla movement.

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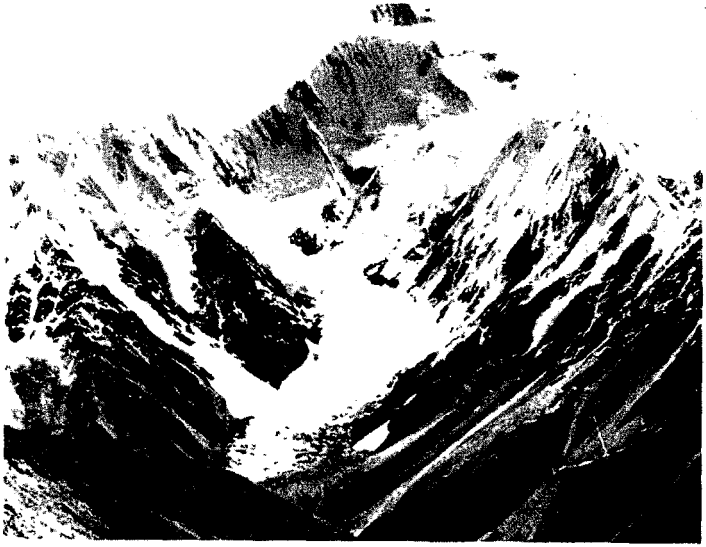
Land Communications



Through Asia's Highest Mountains

Wing Commander Maharaj K. Chopra, *Indian Air Force, Retired*

THE mountain complex which extends west to east from the Pamir knot to the trijunction of India, Tibet, and Burma forms the dividing barrier between central Asia and the Indo-Pakistan subcontinent.

For ages past, in textbooks as well as in common parlance, this mighty conglomeration of rock, snow, and forest has been called a "mountain wall," with its implication of impregnability. This is true in a way. The two regions, north and south of it, have kept distinctly apart from each other, giving rise to different kinds of civilizations and geopolitical inter-

ests which have almost never clashed.

In ancient times, hordes of migrants trekked westward, sometimes on to Europe, sometimes down to the Middle East and from the Middle East to India, but never southward directly into India. By the time they appeared in India the roundabout way, they were a different people, with many new physical and cultural features.

But while serving as a barrier, the mountain wall has neither been impregnable nor lacking in communications. Since ancient times, travelers have crossed it at numerous points from the north as well as the south, and under almost every limitation set by nature or man. Such cross movements have, of course, been few and confined to a small number of people, but some of them have been charged with enormous significance for mankind—it was along the trails and tracks of high Asia that Buddhism traveled to the east Asian lands.

Geographical Changes

Today, the mountain wall is crumbling before technology. To the north and south of it independent states have sprung up to confront one another along the highest crests. Mountains are being surveyed, rocks blasted, jungles cleared, and bridges laid. Here, in the land of the yak and the yeti, of glaciers and wildernesses, more and more sophistications of modern life are arriving in the trail of engineers, laborers, and soldiers. The aim of the whole endeavor is to open up the country, mostly by building roads. This will be a prolonged and gigantic operation. The mountain landscape is changing and, strategically, a new, curious world of power relations is being born.

For convenience as well as understanding of the lines of communications, the mountain complex may be divided into three sectors:

- The western, between the Pamirs and the western frontier of Nepal.
- The central, the state of Nepal.
- The eastern, between Nepal and the international trijunction.

This division does not conform strictly to geographical features—the western sector partakes of the central Asian as well as Himalayan landscapes. But it has some conformity with history and strategy.

Western Sector

The western sector includes all of Kashmir and parts of the states of Punjab and Uttar Pradesh. Facing them across the frontier are the territories of Sinkiang and Tibet. The physical features which affect communications are the high mountains, plateaus, rivers, and severe climate.

The Karakoram Range is the most prominent feature dividing India and China. From Hunza, a westernmost town, to Tibet it is 400 kilometers and contains the greatest cluster of the world's highest peaks, 33 above 7,300 meters. Mintaka, Kilki, and Karakoram are the three important passes in it connecting Sinkiang with Kashmir.

About 160 kilometers south of the western ramparts of Karakoram, and close to the northernmost bend of the Indus River, lies the famous peak of Nanga Parbat. Here, begins the Great Himalayan Range which extends to

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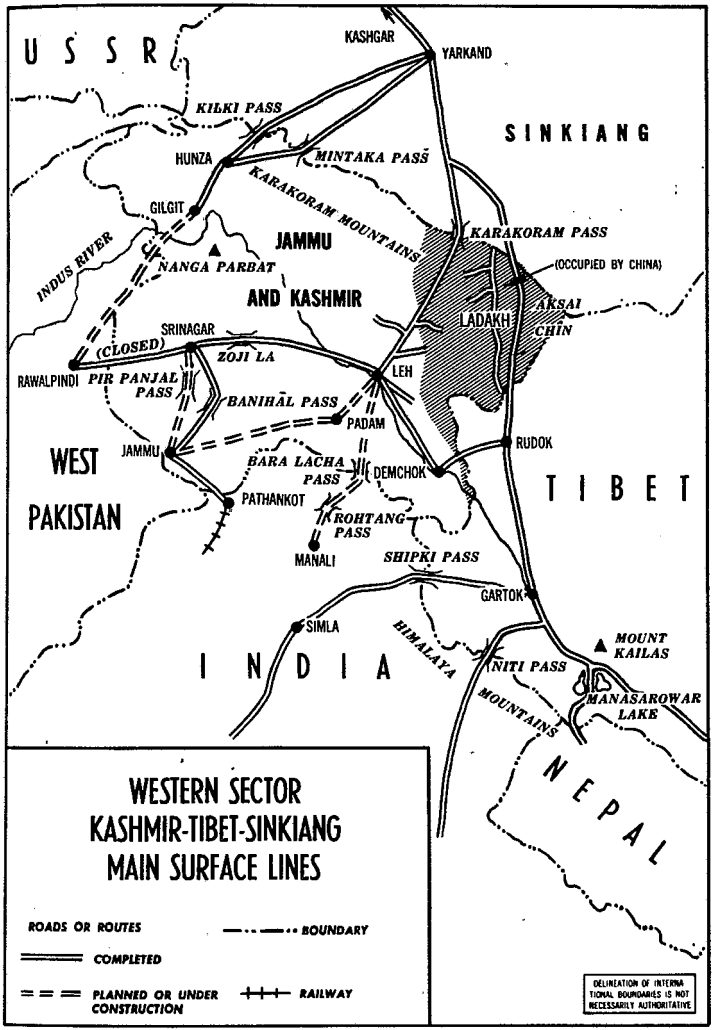
U S S R
KASHGAR
YARKAND
KILKI PASS
SINKIANG
HUNZA
MINTAKA PASS
KARAKORAM MOUNTAINS
GILGIT
KARAKORAM PASS
JAMMU
INDUS RIVER
NANGA PARBAT
(OCCUPIED BY CHINA)
AND KASHMIR
AKSAI CHIN
LADAKH
SRINAGAR
(CLOSED)
ZOJI LA
RAWALPINDI
PIR PANJAL PASS
LEH
BANIHAL PASS
PADAM
RUDOK
WEST
JAMMU
BARA LACHA PASS
DEMCHOK
T I B E T
PAKISTAN
PATHANKOT
ROHTANG PASS
MANALI
SHIPKI PASS
GARTOK
SIMLA
HIMALAYA MOUNTAINS
MOUNT KAILAS
I N D I A
NITI PASS
MANASAROWAR LAKE
N E P A L
WESTERN SECTOR
KASHMIR-TIBET-SINKIANG
MAIN SURFACE LINES
ROADS OR ROUTES
BOUNDARY
COMPLETED
PLANNED OR UNDER CONSTRUCTION
RAILWAY
DELINEATION OF INTERNATIONAL BOUNDARIES IS NOT NECESSARILY AUTHORITATIVE

Figure 1.

the Burma frontier, about 2,900 kilometers. That part which lies in the western sector goes only to the frontier of Nepal. Among its passes are the Burzil, Zoji, Bara Lacha, and Rohtang. Interspersed between the Karakoram and the Himalaya are smaller ranges. South of the Himalaya is another range, the Pir Panjal, which can be crossed through Banihāl Pass and Pir Panjal Pass. Between this range and the Himalayas is the valley of Kashmir about 135 kilometers by 40 kilometers.

Trans-Himalayan Region

The valley of Kashmir is 1,585 meters above sea level; the passes across the Pir Panjal Range are between 2,700 and 4,000 meters; while beyond the Himalaya toward the Karakoram there are few passes less than the summit of Mount Blanc, 4,600 meters. In other words, altitude rises as one travels north. And yet it is the trans-Himalayan region—Ladakh, for instance—which is comparatively more suitable for military operations.

The reason lies partly in the more level character of the surface north of the Himalayas, considerable portions of which are flat plateaus fit for roadbuilding and wheeled traffic. Here, too, rainfall is scanty—at places only 50 millimeters a year—and there is little erosion and drainage to obstruct movement. On the other hand, monsoons beat with all their fury on the Himalayas, giving rise to screaming rivulets, eroding the surfaces, creating gorges, and causing landslides. The Zoji La experiences a snowfall of 24 meters in winter. In the past, commanders have not been worried so much about the terrain between the Karakoram Range and the Himalayas as about the Himalayas themselves.

The communication system of the western sector falls broadly into two groups which have existed for centuries and still exist, although with modifications. One is between the Nepal and Punjab frontiers, the other through Kashmir.

In the first group two routes lead to Tibet. One takes off from close to Nepal and runs through the Niti Pass to Mount Kailas and Manasarowar Lake. In 1962, when China attacked, the route was closed. The second route, to the west, rises from the plains touching Simla and runs through Spiti leading to Tibet. Modifications have recently been made in this section.

Internationally, the communications through Kashmir are better known. They are based upon three principal towns in Kashmir: Srinagar, the capital; Leh in Ladakh Province; and Gilgit.

From the south one route crosses the Pir Panjal to Srinagar through Burzil Pass to Gilgit, and through Kilki or Mintaka Pass to Yarkand and Kashgar. Gilgit to Kashgar is 770 kilometers. Another route extends from Srinagar through Zoji La to Leh, and through Karakoram Pass to Yarkand and Kashgar. Leh to Kashgar is 930 kilometers.

Trade Channel

The Leh route is longer, but it provides a better channel of trade in numerous articles gathered from at least three civilizations: sugar, cloth, and pearls from India, jade from Tibet, and silk from China. A hundred years ago the Leh mart was one of the most cosmopolitan centers of Asia. With the advent of the Communist regime in mainland China both these routes were closed.

While there is a tradition that Alexander came to the Hunza Valley

and the historical fact that Genghis Khan came to the Indus after crossing the Karakoram, authorities agree that in the upper reaches of Kashmir no large-scale war has ever been fought in the past. The India-China battles fought here in the winter of 1962 were, therefore, the first of their kind, and have deeply affected the communication network of the area.

Important Network

This new network, completed or proposed, includes the Aksai Chin, one of the first roads the Chinese constructed in 1957 through the Indian territory of that name. Its location is important, because beyond it there is rocky desert through which roads cannot be constructed. The road runs for 160 kilometers through the Indian territory and is a part of the long highway which connects Sinkiang with Tibet. Another road, 130 kilometers long, has been laid westward parallel to it with feeder lines radiating to forward posts. These roads can take heavy trucks.

Indian roadways take off from the plains to the mountains with Jammu as the starting point. Jammu is situated at the foot of the Himalaya and is connected by road, which is being supplemented by a railway, to a railhead in the plains.

From Jammu to Srinagar a 320-kilometer road threads its way up the Pir Panjal and through the tunnel at Banihāl Pass. This all-weather road can be traversed by heavy vehicles, but is subject to landslides. From Srinagar to Leh, the road is usable only for six months a year.

Another road from Jammu to Srinagar has now been undertaken which will run through, or close to, Pir Panjal Pass west of the Banihāl route and would be about 280 kilometers long. This would also need a tunnel through the range.

A direct route from Jammu to Leh is contemplated, along Kishtwar, over the Bara Lacha Range and through Padam. Yet another direct route to Leh is planned, but it would not be from Jammu. It would start from Manali, a hill town 240 kilometers east of Jammu, snake up the Rohtang and Bara Lacha Passes, and cross the Indus before touching Leh.

The Hindustan-Tibet Road, completed last June, is the latest to be

Directorate of Public Relations (Defense) India

Roadbuilding in the mountains is a grueling, time-consuming, expensive task

constructed. About half of this 400-kilometer road, up to Simla, has been there for a long time, but the other half, from Simla to Tibet, took 14 years to build. The road, snowbound for part of the year, is aligned to the traditional mule track which runs along the Sutlej River and then di-

verts to the Shipki Pass on the Tibetan border.

A road from Rawalpindi through the Indus Valley to Gilgit will soon be completed. There is a proposal between Pakistan and China to open up the route from Gilgit to Kashgar, but its progress is uncertain.

Central Sector

The central sector of the mountain mass embraces Nepal, a little less than half of which is mountainous, and much of which is permanently under snow. Its east-west borders with India and Tibet are each 885 kilometers long and the intervening breadth is from 160 to 240 kilometers.

Except for a few salients, the entire Nepal-Tibetan border lies along the crest of the Great Himalaya. In it are located some of the world's highest peaks, including Mount Everest. Nevertheless, it has two dozen well-known passes fit for trade.

The 625-square-kilometer Katmandu Valley is the heart of the mountain kingdom and all communications must pass through it. Owing to the mountainous character of the north, these lines have been orientated toward the south and pass through the Terai, which is notorious for its malarial character, thick savanna forests, and big game. The Terai has long been a barrier between Nepal and India, but is now being opened.

For a considerable time, Nepal was content with the barest of communications in which porters, buffalo carts, ponies, donkeys, sheep, goats, yaks, elephants, an odd automobile, or a tiny steam engine took a hand. The main connection began at the Indian railhead of Raxaul from which a narrow gauge railway ascended 48 kilometers to Amlekganj in Nepal. Another 53 kilometers to Bijulpura ended the railway system. There was also an 80-kilometer road from Raxaul to Bhimphedi followed by a track on which motor vehicles were bodily carried to the last motorable 15 kilometers to Katmandu.

For 36 years the railway system has remained unaltered, but roadways have been improved and extended. The Tribhuvan Rajpath, six meters wide and 127 kilometers long, runs uninterrupted from the Indian border to Katmandu. Built by India, it has obvious strategic value. The Nepalese Government has embarked on a network of 1,600 kilometers of roads with the assistance of India, the United States, and the Soviet Union. In this will be included a lateral highway running along the entire east-west length which will probably form a part of the Asian highway.

In 1963 China also entered the field of roadbuilding in Nepal by electing to establish connections between the Tibetan border and Katmandu. The road which is presently under construction runs from Katmandu through Benapa to Kodari, an all-weather pass on the Tibetan frontier at an elevation of only 2,130 meters. The road, will be 130 kilometers long and is scheduled to be completed in 1966. A 20-kilometer motor road connecting Kodari to the main road leading to Lhasa, 965 kilometers away, was constructed by the Chinese before the Katmandu-Kodari link was undertaken. Thus, in a year's time one should be able to travel from the Indian to the Tibetan border by automobile in a matter of eight hours.

Eastern Sector

The eastern sector runs along the Tibetan frontier from Nepal to the trijunction of India, Tibet, and Burma, and includes Sikkim, Bhutan,

and the North-East Frontier Agency (NEFA). NEFA is divided from Tibet by the McMahon Line, which the Chinese have sought not to recognize in their bid to make territorial claims. It was the crossing of this line by the Chinese in 1962 that signaled the Sino-Indian border war.

The framework of this region is provided by the Brahmaputra River (Tsangpo in Tibet) which flows west-east in Tibet, takes a hairpin bend near the end of the McMahon Line,

Between Sikkim and the trijunction there is a string of high mountains. Although the eastern sector is about the least known part of the Himalayan Range, it can be crossed at numerous points. In general, passage is possible through valleys of rivers which flow south from the mountain sources to the Indian plains—the Tista in Sikkim, the Ama and Lhobrak in Bhutan, and the Subansiri, the Siang, and the Lohit in NEFA.

The passage from India to Tibet

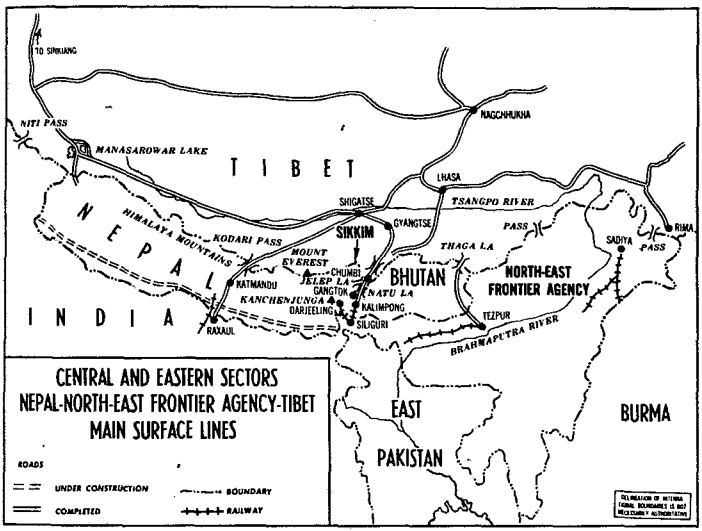

Figure 2.

flows east-west in India, and then near Bhutan runs south into the Bay of Bengal. At no point is the river more than 240 kilometers from the Himalayan crest. In India it almost skirts the Himalayan foothills, thus setting the pattern for communications between the plains and the mountains.

through the Chumbi Valley has been known and in use since ancient times. About 13 kilometers from the hills lies the Indian town of Siliguri where the meter gauge railway from the plains ends. Two 2-foot railway lines climb the mountains, one going to Darjeeling and another to Kalimpong,

the takeoff point for all travelers to Tibet. From Kalimpong the route goes through Jelep La on the Sikkim-Tibet border and Tang La at the head of the Chumbi River in Tibet to Gyangtse and Lhasa. The first British expedition to Lhasa in 1904 followed this route and improved its grading. This was also the route adopted by numerous expeditions to Mount Everest before the Second World War.

Feeder Roads

Many feeder roads have been constructed in Sikkim and Tibet. A ropeway, 21 kilometers in length, now operates in Sikkim carrying goods from Gangtok to Natu La. Roads are also under construction in Bhutan; some 1,280 kilometers have been planned and half have been completed, including a 172-kilometer road from the Indian border to the Bhutanese capital.

The NEFA has been the most backward of Indian territories. Before the Chinese struck in 1962, the stress was on opening up the country as quickly as possible by means of communication lines which could be economically constructed. As a result, approximately 6,430 kilometers of bridle paths were laid. Only one strategic motorable road was built. It extended from the foothills to halfway up the mountain over a distance of 130 kilometers. The remaining 110 kilometers up to the crest had no road.

The Chinese struck from three points: from near Bhutan, through Thaga La and Bum La; from the middle of the McMahon Line; and from the easternmost extremity. Only the first of these three prongs went down the entire Himalayan slope, and a part of it was along the Indian road.

In Indian hands now, this road has been extended and other strategic roads have been added. But the problem does not rest with the logistics of NEFA only; the communications of its immediate hinterland must also improve. The Brahmaputra is the backbone of this hinterland; its width, never less than 1.2 kilometers, becomes six or eight kilometers during the monsoons. The area south of the river is served by railroads of two different gauges requiring unloading and reloading at various points. The north is only scantily served. Connections between the northern and southern lateral railways have, until recently, depended upon ferry across the river. There is now one bridge and others are planned.

Chinese Roads

There is considerable secrecy over Chinese efforts to build communications on the flanks and the foreground of the mountains overlooking Tibet and Sinkiang, but there is no doubt that the efforts are of a massive character. The aim is to link China closely with Tibet, to open up the regions, and to strengthen frontiers all along the concave arc from the Pamirs to the Pacific.

This is a colossal task. The average height of Tibet is 3,650 meters, and between China and Tibet there are at least 29 passes which are frozen hard during winter. Supplies, as well as the Tibetan guerrillas, are a problem. Still, China puts high stakes on her communication lines in the area, and maintains that the Peking-Lhasa railway will be completed next year.

The two main border roads of China which have already been mentioned, the Aksai Chin through Kashmir and the Lhasa-Katmandu Road, are actually comparatively short sections of a vast communication project. The principal element is the road between

Rima, an easternmost town of Tibet, and Kashgar in Sinkiang, a distance of over 3,200 kilometers. This road runs almost parallel to the McMahon Line and the India-Nepal border, skirting the mountain foothills and following the Tsangpo Valley most of the way. It touches Manasarowar Lake and goes on to the frontier of Kashmir.

The Tsangpo has to be bridged at numerous points, a task probably not yet completed. But considerable portions of the road are reported ready for heavy traffic, and, with improvisations, movements between Kashgar and Rima could be uninterrupted.

Communication Hub

In the communication system which is now emerging, Lhasa appears to be the hub, having, in fact, become a crossroad between central China and Sinkiang. Its traditional link with the Chumbi Valley through Shigatse and Gyangtse has been improved, and to this has been added another link eastward which skirts the border of Bhutan. West of the Lhasa-Katmandu Road there are more roads facing the Hindustan-Tibet Road of India.

The layout of the roads north and south of the mountain complex is one of the many indications of the India-China confrontation. Two points of strategic significance may be noted. China has complete control of the entire territory north of the mountains. Her communications along the border are under one political authority, which not only ensures full coordination of the various elements involved, but also prescribes and implements one, undivided strategy. Political conditions on the Indian side do not permit this.

Between India's eastern and western territories there is no continuous land link to match the Rima-Kashgar link. Some such link may be formed once the Asian highway comes into being, from Vietnam through Cambodia, Thailand, Burma, India, Pakistan, Nepal, Afghanistan, and Iran to Turkey. But only part of it would pass through the Himalayan Range, and that through its lower regions. It would be a cultural, rather than a strategic link.

Another point relates to the Indian and Chinese hinterlands to the mountain complex. The Indian hinterland is a vast plain, 1,450 kilometers east-west, thickly populated, and highly developed. The Chinese hinterland consists of highlands and deserts which form a kind of barrier by themselves and serve as a buffer to the heart of China. From the mountain wall, a vital part of India is highly vulnerable and the vital part of China is highly secure. Thus, Indian communications in the mountains have a defensive character, while the Chinese lines implement a forward aggressive policy.

Roadbuilding Difficulties

To construct roads in the mountains is a grueling, time-consuming, and expensive task. The mountain complex has an area of 1.3 million square kilometers, largely unsurveyed. Some parts, important strategically, are all but inaccessible. Rivers and streams abound, are difficult to ford, and cause strange miscalculations by their unpredictable ebb and flow with seasons. Most areas are uninhabited and depend upon the plains for labor, provisions, and building material.

The shortage of labor in this part of the world is chronic and a main cause of delays. A casualty among the gang, by slip or landslide, is an occasion for mourning and for desertion.

India has now evolved a border road-building organization of a semimilitary character which has improved discipline but has not alleviated labor scarcity.

Roadbuilding in high mountains is a matter of high finance, for the cost per kilometer may range from $50,000 to $200,000. In view of the large sums involved, foresight and planning of a high order are required. In the case of India, the entire project has to be fully integrated into the national five-year plans. Search for economy as well as efficiency has led engineers to ask for better, more modern tools. Eventually, it may be that technique will be as important in these matters as human will, funds, labor, and material.

It is now recognized that however big the effort, roads alone cannot provide all the answers to the logistics of the region. India will soon be completing nearly 12,875 kilometers, but will be touching only the fringe of the problem. Areas will remain which can never be reached by roads.

Air communications in the mountains are indispensable. A large number of airstrips have been constructed on both the Indian and Chinese sides. In winter and during the monsoons, air communications are often the only means of contact between the forward posts and the base. In the event of a large-scale air war between India and China, the mountain area might be of marginal importance. However, at present, the stress is on capturing and holding land, and on the Chinese side, to be as close as possible to the line of guerrilla operations. It appears that presently, as, perhaps, in the long run, landlines are more important than airlines.

Different people would no doubt react differently to the herculean roadbuilding operations in the high mountains. The Indian hermits who have always been in search of Himalayan sanctuaries; the Chinese pilgrims who once came to India along impossible routes, suffering terribly; the Christians who carried the cross over the Himalaya into Tibet, half dead—men such as these would have welcomed them. The explorers, anthropologists, botanists, mountaineers, and especially the traders who have always sought, but never found, the short and safe routes between India and Tibet also would have welcomed the roadbuilding operations as would the many million mountain peoples who have remained backward for lack of communications with the outside world.

But these operations are not taking place against a religious, scientific, or humanitarian background. They are taking place against the background of border wars, frontier violations and ceaseless tension, declarations of bellicose intent and deployment of massive forces by China, and the flight of frontiersmen from their homelands.

It seems, indeed, that two different races and civilizations, so far kept distinctly apart by the mountain barrier, are moving closer to each other step by step in serious confrontation. Whether, ultimately, this is for the better or for the worse only the future can tell. In either situation, however, the mountain roadways will play a vital role.

THE NATIONAL PURPOSE

Colonel Wilmot R. McCutchen, *United States Army*

TODAY, more than ever, long-range military planners face a dual challenge. They must devise effective strategies to meet an increasingly complex variety of conflict situations and contingencies. At the same time, they must project plans ever further into the future so that forces equipped with long leadtime weapons will be available when needed.

If the planners at the national level take a pragmatic view of this two-pronged task, they are likely to begin their efforts with a search for long-range national objectives. What are the enduring interests of the Nation which must be safeguarded with the help of military power?

Aside from the elementary proposition of protecting lives and property from aggression, the answer is not a simple one. In addition to mere survival, we might logically seek to define precisely the nature of those fundamental values and institutions of the Nation which we seek to safeguard at all costs.

Many informed people claim that our pluralistic society has such a diversity of aims as to defy a definition of consensus. Besides, they say, the subject is so subconscious, mystical,

or ethereal anyway that it has no practical value.

This attitude cannot be accepted by the military planner. Long-range plans require as their basis the long-range view of national objectives—the national purpose. Only in this way can strategies to meet objectives be tested for their true worth; only then can they be correctly evaluated as a means of winning in the long run.

Currents and Trends

In a way, national objectives are conscious expressions (or sometimes the lack of expression) of what the Nation wants to do or achieve in a given situation; they arise out of and merge into the underlying mainstream of the national purpose. If we focus, then, on the underlying currents and trends, a better understanding of the structure and movement of the Nation as a whole, as well as its more temporary objectives, can be gained.

A study of the national purpose may be approached from many angles, each designed to illuminate various facets of the subject. In a realistic approach, the United States could be treated as one among many "nation-states" on the world scene. In the idealistic realm, an attempt could be made to determine if some "unique destiny" guides the Nation as a sense of mission.

The term "nation-state" connotes usually that a country has both a national identity in the form of a more or less homogeneous society—with a common language, customs, culture, and aspirations—and a statehood status, or a state with an independent government and territory. By this definition, the United States certainly qualifies as a nation-state. Moreover, it is generally recognized that the nation-state system, with its relations between states, is the way the world operates and is likely to operate for some years to come, notwithstanding progress toward a supranational world government.

General Welfare

The nation-state is a convenient model to examine, for it seems obvious that one of the main objectives of such a political unit is to advance its welfare. In short, it is engaged in nation building—promoting the general welfare, and seeking aggrandizement through various means such as territorial expansion, economic development, increased trade, political control, and enhancement of power potential. Some authorities see power building—economic, political, social, and military—as an end objective in itself for a nation-state.

In this jungle-like view of the world, the nation-state is vitally concerned with its survival and security. Those that have want to hold on to what they have and possibly acquire more; those that have not are covetous of what other nations have.

Accordingly, the United States, as the world's most powerful Nation, plays her international role because of her power and self-interest. She is willing to cooperate with those nations whose own interests are the same; she opposes those whose interests are different.

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The spirit of nationalism—national identity, national pride, and patriotism—is a powerful motivating force. It plays a large role in galvanizing the emotions of the society to react to crises with a common purpose.

Today, a world order of nations respecting peace and lawful intercourse is best suited to the advancement of the United States as a nation-state. As a lesser condition, the United States could seek an array of states whose national power, individually or collectively, would not threaten ultimately the Nation's security.

Political Sovereignty

This analysis may apply in some degree to the national purpose of the United States, as far as it goes. Still, it must be realized that the nation-state system in today's world is somewhat anachronistic. Although there is a great proliferation of new nations with political identity and sovereignty in the developing areas, there is also a strong countertrend toward interdependence among the more developed nations.

Nation-states may be able to retain a measure of political sovereignty, but they are not complete and impervious enclaves to economic, ideological, and sociological forces thrusting in upon them. The rapid expansion of communication and the increased mobility, education, and awakening of peoples throughout the world are having their effects on the traditional nation-state structure.

It seems reasonable, therefore, that the United States should not be satisfied with a limited, nation-state view of the national purpose, but should look elsewhere for additional elements. The history of a nation—its accomplishments, struggles, traditions, religions, and even folklore—forms a strong bond of purpose in its society. The United States is no exception. Her heritage, mostly derived from Greco-Roman and European civilizations, and influenced strongly by Hebraic and Christian mores, is carried forward today to play a large part in shaping her habits of thought and action.

These influences, added to the story of the Nation in building itself from a weak collection of colonies into a continental and industrial giant, have truly produced a new country with distinct characteristics and aims. Although many of America's moral and economic convictions—as well as her concepts of law and order—were a product of heritage, these same principles have been reshaped to the American mold in the country's development.

The American Way

The people as a whole can be described as energetic doers and builders whose ability to form capital from their resources and to produce goods and services for their welfare has been unmatched in history. The society is highly mobile from the point of view of both status and physical movement. The people are overwhelmingly optimistic, proud of their accomplishments, and confident that they have found the answers for mankind through their experiences with free enterprise and institutions.

Many volumes have been written and even more words spoken extolling the virtues, condemning the shortcomings, and hopefully arriving at the promises contained in the "American way of life." The praisers and critics have been both domestic and foreign; no other society has been so assiduously diagnosed and studied to see what makes it tick.

America's destiny may be susceptible of definition, but it is not by any stretch of the imagination "manifest." In a sense, every American has his own definition of the national purpose, particularly that part pertaining to a unique destiny; to arrive at a consensus of these many ideas and outlooks is most difficult.

Characteristics

What are some of the characteristics of the American Nation which may be classed as unique? For one, there is a pervading reverence to the Constitution and the ideals of orderly processes in government which it espouses and the rights guaranteed to the citizens. Although this document is not the only written constitution for national self-government in the world today, it is the pioneer of its kind. Moreover, it is unique in withstanding the stresses and strains of constant change and adaptation in an experiment in free government—the greatest experiment of its kind in world history.

Starting from a small and weak federation, the Nation has followed the same basic form of government in its expansion to a union of 50 states with more cohesiveness than ever. In the process, its society and economy have been transformed in a way the framers of the Constitution never dreamed of.

True, the political power balance has shifted over the years between State and Federal Governments, and among branches of the Federal Government. It is also true, however, that the US form of government has been able to adapt itself in a remarkable way to the radically altered role placed upon it in world affairs. In a no less remarkable way, the American economic system has been able to accommodate to the demands of social progress while retaining the traditions of free enterprise and initiative.

Preoccupied with contemporary problems, it is sometimes easy to lose sight of the accomplishments of the Nation in making democratic institutions truly democratic and workable. The people of the country have progressed far from the limited representative government conceived originally, continually widening suffrage and increasing the direct voice of the people in determining their affairs. The country has assimilated more diverse nationalities, languages, races, and creeds than any other nation.

Another aspect of the "American way" frequently cited is the respect for the dignity of man, the individual. This arises from the moral precepts of the society—the built-in sense of striving for harmony among the principles of individual liberty, justice, and order.

Responsibilities

Some would argue that Americans do not have the same zeal for responsibility in governing and ordering their affairs as they do in asserting their rights. This argument does not stand up when it is realized that the American people have always measured up to the challenge placed upon them. It does not matter that they must be inspired emotionally to react to a situation which they only vaguely understand. It is one thing to motivate a democratic people by a clear and present danger; it is quite another to have them recognize and willingly support a more obscure cause.

The Nation's responsibilities in the world today can be measured by the criterion of self-interest; but its leadership of the world's free nations must be sustained by some higher

purpose which will gain the understanding and support of other peoples. While Americans have come to realize that they cannot make the world over in their own image, they do have their own example and experiment in free institutions to offer to the world. They can offer the right of self-determination as a simple but powerful ideal for others.

From all of this, it is clear that a spirit of idealism forms a basic, lasting element of the national purpose.

There is little doubt that the cold war has intensified attention on the Nation's objectives and goals. Some observers have contrasted America with the Communist nations as one lacking a mission or purpose. Yet a society as dynamic and growing as ours does, indeed, have a fundamental, enduring aspiration.

If rational problem solvers, such as military planners, seek a rational basis for planning, we would not go far wrong with the assumption that the national purpose of the United States is "to secure the blessings of liberty for ourselves and our posterity."

Admittedly, this statement does not meet the requirements stipulated in Field Manual 100-5, *Field Service Regulations—Operations*, for a purely military objective. Being an intangible goal and subject to wide variance in interpretation, the "blessings of liberty" are not "clearly defined." Being open-ended for future generations, it is patently a never "attainable goal."

Still, it does provide the element of decisiveness in defining the Nation's fundamental values. Moreover, it puts into proper context those institutions which support the attainment of those values—"the common defense," "the general welfare," "a more perfect union" under the principles of freedom, justice, and order.

As a national goal, this statement is properly confined to the aspirations of the American people. As such, it reflects the self-centered purpose of the United States as a nation-state, a purpose that can be advanced by a variety of policies and strategies ranging from isolationism to deep international involvement.

At the same time, this distillation of purpose is not only a real mirror of our culture and heritage, it also reflects a sense of mission. Whether we can go so far as to "make the world safe for democracy," we can accomplish much with our selfish purpose for the good of the world. Our national power can and should be used to assist those nations which would seek to adapt to their own needs our grand experiment in self-determination and free institutions.

Defense and Economic

Robert L. Hirshberg

RECENTLY, certain reductions in US foreign aid appropriations have led to pressure being placed on various recipient countries to pick up in their own defense budgets certain supply costs heretofore covered by the US Military Assistance Program (MAP). In Taiwan—and in several of the other "forward defense" countries—this has intensified competition for available local funds.

As countries improve their economies, economic aid, as currently defined and administered by the Agency for International Development (AID), will be phased out. There will thus be a marked decline in the unifying influence on their governmental processes which comes from a country team operation managing combined military and economic aid.

A national view of combined financial planning for defense and development will become more necessary on the part of local leaders. In this area, the United States can encourage the cross entry of military leaders and economic authorities into each other's planning councils.

The US programs of assistance to the Government of the Republic of China (GRC) on Taiwan have reached the stage where a shift to a true total resources approach is needed to assure the effective attainment of overall security objectives. Economic aid ended with the last fiscal year, yet the Chinese defense effort is continuing; maintenance and operation costs of the armed forces remain high.

US military assistance funds are not adequate to cover as large a portion of these costs as in the past and still provide needed equipment modernization. Taiwan's own resources must be used more and more for elements of the defense program which have been previously underwritten by US aid. At the same time, the momentum of economic development must be maintained if a growing population is to enjoy progressively higher standards of living.

Taiwan is not an isolated example of the problems facing United States and participating country officials in adjusting to the longrun demands of increasing self-reliance in defense programs. Greece, too, is confronted with a phaseout of economic aid, coupled with reduced MAP availabilities. As

Development

The Taiwan Experience

growing economic capabilities make it possible to scale down the volume of US aid, Turkey and Korea (to mention only two) are among the "forward defense" countries which eventually will have to find ways of managing their own military burdens.

How to maintain simultaneously an adequate defense posture and a satisfactory development program is a question which may be partially answered by examining the factors in Taiwan's success. Steps that can be taken to ease the transition in other countries where similar conditions prevail may be indicated by concrete courses of action which now appear feasible for Taiwan.

During the period of the US aid program for Taiwan, defense expenditures were and have been a major element in the government's fiscal picture. In early 1960 the US economic aid mission secured the GRC agreement of a 19-point "Accelerated Development Program" which included "greater fiscal discipline, primarily over military expenditures."

Notwithstanding this joint concern about the adverse economic impact of high defense expenditures, the GRC

announced in late April 1962 a special 14-month supplementary defense budget "to help finance military preparations for a possible return to the mainland." Local business and financial interests reacted rather critically. Editorial opinion saw the government's fiscal policy and heavy military expenditures as "contributing significantly to the decline in Taiwan's rate of economic growth during the year."

Military Expenditures Reduced

The upsurge in Chinese military outlays proved to be short lived. As of 30 June 1963 the Special Preparedness taxes had been allowed to lapse, thereby reducing budgeted military expenditures 16 percent below the Fiscal Year 1963 level. This, said the US AID Mission, "gives credence to the GRC commitment, under the 19-Point Economic Reform Program." The mission statement, that "all agencies must firmly support the position that GRC military expenditures must be contained so that economic development can progress" is indicative of present AID policy on the Taiwan defense burden.

Massive injections of economic aid, coupled with a military assistance program large enough to relieve the GRC of any appreciable foreign exchange outlays for military equipment, provided the wherewithal for growth during a period of high military expenditures. The dynamism of the economy, supported by sound fiscal monetary management, provided the vital element of Chinese self-help, without which foreign aid could not have succeeded so well in the dual objectives of defense and economic development.

Economic Implications

Now, though, with economic aid being phased out, and MAP prospectively insufficient to fund the full range of imported defense items previously provided, the two cooperating governments must adjust to new circumstances. The objectives remain unchanged; so, too, do the basic financial and resource relationships within the Taiwan economy.

Two elements have been altered:

- The assistance supplied by the United States is being reduced in total amount and confined in form to specified commodity categories—agricultural surpluses and items for the armed forces. US participation in the economic development planning process is being diminished with the termination of the AID Mission. Programing responsibility for the continuing assistance will rest largely with the Military Assistance Advisory Group (MAAG).

- MAP no longer holds out the promise of substantially meeting the materiel deficiencies of the Chinese forces with imported items. The GRC will be confronted increasingly with the dilemmas of allocating its own resources (including foreign exchange) properly between defense and economic development programs.

Social overhead or economic infra-

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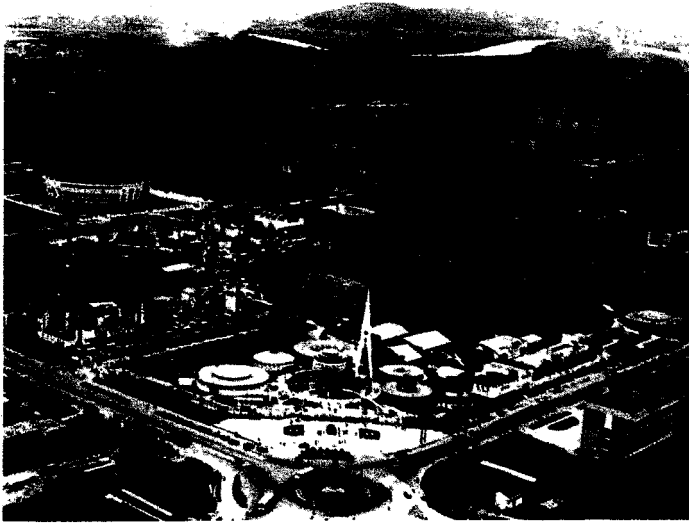
structure investments—financed, in large part, by US economic aid—have enhanced Taiwan's capacity to meet defense needs. Railways, roads, and ports have been designed to carry military loads as well as civil traffic. Power-generating capacity has kept pace with over-all demand, including that imposed by military installations and communication networks.

In the industrial capital development field, aid-financed imports of production equipment have been a major factor in increasing the local capacity to produce certain basic commodities usable in military construction and maintenance—cement, lumber, glass, and aluminum. Too, a considerable range of general purpose production capacity has been built up, both through direct aid projects and through private investment made attractive by the promising economic conditions resulting from US assistance.

This capacity has been increased in those sectors of industry capable of meeting military demands for such items as nonferrous metals, pharmaceuticals, vehicle assemblies and spares, and metal products.

At an early stage, the US assistance effort reflected a recognition of the need for close cooperation between MAAG and the economic aid mission in broadening Taiwan's production base to meet defense needs. MAP guidance required local procurement of military supplies where feasible, and MAAG participated in the modernization of factories.



A view of the Nationalist Chinese Economic Development Exposition in Taipei, Taiwan

By 1958 it was reported that Taiwan had achieved self-sufficiency in military clothing production, with

raw cotton and wool being financed under MAP dollar programs and spinning, weaving, and dyeing costs covered through aid-generated local currency counterpart funds. A machine maintenance and rebuild capability had also been developed, with forges, dies, presses, and test apparatus furnished under MAP.

Petroleum products were being provided by the China Petroleum Company, with local refinery costs covered from counterpart funds. A steady uptrend could be observed in the local manufacturing capacity for military procurement items in the categories of lumber, medical supplies, and "hardware-type" items.

The US economic aid mission observed that many skills acquired under MAP training programs would provide a useful carryover to the civilian economy, and concluded that "MAP funds directed to industries and services on Taiwan have done much to spur economic development."

MAP Transfer Program

In the past year or two, in view of the restrictions on total MAP funds, the Department of Defense has been actively promoting the transfer to local budget procurement of various military supply items heretofore provided under MAP. And in the Fiscal Year 1964 foreign aid appropriation hearings, an AID witness confirmed that Taiwan was being asked to assume some of the military maintenance costs formerly funded in MAP.

The witness also said that two million dollars had been shifted out of the "consumables" category and into the Chinese budget. In the Fiscal Year 1965 hearings, AID Administrator David E. Bell cited possibilities for local production of uniforms, shoes, and small arms. He said, "We would expect them, as their economic strength continues to improve, to be able gradually to finance more of their equipment needs."

Stimulate Economic Growth

It may well prove that in the immediate future one of the most promising means of stimulating industrial development will be in the military production of items in categories also usable by the civilian economy—notably pharmaceuticals, vehicles, and electronics. To make the most of such opportunities, MAP must take the form of raw materials and technical assistance rather than furnished items. This form of resource transfer—which in the final analysis is economic assistance—is by definition less costly to the United States than furnishing finished goods to which there can be no value added by the Taiwan economy.

The basic problem of the development policy will be to keep the total consumption by private individuals and by the government sufficiently in bounds as to leave an adequate surplus for productive investment. For an economy in its early stages of development, when the principal investment requirements are in the social overhead category (transportation, communication, power, land, and water resource development), the required line of action is clear—restrain private and public consumption to the utmost, and invest with all possible speed. The facilities thus created, if properly planned, can readily be put to use.

At a later stage of the development cycle, when expansion of manufacturing industries begins to predominate as in Taiwan, an effective demand for the increased output of goods is needed to sustain growth. Exports are

one answer. Reinvestment in continued expansion of capital plant is another. Increased local consumption is a third outlet.

The realization that government spending, and defense spending specifically, can stimulate the economy is by no means new. Nevertheless, economic development planners have tended strongly to discourage military outlays in the developing areas on the ground that they waste resources.

This argument is true in a generalized sense. Certainly, the military equipment and installations that are produced are themselves nonproductive and, therefore, classified properly as "government consumption."

The point to be made here, however, is that a careful distinction needs to be made between over-all increases in the output of additional goods and services and government decisions as to the disposition of this output. Any move that a developing nation can make to translate its available factors of production into actual output is a move to promote economic growth.

The crucial questions are:

- Can this growth become self-sustaining through the allocation of sufficient amounts of the output to build additional productive facilities?
- Does the resultant structure of the economy produce a quantity and range of consumption goods appropriate to the national needs?

The subsidiary questions of how this consumption is divided between the enhancement of individual living standards (either via increased personal incomes or via a larger volume of government services), and the furtherance of the aims of the state (through a buildup of military power, or diplomacy, or even foreign aid) should be recognized as value judgments. They are not issues of economic policy per se.

US Army

Nationalist Chinese infantrymen during field exercises in Southern Taiwan

Properly managed, defense demand can play an important role in promoting economic growth. Characteristically, in countries which have received substantial development assistance in the private sector, installed manufacturing capacity tends to outrun effective domestic demand. Yet the cost structure of the many industries prevents pricing products so they can compete in international markets. Defense procurement orders placed in these circumstances might well provide the critically needed extra margin of production runs which makes it possible to realize sizable economies of scale.

Combined Management

In the construction industry, the scheduling of defense projects to dovetail with activities in the civil sector could iron out uneveness in demand—whether attributable to technical engineering factors or to cyclical fluctuations. Contractors and producers of construction materials could make increased profits at lower prices with this kind of combined management by economic and military planners.

An arrangement for offpeak or deferred rates for power, transportation, and communications for the Defense Establishment could help level out load factors for these public utility services, thereby improving financial results. The economy as a whole could benefit from the gradual curtailment of duplicating higher cost, military facilities as civilian infrastructure would take over the load or provide standby capacity for emergencies. Defense expenditures, then, could be expected to drop, corporate investment from retained earnings to increase, and public utility rates to trend downward.

On Taiwan, a policy of directly encouraging production for military needs—within reasonably flexible limits of theoretical economic efficiency—is required to structure the economy to take on the increasing burden of defense self-support. Military assistance should be administered to provide the necessary margin of externally supplied resources in whatever form may prove technically most effective to supplement the GRC defense effort: end items, production components, raw materials, or technical services.

This flexibly available MAP, supplemented by agricultural surpluses under US Public Law 480, could be a vital factor contributing to the continuation of balanced economic growth at prevailing rates. Insofar as this growth yields improvements in Taiwan's foreign exchange position, the United States should progressively shift the provision of finished major material items to a sales basis.

Military Sales Program

The increase in Taiwan's foreign exchange reserves by 100 million dollars in 1963 highlights the fallacy of a "grant or nothing" approach to MAP. Chinese military leaders doubtless share the awareness, voiced by administration witnesses in foreign aid hearings, that force modernization is a high-priority need which cannot be fully met with prevailing MAP appropriations. The GRC can be expected to allocate some of its dollar resources to fill the gap. It behooves the United States, for both strategic and financial reasons, to make military equipment available on advantageous terms through the credit and cooperative logistic facilities of her military sales program.

While much progress has been made in achieving among the US agencies

administering foreign aid a better understanding of the military-economic interrelationships, controlling policy guidance has not kept pace. What is needed is a broad revision of doctrine, a revision that would put the military-economic development competition in proper perspective. This new perspective on military-economic relationships should then be reflected in clarified assistance concepts and allocations of responsibilities between the Department of State, particularly AID, and the Department of Defense.

Taking the US aid program for Taiwan as a point of departure, new doctrine should be developed and issued at the policy level to provide uniform guidance to AID and the Department of Defense in dealing with the resource demands imposed by both defense and economic development objectives. Military assistance should be progressively removed from its present protected position outside the recipient country's budgetary and national accounts structures. Over-all US aid programs should be structured to provide greater flexibility in combining imports with domestic resources to achieve both defense and economic development objectives.

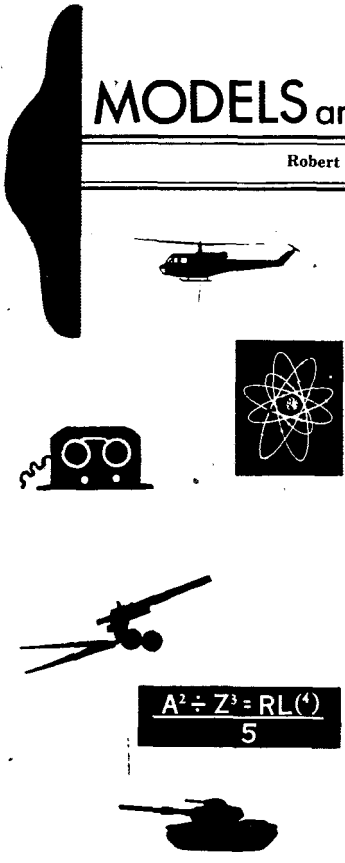
US MAP's in the developing areas should be undertaken, with great attention being paid to their impact on economic growth. Compensatory economic assistance should be adequate not only to offset fiscal-monetary pressures through the provision of current consumption imports, but also to permit sufficient investment in transportation, power, communications, and other facilities to handle military load factors.

US aid programs in the developing areas where local military forces are desired should continue to have as a major objective the encouragement of greater self-sufficiency in maintaining those forces. The experience on Taiwan demonstrates that US efforts to equip developing economies to assume an increasing share of the defense burden can have a generally beneficial impact on economic growth.

In particular, programs for increasing the local production of military supplies can significantly stimulate private industry. Where idle production capacity exists, US military assistance can be more effective—at a given dollar level—if provided in the form of production components rather than as finished military end items.

MODELS and system effectiveness

Robert R. Hare, Jr.



THE military planner at every level of activity has always found that the resources available for his program are limited. He is continually faced with the problem of deciding how these resources should be allocated in order to assure that the mission of his particular activity is accomplished.

In the course of solving this problem, the planner spends much of his time making decisions with regard to individual systems. He may consider how an existing system, such as a communications network or an infantry battalion, might be modified to improve its performance, and then decide whether such modification is desirable from the standpoint of cost. He may have to decide when an existing system should be eliminated or replaced, or he may have to choose between competing systems that have been proposed to fill a particular requirement.

In order to have a rational basis for making such decisions, the planner must obtain rather complete estimates of system effectiveness as it re-

lates to military needs, and he must determine the costs involved in terms of available resources.

In recent years, operations research and systems analysis have proved to be of considerable value as sources of information and comparison regarding the operation, effectiveness, and cost of alternative military systems. As a result, the military planner has come to rely more and more on the systems and operations analyst to provide him with the necessary information on which to base his decisions.

Operations research and systems analysis are not specific techniques, or even collections of techniques. Instead, they are essentially the application of the scientific method to the study of systems and their operations, just as physics is an application of the scientific method to the study of matter and energy.

Methods of Solution

A number of techniques are used occasionally by the analyst—game theory, information theory, queuing theory, linear and dynamic programming, input-output analysis, and system simulation. But the operations analyst does not distort a problem to fit a particular method of solution. On the contrary, he uses whatever methods he can invent, beg, borrow, or steal to solve the particular problem at hand.

Determining costs of a system and its elements for comparative purposes is difficult. This half of cost effectiveness has been dealt with by Professor John J. Clark, Major General Clifton F. von Kann, and Colonel James H. Hayes in previous issues of the *Military Review*.* Measurement of effectiveness may be equally, if not more, difficult, and sometimes seemingly impossible—yet definitive systems analysis, operations research, and cost effectiveness studies cannot be complete without this part of the equation.

Estimating Problems

The problems of estimating the effectiveness of a complex system, or of modifying it in response to technological and economic change, have become increasingly difficult in today's military operations. Associated with these problems is the need to understand the interrelationships among system elements in order to predict the behavior of the system and to facilitate its control by the commander.

It has become apparent in recent years that past operating experience alone is no longer an adequate means for obtaining this understanding, particularly where it is necessary to project the effects of new conditions on a system. Such experience usually represents only a small sample of the possible ways in which the system might be operated.

In certain instances, measurement and analysis of past operations alone

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* John J. Clark, "The Economics of Systems Analysis," *Military Review*, April 1964, pp 25-31.
Major General Clifton F. von Kann, "The Army and Cost/Effectiveness," *Military Review*, September 1964, pp 3-11.
Colonel James H. Hayes, "Basic Concepts of Systems Analysis," *Military Review*, April 1965, pp 4-13.

may reveal simple cause-and-effect relationships from which predictions can be made regarding the consequences of alternative modes of operation. For most modern systems, though, such predictions cannot be made until after a substantial amount of additional information has been collected.

'Real-System' Experiments

One possible way of getting additional information about a system is by carrying out "real-system" experiments. This concept proposes deliberate experimentation with the operating system itself, or a large segment of it. Its objective is that of any experiment--to gain information not otherwise available or to test a theory which, if valid, has broader practical applications.

Although real-system experimentation has been, and continues to be, carried out by both industry and the Armed Forces, it has certain serious limitations. This approach cannot be used in many instances because of high cost in money and time, because of unacceptable consequences in the event of failure, or because the approach may be downright infeasible. There is, for example, only a limited amount of useful experimentation that can be carried out on certain systems related to civil defense or to tactical operations on a battlefield, since such systems become fully operational only in times of emergency or war.

Perhaps the most serious limitation of real-system experimentation is that it cannot be conducted on proposed future systems that are still only tentative concepts or preliminary designs. This is an area in which improved understanding is especially needed, and which is becoming increasingly important as the rate and cost of technological change increases.

The limitations of operating experience and of real-system experimentation have caused systems analysts to look for other ways of obtaining the information they require, and their search has led them to the extensive use of system models. The analysis of models, particularly those that are basically mathematical in design, has assumed a vital role as an aid to management in its decisions concerning the development, improvement, and operation of major systems.

Types of Models

A model can be defined as a useful, simplified representation of the essentially important aspects of a real object or situation. A model of a system can be a picture, a mechanical or electrical device, a set of mathematical equations, or anything else having characteristics representative of those that are fundamental to the system.

Ordinarily, a model will be much simpler than the system it represents, since an important goal of model design is to omit all detail of the original system that is unimportant to the study of the system's operation. The purpose of this is to reduce as much as possible the effort required to analyze the interrelationships that exist among the different elements of the model.

If the model has been well designed, an analysis should then yield information about the corresponding interrelationships among elements of the original system. In other words, a good model will be designed so that what happens in the model accurately reflects the important things that would happen in the system to which it corresponds.

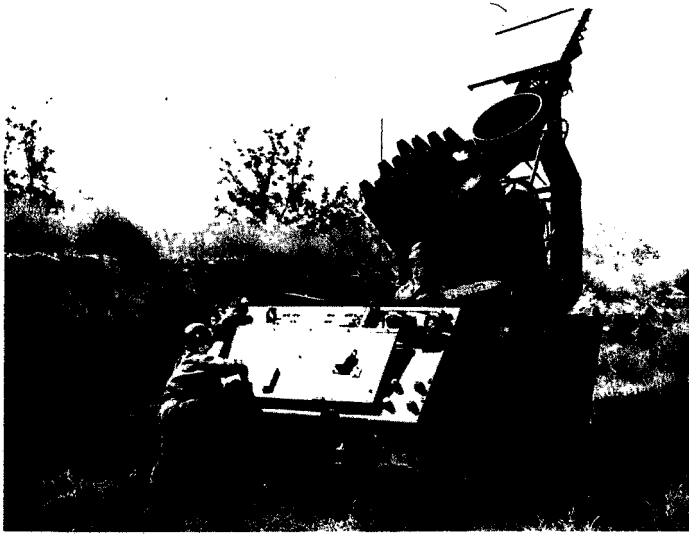
An obvious question at this point is: How do we know what is impor-

tant and what is not in a system? There is no clear-cut answer to this question. Some elements of a system will be of obvious importance; others not so obvious.

Wherever a question arises as to the significance of a system element, it should be represented in the model, although it may be omitted later if subsequent analysis shows that the questionable element is not important. On the whole, the design of an adequate model is something of an art, and requires that the designer know the system with which he is concerned.

When a model is used in the analysis of a system, the analyst is generally interested in determining quantitative relationships which can then be applied to the system. Therefore, the model should be constructed so that there is a known correspondence between model values and system values. Generally, one is the same or proportional to the other. If a map is a visual model of a certain piece of terrain, for example, distances on the map are proportional to distances on the terrain, and corresponding angles have the same value.

Models are ordinarily classified as visual, analogue, or symbolic. Of course, these classifications are not rigid, and several may apply to a given model at the same time. Navigation charts and house floor plans are examples of visual models; both are much simpler than the things they



US Army

In recent years, operations research and systems analysis have proved to be of considerable value as means of obtaining information about and comparing the operation and effectiveness of military systems such as the *Mauler*

represent, and contain only significant elements of the original and none of the unessential detail.

At the same time, they are useful —the chart helps the mariner steer from one buoy to the next, even though he is often unable to see more than one buoy at a time. The floor plan helps the architect detect and correct faults in the house layout before starting construction.

A common analogue model is the electrical network which is used to represent mechanical, waterflow, and many other kinds of systems.

The type of model that has been especially valuable in the study of complex systems is the symbolic model which is composed of mathematical and logical relationships. An example of such a model is one used in the engineering design of bridges. It is made up of a number of theoretical and empirical relationships involving Hooke's law, Young's modulus, the mechanics of materials, stress analysis, and vibration analysis. With the aid of these mathematical representations, bridge structures can be designed quickly and cheaply.

Another symbolic model is computer simulation, which has made possible the analysis of complex systems that could not ordinarily be analyzed prior to the development of high-speed digital computers.

The process of constructing a model, in itself, will tend to give a better understanding of the system and how it functions, and information provided by the model can be used to improve the system. System improvements may include changes in equipment and personnel, in operating doctrine and procedures, in command and control procedures, and changes in organization. Model analysis, unlike real-system experimentation, can be applied to proposed systems as well as those that already exist.

Two practical observations must be made regarding the use of system models. The usefulness of any model will be limited by the amount and quality of basic operational data available for input. The model designer, however, should ordinarily be able to get most of this data from existing records and measurements of the system's past operation, and by working closely with system management and operating personnel.

If information about the value of a particular factor in the system is not available from these sources, however, a reasonable range of values may be estimated, and the model can be used to examine system operation for this range. If it is found by this means that the performance of the system is strongly affected by the value of the missing factor, then some experimentation with system components may be required to obtain the value.

The second observation is that model analysis cannot be a complete substitute for full-scale trial of a system. Models can help to organize and analyze experience data for the purpose of drawing certain conclusions, but intangible factors which a model cannot take into account will often affect system operation significantly. Military planners, therefore, must know the limitations of the models they employ, and must use their experience and good judgment to interpret model results in the light of intangible factors.

WAR

Lieutenant Colonel Albert N. Garland, *United States Army*
Photos by James H. Pickerell

ONLY the very young, or the very old, think war is glamorous. To the active participant, and particularly to the ground soldier and to those who fly in direct support of him, war is anything but glamorous. It may be different, stimulating, painful, dirty, disgusting, thrilling—but war definitely is not glamorous.

War has been with us a long, long time. It has assumed many shapes and guises. And there is little likelihood that war will be done away with in the lifetimes of those of us who today inhabit the earth.

Wars have been fought for many reasons—for personal gain, political objectives, glory, survival, or simple necessity. But no matter why they were fought, or when they were fought, all wars have had one thing in common: the suffering and the dying was done by men who closely resembled those you see in these photographs.

Yellow, brown, black, or white; tall or short; professional or nonprofessional; the ground soldier is much the same fellow today as he was at Aachen, Waterloo,

To close with and destroy the enemy

Leipzig, Cannae, and Marathon. His uniform and equipment may have changed, but his basic mission is still to close with and destroy the enemy.

Today, in Vietnam (tomorrow, perhaps, in another place), the American soldier has been called upon to carry out his basic purpose in life. Under admittedly difficult conditions—but no more difficult than those on Guadalcanal or New Guinea—he must seek, find, and destroy an elusive, sturdy, sometimes barbaric opponent who, like himself, also seeks to find and destroy.

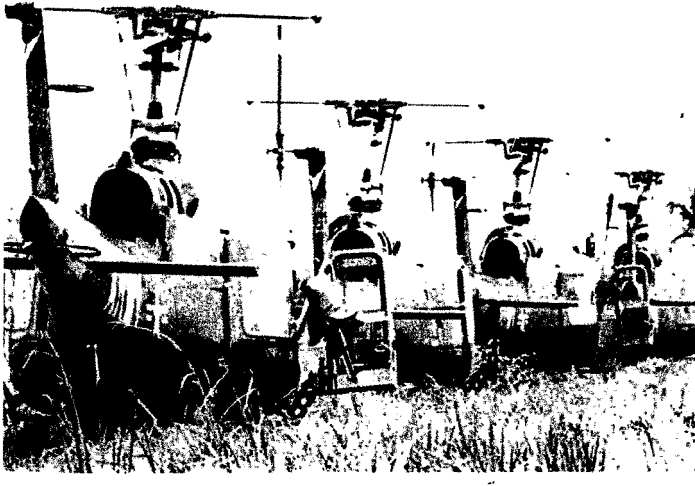
If the words seek, find, and destroy are said fast enough, the task assigned to the American soldier and to his South Vietnamese ally sounds relatively easy to accomplish. Perhaps the words do give the impression this is an easy task, and one which requires little or no talent. Nothing could be further from the truth, although if the soldier did not have to worry about being counted in the "destroyed" category, he might find his job easier to perform.

War is not glamorous

Lieutenant Colonel Albert N. Garland was the Assistant Editor of the MILITARY REVIEW *from June 1962 through August 1965. James H. Pickerell has covered the war in Vietnam since 1963, and was the first US newsman to be wounded in action. His photographs have appeared in* Newsweek *and other US publications.*

Helicopters drop leaflets . . .

wait at base camps . . .



or flush out the enemy like quail

Fortunately, in Vietnam, the odds of late on coming back safe and sound from a seek, find, and destroy mission have all been in the soldier's favor. There is little in the picture to indicate that the odds will take any drastic changes.

Regardless of this fact—and it is a fact—the departure from a secure base camp to seek out the opponent is an experience that causes even the most hardened professional to feel a twinge in the belly or a sudden shortening of breath. The feeling usually passes quickly; confidence in the unit soon overrides the near-fear.

Ahead helicopters roam the skies, flushing out the enemy like quail, or dropping leaflets urging him to come in peacefully before he is found and destroyed. Other helicopters wait at landing areas near the base camp, ready to lift reserve units to the scene of fighting, remove the wounded and dead, or to deliver supplies.

Quickly the soldier recovers . . .

Helicopters are Johnny-come-latelies to this business of war. They proved themselves in a noncombatant fashion during the Korean War. But this is the first time that they have been used so extensively in a combat role. Their performance has been magnificent, not so much because they are magnificent pieces of machinery, but because they are flown and directed by magnificent men.

War comes suddenly to the soldier. The first rifle shots, the first mortar or artillery rounds, come as rude surprises. Tense nerves twang and tremble, a sort of shock sets in, reactions are slowed, movements are made in a seeming daze. Quickly, though —a matter of seconds, really—the soldier recovers and takes on his role, the role for which he has prepared himself during long days, weeks, months, or even years.

He has rehearsed his role on any number of occasions, in all kinds of climate, over all types of terrain. Move and shoot, shoot and move. Up, down. Fire. Throw. Run. Crawl.

As a well-trained member of a well-trained team he makes the proper movements in the proper time to the proper cadence. Prodded, cajoled, led, he moves toward his opponent. Some of his comrades fall; the others push on.

Armed helicopters come into action, harassing the enemy, suppressing his fire. Other helicopters bring in the reserve and supporting units to cut off the enemy and to help seek and destroy him. The firing increases and rises to a pounding, grinding, ear-shattering crescendo.

to search for the enemy

A stationary helicopter is a natural target. It must be airborne quickly.

Payload delivered, fighting men on the ground

Formation flying with "choppers"—tactics of the sixties

And then it is all over. No one really knows exactly when it is all over. But the firing stops; the only sounds are those of relief or pain. The wounded are tended to, the prisoners questioned, the position searched and secured. The enemy may be back—today, tomorrow, next week.

Casualties are the debits of war

A corpsman's job often begins when the rifleman's work is done

To the soldier who has come through the fight unscathed, a feeling of tremendous, soul-satisfying relief sets in and it is difficult for him to concentrate on anything except this feeling of knowing he is alive and unharmed. He must exert a mighty effort to overcome his lethargy at this critical moment, for not enough of the enemy have been found and destroyed. The search must go on; the soldier must get on with his business.

The war in Vietnam is not an easy war to fight. But, then, no war ever is an easy one to fight. Men are hurt, men die, men become heroes, or cowards. All that is good in human nature can come from war. Much that is bad, unfortunately, also comes out of war.

US Army

The flushed enemy surrenders

A pause on the trail

No matter how we say it, though, the war in Vietnam must be fought. We face a cruel and ruthless enemy who seeks to destroy us and our friends, not only in Vietnam but throughout the world. We cannot, must not, back away from him. He understands only power and the bite of a sword.

Freedom has always been worth fighting for. No American soldier could ask for a better cause. His freedom, our freedom, is threatened. Only he can keep us free.

A 10-minute break . . .

and move out again

BRITAIN'S

ARMED FORCES

Admiral of the Fleet the Earl Mountbatten of Burma

BRITAIN'S defense policy has two inseparable purposes: to guarantee the nation's security and to contribute toward peace and stability in the world as a whole.

In a nuclear age the security of Britain cannot be assured by national defenses alone; our safety depends on the North Atlantic Treaty Organization alliance. It is this alliance which has successfully kept the peace of Europe for over 15 years. In this time it has grown into the most powerful and effective international military alliance—created in time of peace to

This article was digested from the original, published in the NATO LETTER *(France) May 1965.*

At the time this article was written, Lord Mountbatten was Chief of the United Kingdom Defense Staff. He retired from active military service in July and is presently serving as Chairman of the National Electronics Research Council.

* Title photo courtesy British Information Services.

preserve peace—that the world has ever seen.

NATO has been a major cause of the peace and stability in Europe. In Europe the risks of direct military action are such that those who might have threatened this peace have been deterred from doing so. This is not to say that the threat in Europe has disappeared or that it would not revive if the alliance were seen to be losing its cohesion and military credibility. But whereas in Europe the threat to peace and stability has been contained, outside Europe it has not.

Peace-Keeping Authority

We should like to see the United Nations eventually take responsibility for keeping the peace outside Europe. In token of our support for this aim and of our faith in the United Nations, we have recently offered British logistic forces and equipment for United Nations peace-keeping operations, subject to our national commitments and other obligations, including our NATO obligations, at the time.

Until the United Nations is able to operate effectively as a worldwide peace-keeping authority, Britain must continue to maintain the military capacity to meet her obligations to Commonwealth and allied countries. We are the only nation which directly contributes forces to all three of the Free World's regional defense alliances—NATO, the Central Treaty Organization (CENTO), and the Southeast Asia Treaty Organization (SEATO).

As a result, calls are made on Britain from many different quarters, and this sometimes affects her ability to maintain the full strength of her forces in Europe. But recognizing that the Communist threat to the Free World's way of life is global—a fact too often overlooked—we believe that we strike a fair balance between the claims of NATO and those of other parts of the world.

The broad division between the numbers of British servicemen based at home and overseas, including West Germany, is as follows: Britain 241,000; Germany (including Berlin) 62,000; Mediterranean 23,000; east of Suez 58,000 (plus 14,000 Gurkhas) and elsewhere 9,000. (The Gurkhas are volunteer regiments formed under agreement between the British Government and the Kingdom of Nepal.)

Categories of Forces

Our contribution of forces to the NATO alliance falls into three categories:

- Strategic nuclear forces.
- Land and air forces in Allied Command Europe.
- Maritime forces in Allied Forces, Mediterranean; Allied Command Atlantic; and Allied Command Channel.

Britain has assigned her entire national deterrent force of *V* bombers to NATO, and all the aircraft are equipped with British nuclear weapons. Britain retained the responsibility in peacetime—as do all countries assigning forces to the alliance—for deployment and for logistic support. We also retained the right, in the last resort, when supreme national interests were at stake, to use the force under national authority.

Recently, in order to help in advancing the cohesion and effectiveness of the alliance, Her Majesty's Government has offered to contribute the greater part of our *V* bombers to an Atlantic nuclear force. When our four *Polaris* submarines, each fitted with 16 missiles, become operational in the period 1968-70, they will replace the

V bombers as our contribution to the force.

We should irrevocably relinquish control of these forces to the Atlantic nuclear force for as long as the force and the NATO alliance continued. This offer would provide a massive British nuclear contribution to the alliance on far more positive terms than hitherto, and it represents an unprecedented move toward multilateral control and cooperation within NATO.

The British contribution of ground forces to Allied Command Europe is at present some 51,000, against our commitment of 55,000 under the revised Brussels Treaty. Nevertheless, apart from the forces in Britain (many of which are earmarked for dispatch to West Germany in an emergency), and notwithstanding the heavy burden of active operations which we carry elsewhere, the total British forces in Germany are greater than in any of our other overseas areas of responsibility.

The infantry and armored units in the 1st British Corps are being equipped with the latest types of weapons in order to improve their capability and firepower; the *Chieftain* tank in particular is a generation ahead of its time and is superior to any other in hitting power.

Our air forces in Germany are equipped with the latest versions of the *Canberra* bomber. During this year we shall be deploying to Germany a force of *Lightning* supersonic all-weather fighters to increase the effectiveness of the air defense capability of the 2d Allied Tactical Air Force.

Of our total fleet, which includes five aircraft carriers, two commando

British Information Services

Three of Britain's frontline jets; leading (right) the *Lightning*, the *Hunter*, and the *Javelin*

ships, four cruisers, and some 90 escorts (including four guided-missile destroyers), about 85 percent is earmarked for assignment to NATO. Those units which are west of Suez are in category A—that is, available to the NATO commanders within 48 hours. They provide a contribution of category A ships to the Supreme Allied Commander, Atlantic; the Allied Commander in Chief, Channel; and the Supreme Allied Commander, Europe, that is second in size only to that of the United States. Those east of Suez form a balanced and fully operational force which contributes to maritime deterrence over a wide area, and they are scheduled to be recalled to the NATO area in case of need.

Principal Bases

Our main bases in the Near and Middle East are Cyprus and Aden, and we maintain smaller garrisons in Gibraltar, Malta, Libya, at Bahrein in the Persian Gulf, and in Swaziland. All the naval forces deployed in the Mediterranean are assigned to NATO, as are the two maritime squadrons and the one photoreconnaissance squadron stationed in Gibraltar and Malta.

The British bases in Cyprus include an army garrison in addition to the important Royal Air Force (RAF) base at Akrotiri Bay and the RAF contingent at Nicosia. RAF units at Akrotiri include *Canberra* bomber squadrons for the support of CENTO; these have a nuclear as well as a conventional capability. Since December 1963 British forces in the island have shared in the United Nations peacekeeping role, and some 1,000 British troops are now serving with the UN force.

Aden is the base for a Royal Marine commando, a large number of army units, and RAF air-support units. Last year, forces of the Middle East Command were in action in the Radfan Mountains and gave support to the civil authorities in Kenya, Uganda, Tanganyika, and Swaziland. Naval units of the Middle East station include aircraft carriers, commando ships, and the amphibious warfare squadron, and are available for operations in the whole area east of Suez.

Support Forces

Our contribution to defense in the Far East is centered on the main base at Singapore, and our forces have the following tasks:

- Support of SEATO, as a check to Communist expansion.
- Support of the Federation of Malaysia against Indonesian confrontation, under the terms of our defense agreement with her.
- Support of ANZAM, the Commonwealth regional defense organization which coordinates the common interests of Australia, New Zealand, and Britain in the defense of Malaysia, Australia, and the sea and air lines of communication between them.
- Defense of particular British responsibilities—such as Hong Kong and certain Pacific islands, and of our sea and air communications with them.

We have declared forces, including the Commonwealth Strategic Reserve (which incorporates forces from Britain, Australia, and New Zealand), to SEATO to meet a number of contingencies. We also provide military assistance to treaty members who seek it—for example, training in counter-insurgency measures and in jungle warfare.

The Indonesian confrontation of Malaysia has called for substantial deployment of our own and Australian

and New Zealand forces in the defense of Malaysia. Indonesian aggression has been, and continues to be, a threat to peace, but so far the Malaysians, with Commonwealth help, have succeeded in combating it. To the defense of eastern Malaysia alone, Britain is contributing 10,000 troops with naval and air support and patrols. Before 1963 there were no troops of any nationality stationed in Sabah or Sarawak; limited sea patrols sufficed to keep the peace despite a 1,600-kilometer frontier with Indonesia.

Our garrison in Hong Kong—which is not large for a population now approaching four million—has the task of patrolling the frontier with Communist China to deter external aggression and of being ready to help the civil police to maintain internal security. Finally, our forces in the Far East have the sea and air-transport capability to cover the long distances which they may be called upon to traverse in order to reinforce troubled areas, from Korea to the Indian Ocean.

NATO's Fifteen Nations

Britain continues to maintain the military capacity to meet her obligations to Commonwealth and allied countries

In April 1964 Britain took a big step forward in the evolution of her defense organization with the formation of a new unified Ministry of Defense, which absorbed the three single service departments and brought the whole defense effort under one Secre-

tary of State and one Defense Council.

Many benefits have resulted from this reorganization. There is much closer consultation at the top level and among the staffs, so that defense business is conducted more expeditiously and the formulation of a unified defense policy is made much easier.

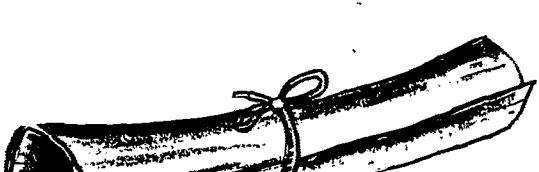
Naturally, it has not been possible in a single year to complete this reorganization. The search continues for greater efficiency, greater economy, and for arrangements which will truly promote and reflect the interdependence of the three services. This task is, of course, complicated by the fact that the changes which it entails have to be carried out without in any way impairing our ability meanwhile to cope with our many worldwide commitments.

The main problems of British defense policy are how to meet our widespread defense commitments at a cost which the nation can afford and how to organize, equip, and deploy our forces so that we achieve the most effective return for the money invested in defense. Because our commitments have not decreased as we might have expected, and because of the continually rising cost of new weapons and equipment, we have now been compelled on economic grounds to make a fundamental reappraisal of our whole defense policy.

The heart of the problem is the sharp rise in the cost of equipment and military manpower. The *Lightning* fighter, for example, costs five times as much as its predecessor, the *Hunter*. Between 1963 and 1968 the cost of equipping an armored regiment in the British Army of the Rhine will have doubled, and the cost of an infantry battalion will have increased by six times. Manpower and directly related costs now absorb about half of the total British defense budget, and thus limit the room for maneuver in other areas of defense spending.

To oversimplify, the problem is whether to have large numbers of men with relatively simple equipment or much fewer men with a lot of sophisticated and expensive equipment. The choice is not an easy one, requiring as it does a judgment of the future capability of potential enemies and the likely areas in which our forces might be called upon to operate. Over the last six months we have, therefore, been engaged upon studies into every aspect of our defense spending. Hard decisions have already been made on equipment; even harder decisions may be necessary as regards the future size and shape of all our forces and the commitments which they can undertake.

There is no easy solution to these problems. I am certain, however, that the answer lies in greater interdependence and common burden-sharing. The problems I have described face all members of the alliance to some extent. They will be solved satisfactorily only if there is common understanding and a widening of horizons. The threat of communism and anarchy is worldwide; defense against it must also be worldwide.



The Wrong Reasons

Lieutenant Colonel Harry J. Maihafer, *United States Army*

The views expressed in this article are the author's and are not necessarily those of the Department of the Army, Department of Defense, or the U. S. Army Command and General Staff College.—Editor.

A FAVORITE children's story ends with a clear voice piping: "But daddy, the emperor doesn't have any clothes on!" Perhaps we need some of that child's honest insight today, because one thing is certain—we are in trouble if we do not eliminate the hypocrisy which creeps into much of our military philosophy.

Americans have always taken a just pride in their practicality and Yankee know-how. They have chuckled at stories of visionaries who can't "get down to cases." They have become annoyed at youngsters who get infatuated with Communist theory, who can't see the wide gap between Karl Marx and Aleksei Kosygin—or between Marx and Nikolai Lenin, for that matter.

It may be our free enterprise which makes us value the practical. Certainly, the system must continually prove itself. The profit motive acts as a built-in validation. If something isn't useful, it isn't likely to be around too long. As psychologists might say, "We stay in contact with reality."

This also holds in our military heritage. There is a story about Captain "Abe" Lincoln, marching his militia company during the Black Hawk War,

being temporarily stymied by a rail fence in his line of march. Lincoln scratched his head. "Fall out," he said, "and fall in again on the other side of that th'ar fence!"

This is the folk tale we enjoy. Our hero isn't too sure of the "fancy" way, but he doesn't really care. His main concern is getting the job done, and he does.

Business Examples

When we praise practicality, we naturally turn to business for our examples. We sense that the chairman of the board, with stockholders looking over his shoulder, must act realistically as he competes in the corporate marketplace and pays the quarterly dividend.

If the businessman is at the practical end of the scale, who is at the other extreme? In our society, we probably assign that slot to the theoretical scholar—the egghead, absent-minded professor, longhair, and other words which have joined our vocabulary. The stereotype of the abstract scientist is of an impractical researcher in an ivory tower.

Americans have traditionally looked with suspicion on nonconcrete efforts, and periodically, some congressional voice is raised against Government subsidies for pure research. Perhaps this is inevitable, although we can all cite practical solutions which grew from abstract beginnings.

Hypocrisy

The main complaint, however, and this includes the one from Congress, is usually directed against hypocrisy —when an impractical study is subsidized under the guise of eventual utility. Apparently, no one objects to pure research if it is identified as such. Indeed, up to a point, our age of affluence can probably afford the luxury of scholarship for its own sake.

The lambasting starts when we lose sight of basic values. Student demonstrations often cause justified indignation; nevertheless, they can be valuable in singling out academic humbug. The same youths who fight for tolerance in other fields can be grossly intolerant when it comes to the hypocrisy of their elders.

They sense, for example, that a teacher's main function is to teach, and that the man who does it well is rare. They resent the false trappings and emphasis on educational byproducts. Signs are carried protesting campus injunctions to "Publish or Perish."

If this division really exists in our culture—the practical versus the ivory tower—where does the military man fit into the scheme? The easy answer is to say that he hits a happy medium. Major General Leslie R. Groves took charge of the Manhattan Project, joining discussions of fanciful atomic physics, yet in the end building a bomb of ghastly practicality. Marine Colonel John H. Glenn, Jr., rode a capsule into orbit, piloting with a hero's skill and courage, yet later moving easily among scientists discussing uncharted future space problems.

While we like to consider the military man as blending the practical and

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the theoretical, the officer is sometimes accused of being too far at the mundane end of the scale. Sneers aim at the military man's seemingly exclusive concentration on practicality.

In one version, the military mind proceeds unswervingly in a one, two, three sequence; it is preoccupied with battlefield tactics; and it ignores the vital preparations of theory and abstraction. Owning a military mind, one is unable to pay sufficient attention to matters which bear only indirectly on problems.

Lose Sight of Goals

Ironically, today's greatest problem may be the exact opposite: By concentrating on preparatory steps, we may lose sight of our ultimate goals. In other words, we want the record to show a solid foundation. And if we carry this desire to the extreme, the record eventually becomes more important than the ability it represents.

In Europe, a young US Army captain moved heaven and earth to get command of a company. Did he want to learn new skills from the assignment? "Well," he said, "I don't want to stay in a company too long—just enough to get it on my record."

A lieutenant at Fort Benning, Georgia, en route to parachute school, said he had no desire for an airborne assignment, but that he did want the record to show he had completed jump training.

In the US Air Force, leaders of certain units must wear wings, even if flying has little to do with the command position. Although a man may have proved his ability to lead such units, regulations still require him to have successful flight training on the record.

Perhaps the clearest example of record hypocrisy is in the field of education, where diplomas are convenient devices for estimating potential. In some educational fields, however, they are treated as absolute measures and ends in themselves. Teachers' salaries, for example, often correlate more closely with degrees held than with ability to teach.

The fascination of the advanced degree has also penetrated the Armed Forces. When a group of cadets from one of the US service academies was asked about graduate school, the members were unanimous in their determination to seek training. Yet not one of them gave "a chance to gain more useful knowledge" as his main reason. Most said they thought their promotion possibilities would be enhanced by having a Master's degree on the record.

Record Evaluation

It's easy to understand the appeal in doing something mainly for the sake of one's record. The services are crowded, and vital career decisions are made by centralized boards; these boards have no choice but to evaluate by using the testimony of records. For a time at least, what a man's record says he is becomes more important to him than what he actually is.

The solution is surely not to criticize jump training, graduate school, command duty, or other worthwhile facets of military life. What should be criticized is the tendency to seek these things for the wrong reasons, for if a man approaches his career development with tongue in cheek, much of his time and effort will be wasted on useless padding.

In tennis there is a breed of player who enhances his ranking by entering minor tournaments which he can probably win, even though they are no

challenge to his ability. Collecting trophies in this manner is known as "mug hunting."

Douglas Southall Freeman once told the West Point Corps of Cadets that there were three basic leadership principles—Know Your Job, Take Care of Your Men, Be a Man. These three rules are well worth remembering when one is tempted to become a military mug hunter.

Under "Know Your Job," we might tell ourselves to work hard at learning our present assignment. If we seek a command, we should do it with the attitude reflected in General Bruce C. Clarke's widely reproduced "So You Want a Command," not merely to get command in the 201 file. We should try to forecast logically so that studies, reading, and day-to-day performance contribute to present and future capabilities. We should not, for the wrong reasons, try to acquire obscure military occupational specialties or far-fetched knowledge merely to make ourselves look good. This is not simple. Each person has to judge himself in such matters, and it is a good man who can do it without bias.

"Take Care of Your Men" applies to many areas. Fortunately, most of these are self-evident, and the main caution here is to avoid the out-and-out eyewash. If we stress physical fitness, we should do it on a year-round basis, not just before the physical training test. If we have athletic teams, we should push those which do the most good for the most men, and not worry about a championship which inflates the ego and the reputation of the commander. Recent moves by the Army's Vice Chief of Staff to curtail the number of post-wide teams is a good move in this direction. If we urge regular participation in savings bond or soldiers' deposit programs, we should be sure we do it for the good of the men, not for the commander's record.

When Mr. Freeman said "Be a Man," he referred to integrity and moral character. We must be willing to choose and be able to recognize "the harder right instead of the easier wrong." A military publication recently printed a letter which said:

Non-Army brats, or more broadly non-USMA officers make the best majors and lieutenant colonels. Rarely preoccupied with PL numbers, often conscious of the fact that their disadvantages as lieutenants have effectively eliminated them from stars, the good ones turn in sounder work and have a stronger sense of duty and honor than many of their contemporaries who are drifting ahead of them.

This is a harsh charge, and one that probably would not stand up. The author writes with sincerity, though, and the implication is clear—he knew far too many "fair haired boys" who were more conscious of their record than of the task at hand.

Only by looking frankly at ourselves and our environment can we answer such a charge. This is a time of national challenge, when each must ask what he can do for his country. The nation cannot afford an officer corps which concentrates on "mug hunting."

The UNITED NATIONS

and

The CONGO CRISIS

Lieutenant Colonel Francisco J. Ramos, *United States Army*

A LITTLE over five years ago, the Belgian Congo was abruptly thrust into the role of an independent nation. Not long thereafter, this vast land became an uncontrollable vortex of mutiny, political fragmentation, foreign intervention, and diplomatic maneuvering which threatened to shatter the very foundation of the United Nations and even brought the threat of an East-West confrontation. The intervention of UN forces in the Congo averted an explosive showdown and raised the curtain on a drama which involved nations large and small, tribal and world leaders, small native forces, and a well-trained international force.

Located in the heart of the African Continent, the Republic of the Congo encompasses an area four times the size of France, and is equivalent to that of the United States east of the Mississippi. Bounded by nine other African nations, the Congo, by virtue of its size and location, seems destined to play a major role in African affairs. Control of the Congo and, consequently, of Central Africa provides a strategic springboard for the control of all of Africa south of the Sahara.

Economically, the Congo's mineral resources make the country potentially one of the wealthiest on the continent. The largest producer of industrial stones, it had, until recently, almost a monopoly in the production of pitchblende. At one time it also provided 60 percent of the Free World's supply of uranium, and even

now provides 55 to 75 percent of the world's cobalt. It is rich in copper, gold, tin, manganese, zinc, coal, and iron.

Background to Independence

The Congo was not completely opened to the Western World until 1876 when the Belgian King convened a Brussels Geographic Conference for the exploration of Central Africa. As a result of this conference, Sir Henry Morton Stanley explored and settled various areas in the Congo, including the present Léopoldville.

American-Congolese relations began in 1884 when King Leopold persuaded the United States and other European nations to recognize the Congo Free State as a sovereign nation although it was, in effect, the King's private domain. The colony known as the Belgian Congo was not officially established by Belgium until 1908 when a world clamor arose against the forced labor and cruel treatment being inflicted upon the Congolese.

Belgium's colonial policy from 1908 to 1960 was paternalistic and placed its emphasis on health measures, primary education, and other social improvements. The Congolese were offered little or no participation in the Congo's economic and political evolution. By independence day there were few educated Congolese. In fact, no Congolese doctors, engineers, architects, or social scientists were available to guide the nation in its economic, social, and political evolution.

Why, then, did Belgium relinquish the reins of power to the Congolese so abruptly on 30 June 1960? Various factors may be cited, among which were the successful demands of other African nations for independence; constant pressures placed on Belgium by other powers within the forum of the United Nations; and the threat of a long colonial war which became imminent as the tempo of Congolese demands, riots, and upheavals reached a crescendo.

The Congolese Parliament, elected prior to independence day under the Brussels conference agreements, designated Joseph Kasavubu as President and Patrice Lumumba as Prime Minister of the new Republic.

Internal Conflicts

Soon after the new government was installed, friction developed between various Congolese factions. On 2 July tribal revolts erupted; on 5 July the Congolese Army mutinied and demanded pay increases, promotions, and the immediate replacement of all Belgian officers by Congolese.

Anarchy resulted. The brunt of the violence, looting, and property damage was borne by the Belgian community which began a mass exodus adding to the further breakdown of all public services.

On 6 July the Belgian Government reinforced its garrisons with paratroopers to protect Belgian citizens. Five days later, provincial leader Moise Tshombe declared Katanga's independence from the Congolese central government and requested Belgian Army assistance.

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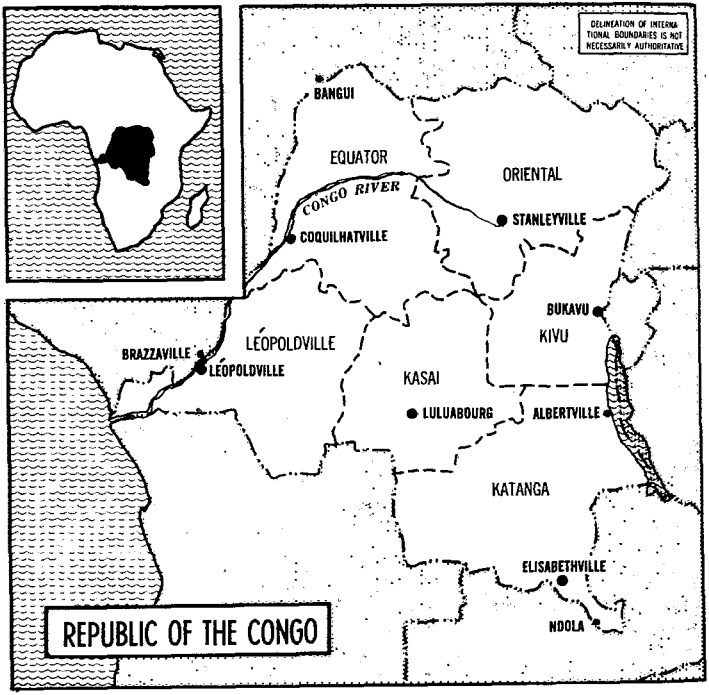
On the next day, 12 July, President Kasavubu and Premier Lumumba, alarmed by what they considered a Belgian unfriendly act, requested the Secretary General of the United Nations for the "urgent dispatch of UN military assistance to quell unsolicited Belgian action."

The UN Secretary General, considering the presence of Belgian troops a threat to international peace, called for an urgent meeting of the Security Council to act on the Congo's demand. By a vote of eight to zero (China, France, and the United Kingdom abstaining), the Security Council on 14 July approved a Tunisian resolution calling upon Belgium to withdraw her troops from the Congo. The resolution also authorized the Secretary General to take the necessary steps to provide the Congolese Government with such military assistance as it required until the local Congolese forces were deemed capable of fully meeting their tasks.



The United States gave her wholehearted support to the resolution and supported the United Nations throughout the Congo operation. US

policy was designed to prevent unilateral intervention by the USSR, to avoid a potentially dangerous US-USSR confrontation, and to insist that foreign assistance to the Congolese Government be channeled through the United Nations.

'ONUC' Force

As soon as the 14 July resolution was approved, the Secretary General set the machinery in action to replace the Belgian forces, and to assist the Congolese Government to maintain law and order. The United Nations force (known as *ONUC* for its French equivalent, *Opération des Nations Unies au Congo*) was to operate under certain rules which were based on previous UN experiences:

- *ONUC* would not include forces from the permanent members of the Security Council, would be composed mostly of African forces, and would operate separately and distinctly from any national authority.
- *ONUC* forces would be under the exclusive command of the United Nations and would not become a party to any internal conflict.
- The area of operations would cover the entire territory of the Congo.
- *ONUC* forces would resort to arms only in self-defense.
- *ONUC* forces would have complete freedom of action throughout the territory.

The first *ONUC* troops arrived on 15 July and by 20 July 3,500 troops had arrived under the command of Ralph Bunche who secured Belgian assurances of withdrawal. The Belgian Government, however, was slow in implementing these assurances.

The Congolese Government threatened to secure aid from the USSR if the provisions of the UN resolution were not rapidly implemented. This forced the Security Council to meet again in an emergency session and on 22 July to approve a second resolution which unanimously called upon Belgian troops to withdraw speedily; authorized the Secretary General to take all actions necessary to that effect; and requested all states to refrain from any action which might impede the restoration of law and order or might undermine the territorial integrity or political independence of the Republic of the Congo.

On 6 August the Secretary General announced the impending movement of UN troops into Katanga to replace Belgian forces. Faced with the threat of force by Premier Tshombe—who labeled any entry of UN troops into Katanga as an act of aggression—the Secretary General withheld the movement of the UN troops and again went to the Security Council for instructions.

Nonintervention

In a third urgent meeting, the Security Council on 9 August passed another resolution which again called upon Belgium to withdraw her troops from Katanga, authorized the entry of UN troops into Katanga, and reaffirmed that *ONUC* forces would not intervene in any of the Congo's internal conflicts.

While the Security Council was deliberating, Albert Kalonji, chief of Kasai Province, declared the province to be the Independent Mining State.

Tshombe, reassured of UN nonintervention, agreed to the entry of *ONUC* forces into Katanga. Nonintervention, though, brought about acid criticism of the United Nations by Premier Lumumba who wanted *ONUC* forces to quell Katangese secession attempts. An angry Lumumba

called back the Congolese Army and committed it first in Kasai Province to frustrate Kalonji's plans. Once this was accomplished, he planned to send it into Katanga to put down secession there. During this period, the USSR provided Premier Lumumba with transports to ferry Congolese troops into Kasai Province.

Faced with the threat of civil war, President Kasavubu dismissed Lumumba as Prime Minister on 5 September and asked the United Nations to assume responsibility for law and order. Lumumba, in turn, fired Kasavubu. While the government crisis flared both in public and in the Parliament, the United Nations closed the Léopoldville radio station and stopped traffic at all airports to prevent the ferrying by Soviet planes of Congolese troops into Kasai or Léopoldville.

On 14 September Colonel Joseph-Désiré Mobutu, the Chief of Staff of the Congolese Army, put a temporary stop to the squabbling by taking over the government temporarily, neutralizing the Lumumba and Kasavubu governments, dismissing Parliament, and arresting Lumumba. At the same time, he ordered Soviet and other Communist diplomats to leave the country within 48 hours and installed a "College of High Commissioners" composed of university graduates to act as a caretaker government.

United Nations

A scene in Léopoldville during a demonstration in 1960

This dramatic change, coupled with the danger of continued fragmentation and hostilities, altered the original purpose of the *ONUC* forces, since it forced the UN to seek ways of bringing the pieces together with-

out a major civil war and intervention by other external forces.

Meanwhile, the USSR launched a vitriolic attack against the UN Secretary General for his failure to unify the Congo, demanded his resignation, and introduced the Troika resolution for the reorganization of the Secretariat. In the Congo, Antoine Gizenga, a Lumumba follower, established in December 1960 a rival central government in Stanleyville which, through the use of forces, extended its influence into Kivu Province.

Four Armies

By the end of 1960 only two provinces remained under central government control and the Congolese Army was, in effect, divided into four armies:

- One in Stanleyville, with 6,000 men under Gizenga.
- One in Katanga, with 15,000 gendarmes under Tshombe.
- One in Kasai, with 2,000 men under Kalonji.
- One in Léopoldville, with 12,000 men under Mobutu.

Just as important, various Communist regimes—including the USSR—and some neutralist nations recognized the Stanleyville regime as the legal government of the Congo. The United Nations continued to recognize the Léopoldville Government.

The chaos in the Congo caused the Secretary General in December 1960 to seek further instructions. Mr. Lumumba's escape, subsequent arrest, and murder in February 1961 compounded the difficulty. The Soviet Union threatened unilateral intervention, but the US, under a new administration, forcibly warned against intervention and made it clear that the only way to keep the cold war out was to keep the UN in the Congo.

In February 1961 the Security Council, with France and the USSR abstaining, urged the UN Secretary General to take immediate measures to prevent civil war, including halting all military operations; arrangement of cease-fires; prevention of further clashes; and the use of force, if necessary. Additionally, the resolution urged the withdrawal of all Belgian and other foreign military and paramilitary personnel, political advisors, and mercenaries, and called for the reorganization of the Congolese Army to bring it under discipline and control.

New Government

The Congolese Parliament was reconvened in June 1961 through UN mediation and under UN protection. President Kasavubu proclaimed a new national government of reconciliation under the Premiership of Cyrille Adoula, with Antoine Gizenga, of the Stanleyville faction, as Vice Premier. The Stanleyville regime was thus dissolved, although Gizenga showed great reluctance to move into Léopoldville and participate in the new government.

The main remaining obstacle to national unity was the secession of Katanga which lasted for another year and a half.

In August the recently established Adoula government requested the assistance of *ONUC* forces to expel those non-Congolese elements still operating with the Katanga forces. The first big *ONUC* military operation to this end occurred on 13 September 1961 when UN troops attempted to occupy key installations in Elisabethville. The UN troops were unable to cope with the Katangese *gendarmerie* and were defeated. Secretary General Dag Hammarskjöld called for a cease-

fire and agreed to meet with Tshombe at Ndola, Rhodesia; his plane never arrived at its destination.

The UN Security Council, shocked into action by the tragic event, passed a resolution authorizing the new Secretary General, U Thant, to take action, including the use of force, to deal with the Katanga mercenaries, and demanded the immediate cessation of secessionist activities.

On 1 December fighting broke out again between the UN and the Katangese forces. This time, though, UN successes forced Tshombe to agree to meet with Premier Adoula at Kitona where, in a joint declaration, he recognized the unity of the Congo, the authority of the Central Government over all parts of the Republic, and agreed to place his gendarmes under President Kasavubu. In January 1962 UN troops also moved into Stanleyville and disarmed the troops of Gizenga.

The year 1962, sometimes referred to—perhaps in mockery—as the "Pax Katanga" year, was a tense period during which peace hung in the balance. Negotiations to implement the Kitona Declaration dragged on until mid-July 1962 when, after a complete breakdown, U Thant proposed his own Plan of Reconciliation which, basically, called for:

- A new federal constitution.
- The formation of a coalition government.
- The integration of all military and paramilitary forces into a national army.
- A general amnesty.

US Army

Native workers load US grain and rations on a truck en route to refugees

- Freedom of movement for *ONUC* forces.

U Thant's plan also contemplated graduated economic and financial pressures to bring about its acceptance.

Throughout the remainder of the year, however, Tshombe's procrastinations continued to obstruct the progress of the negotiations. By mid-December the process of unification had reached a standstill.

The US Government, concluding that Katanga's secession attempts had to be thwarted, began to provide large-scale assistance to the United Nations. Equally, Asian and African countries added considerably to the combat strength of *ONUC* forces.

Alarmed by this UN military buildup, the Katangese *gendarmerie* launched an attack in December 1962. UN troops not only rebuffed the attack, but assumed the military initiative and proceeded to secure all key industrial and urban centers in Katanga. By 21 January 1963, with the occupation of Kolwezi, *ONUC* forces had established control and again forced Tshombe to agree to end Katanga's secession in accordance with U Thant's plan.

Faced with financial and other problems, the United Nations made immediate plans for the phased withdrawal by December 1963 of all *ONUC* forces in the Congo, a force which at its peak consisted of approximately 20,000 troops from 23 different nations, the largest military contingent ever assembled by the UN except for the UN force in Korea. With the departure of the last UN detachment on 30 June 1964, this decisive and unprecedented phase of UN peace-keeping operations came to an end.

In the Congo, the United Nations assumed an unprecedented role of restoring law and order in an independent state. In discharging this role of both an army and a police force, the United Nations became the target of charges and recriminations by many factions—accusations which were successfully surmounted without any wavering from the main objectives established. Unquestionably, the *ONUC* forces in the Congo were successful in:

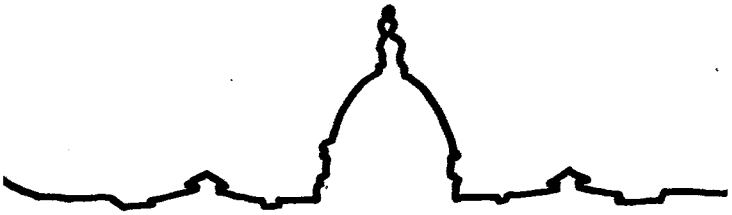
- Assisting the Congolese Government in preserving its territorial integrity and political unity.
- Providing the Congo a basis for unity and nationhood.
- Establishing a measure of law and order.
- Avoiding a civil war.
- Avoiding a serious East-West confrontation.

The *ONUC* forces, however, departed the Congo without fully implementing the mandate of the first Security Council resolution of 14 July 1960 which had stated that "military assistance will be provided until the national security forces may be able . . . to meet *fully* their tasks."

Upon the *ONUC's* departure, the inability of the Congolese Army to guarantee internal security allowed renewed rebellion which obstructs orderly political and economic development.

Despite the relative success of the UN mission, the ultimate solution to the Congo's problems still hinges on the development of an effective political structure, the organization of a well-trained national security force, and the resurgence of a viable economy. To this task the Congolese people must address their main efforts.

POLITICAL THEORY and MILITARY GROUPS



John F. Scott and John R. Cameron

IN AN address which may become one of the most quoted of public utterances in the discussion of military-political activities, former President Dwight D. Eisenhower warned that, "in the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex." Not only did this statement elicit considerable comment and argument, it was immediately joined as part of the continuing debate of the role of the military in the American political system.

The statement came at a time when two forces were rising into prominence—the enhanced position of the civilian elements of the Department of Defense, and the coming of age of the behavioral methodology of the social scientists. Much has been written on the first aspect. Indeed, many of the activities of military elements have been decried as inimical to the democratic process.

But in an effort to clarify a controversy clouded with bias and misunderstanding, we hope to indicate the consonance of modern political theory with legitimate military associational activities to secure legitimate ends.

The negative attitude toward military groups can be traced

back at least as far as 1783 to the founding of the Society of the Cincinnati. Although noble in purpose, the formation of the society by high-ranking officers of the American Revolution came close on the heels of the infamous Newburgh, New York, moyement which toyed with the idea of a military revolution.

Political Objectives

On paper, the society's political objectives were merely "to promote among the original thirteen states an essential national honor" and "the preservation of those rights and liberties for which the members had fought," but the society was accused of harboring ambitious and selfish claims.

The society's pomp and circumstance, the wearing of distinctive rosettes, and, worst of all, its hereditary membership provisions brought criticism from men of considerable influence—John Jay, James Madison, Thomas Jefferson, and John Adams, among others. Opposition was articulate and widespread; as a political interest group, the society failed although individual members played auspicious roles in the shaping of early America.

This public attitude concerning military interests continued; not so much from the stigma of the Cincinnati, which seems innocuous in retrospect, but rather from the tradition that the military man should stay out of politics in any form. This came, in part, from memories of the Cromwellian period and of the colonists' experience with British troops after 1763 and, in part, from the already established belief in civilian preeminence over military forces.

Individual military men have had political ambitions and have pursued those ambitions, some successfully, some not. They have been criticized, usually by an opposition party. But the American propensity to elect generals to the Presidency seems to indicate society's acceptance of this nongroup role. Organized military interests, on the other hand, played no significant part in the major policy decisions of the Nation until the present century.

Competition

Before 1941, military-group activities were relatively insignificant in their implications for society. The Military Establishment consisted of two Cabinet-level departments—War and Navy—whose roles and missions were, by present standards, clear cut. Each had equal access to the centers of political power, both executive and legislative.

Competition came from within each department and from external sources. A speaker at a meeting of the New York Peace Society in 1909, for example, called the then inchoate Navy League of the United States "the most dangerous set of men since the oligarchy of slaveholders in the fifties." The league had committed the sin of carrying on public relations activities for its cause.

Otherwise, efforts by the services to influence legislation must have been based upon personal friendships and official access between military men

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and Congressmen. The degree of success in lobbying was probably the result of the persuasive talents of a few facile military officers and the occasional political leverage of a particular branch. Apparently the efforts to persuade were not always tactful, for some forays by the military salesman into Congress were labeled "downright vicious."

Whatever maneuverings to secure favorable legislation went on were done with the meager resources of the military departments, and the services were constrained to act within the bounds of acceptable political behavior. Opposing civilian groups knew no such constraints. Generally, the Armed Forces had little bargaining power except their occupational prestige. This asset in later years proved inadequate in realizing service objectives.

Contemporary Origins

The period immediately following World War II marked the beginning of the military interest system as it exists today. The National Security Act of 1947 created the US Air Force as a separate military department. Organizational arrangements for the concerted operations of the three services were embodied in the new Office of the Secretary of Defense, while the changed nature of warfare blurred the distinctive character of each service's roles and missions and altered the empasis placed upon traditional military operations.

The doctrine of airpower had by the early 1950's come into ascendancy; its appeal had its foundation in modern weapon systems. The massive offensive power posed by these systems, and, concurrently, their deterrent effects upon the ambitions of potential aggressors, was thought to render almost anachronistic the traditional doctrine of defeat and control of surface space held by the older services.

Throughout the 1950's, service-generated pressures upon Government centers of power were undertaken to maintain an effective and realistic military mission for the threatened groups, and to retain the ascendant place for the most successful group. Relative to one another, each service managed to construct battlements around its position in the quest for both roles and budgetary resources.

Group Tactics

The fraternally divisive effects of competing strategic doctrines and the quest for funds to implement service philosophies were aggravated by the several reorganizations of the Military Establishment. Each increase in the power of the Office of the Secretary of Defense made more necessary the adoption of unconventional interest group tactics by the services. As executive departments themselves, the services had clear paths to executive and legislative power; as is common to all bureaucratic groups, when their interests were not fully served through these policymaking centers, the administration of that policy could be made at least amenable to the group.

By 1958, though, administrative discretion and clear access to power had become circumscribed and confused. To reach the ultimate civilian authority, each service had to adopt the sophisticated techniques of nonmilitary groups and to find voices to speak out in a way the service itself could not.

To be effective, an interest group must have the wherewithal to exert influence. This includes financial resources, political leadership abilities,

sophisticated techniques to marshal support from sympathetic interests, and a large, representative, and preferably prestigious membership willing to act together to accomplish the goals of the group. There are many other characteristics a group should possess and other benchmarks by which to measure influence-potential, but the form, the characteristics of the group itself, is the most immediate concern.

Organizational Instruments

The form taken by the present groups appears to reflect American tradition concerning political activities of military personnel. Proscribed by custom and law from engaging in overt political activities outside the formal military system of communication with civilian authority, the services maintain alliances with civilians who share common interests and who are under no such restrictions. The Navy League, the Air Force Association, and the Association of the United States Army (AUSA) may be seen then as organizational instruments to bridge the gap between what service interests would like to do and what, in fact, they can do in the way of influencing public policy.

The AUSA, for example, is the outgrowth of purely professional associations; it was only in the mid-1950's that the Army association achieved its current form and energetically undertook public relations activities on behalf of the ground forces. As one writer has said of the action, "this break with the old tradition was rationalized as an act of self-defense." The Army was being "outgunned"; it had no civilian public relations outlet comparable to the other services.

This is not to say that the various service associations are merely "fronts" which express the wishes of a military bureaucracy, or that they are militant groups which engage in social lobbying, threats of vote mobilization against recalcitrant Congressmen, and related pressure tactics not available to the military man. They serve, rather, as focal points about which enthusiastic support for a particular stand on an issue can be rallied, and, through their publications, they can make known their position to their own membership as well as to those they seek to influence.

Group Theory

The literature of the psychologist, sociologist, and political scientist agrees generally that the group—be it the family or an interest group—is the basic unit of societal action. Through it come both the formulation of much of the individual's personality and the realization of most of his potential power. It is through groups of one kind or another that man's social values are put into action; by the nature of man, this is a need which must be filled.

Each of us is a member of many groups, including some we fail to recognize; each of these groups exerts its influence on us and, in turn, we exert the influence of our ideas on them. Without the group, there would be no means with which to give expression or action to our ideas. Thus, groups can be considered as being associations of individuals holding similar attitudes which are channeled into some pattern, developing and maintaining internal morale by action on the patterns of society.

The society may then be viewed as consisting of widely divergent groups, each clamoring for attention in the political process. The purpose of the group is the advancement of

mutual interest; there is a constant attempt to maintain the position of the group by acting on other groups.

Since the success of one group will often degrade the position of another, there must be constant intergroup conflict. Indeed, change in the physical and technological environment, while having an immediate impact on those groups most closely associated with the change, also affects all groups.

Arbitrator Role

Government is the center of power in our society. To it will be turned the attention of all groups whose interests affect or will be affected by political decisions, and these groups will attempt to exert pressure on the Government to secure an advantage.

As a result of this focusing of the conflict, some writers refer to the role of Government as the arbitrator of the conflict of groups. But this is too restrictive since there are two additional functions for the control element—the rules under which the conflict takes place, which are determined by the controlling element, are themselves the subject of conflict by groups seeking favorable circumstances; the control element is itself a form of group, jealous of its interests and with its own aims to advance and protect.

It is this broad role that Congress plays in the United States. Similar roles are played by different groups in conflict over different issues in the "private governments" of churches and unions. For some groups, the group conflict has to be waged before the state legislatures as well as before the Congress. On military matters, all groups concerned must engage in conflict before the Congress. The vote on any issue in committee or on the floor can be said to represent the balance of the influence of all interested groups—civilian, military, and congressional—on that particular issue, at that point in time.

The vote also has as an element the influence of the Legislature itself, and of the particular legislative committee—also groups within the construct of this theory. A further element in each vote is the representation of the group conflict in the legislator's constituency, a conflict which, decided on issues often unrelated to national problems, may produce a legislator who will inject a different set of views than might otherwise be expected.

Internal Friction

One other point needs to be made—the structure of the Government and its Legislature leads to a friction of groups within the society. The US system demands a complexity of groups of national concern since influence must be exerted on many other groups and on the several access points of the Government. Thus, a national group will seek to influence groups in the constituency, in the legislative committee, in the Legislature itself, and in the administering agency.

Virtually, by definition, the US Government is the scene of group conflict by creation of three branches, each with its own interests and ideas; with the two houses in the Legislature, each with its own interests and ideas; and with the several committees, often with overlapping concerns, each with its own interests and ideas. "Where the power lies, there the pressure will be applied."

It is obviously possible to view the military association within the group context. They are composed of individuals who are or have been asso-

ciated with a particular branch of the services and who have a common interest in the maintenance of an adequate military posture. National defense is a congressional responsibility which necessitates approach to that body. The advent of increased civilian control in the various military departments, however, has forced the military man to go outside purely military channels to present the views of his group; he does so in much the same manner as do other elements of our society.

Representative Function

Military and national defense interest groups perform a representative function. Most large groups do. The division of the Nation into Senatorial and House districts by states leaves a representational gap respecting commonly held interests which transcend state and district boundaries.

In another sense, representative groups arise because of the complete lack of elected representation to the National Government. It is in this category that the service groups fall. As enfranchised citizens, uniformed personnel make known their positions on public policy through the ballot; as an occupational group, there is no such democratic representation, and institutionalized provisions for access to power are not completely adequate.

Another function, and one which is particularly applicable to the military services, is the advisory role played by groups. In a word, group members are presumed to possess expert knowledge in their field, knowledge which is invaluable to the harried Congressman sitting in committee or otherwise gathering fact and opinion on issues of legislative concern. Although a formal procedure exists for military men to present information, it is conceivable that they may not always have their day in court; when they do, the scope of their testimony may be limited to what the military service feels should be presented.

Equal Treatment

Since the unification of congressional armed forces committees, though, the evidence of committee hearings is that equal treatment is given to each military service and to other interested groups. This does not preclude the necessity for a well-timed article in an association's publication, written by a military man and bearing on the issue before the legislators. This vehicle, considered as acceptable behavior, is one of the few ways in which the military interests can give full vent to their views on an issue, be representative of the group's position, and reach the desired audience.

Group theory and the empirical studies of groups as seekers and users of political power are certainly not the only or necessarily the best ways to conceive of the making of public policies. It is possible to place in proper perspective the efforts of military men to influence policy by recognizing that the military services do behave overtly as interest groups and by calling upon the accumulated body of knowledge of interest group activities to illustrate the concept.

This is important, because for too long the reporting of group politics as played by the military services and their friends has been loaded with implicit assumptions unfavorable to the services. For many years this attitude was applicable to all politicized groups in society, and it was not until recently that the activities of such groups were understood and, consequently, found increased acceptance.

Unfortunately, the activities of military groups, unlike other Government bureaucracies, have not achieved similar acceptance.

The activities of these groups—so often castigated—must be viewed in the same light as any other group or group interest. In fact, the activity of the military interest is a fully desirable function since other interests in society are in no way constrained from action in the military field.

On each issue which comes forward for a political solution, there will be many varied interests activated. For these opposing interests not to be represented would be as inimical to our system as it would be for military interests to be denied access to the arena of group competition.

The military man is many persons.

He is the great captain who commands fleets and air forces and armies. He is the dedicated professional—in school, on patrol or on guard.

He is the draftee taking his turn at freedom's watch.

He is the reservist or guardsman in summer training.

He is also, in a sense, the civilian who devotes his mind and energy to public service.

Whoever he is—wherever he serves—this man is a product of our whole society—and he means more to peace today than ever before.

President Lyndon B. Johnson

POLEX

THERE are few revolutions in the study and understanding of foreign policy. Rarer still are ways to anticipate events methodically in the realm of diplomacy—a trade which traditionally relies on unscientific hunch-playing and a sense of history.

In recent years there has been an intense search for ways to apply to foreign policy planning some of the imaginative analytical techniques employed by military planners and operations analysts.

If these new methods are to serve a useful purpose, they should provide us new insights into the wisdom and feasibility of national strategies and policies. They should help us make better guesses about the probable reactions to American initiatives by other actors on the international stage. They should help the weapons designer understand better the likely political context of his product, and the civilian planner the impact of force structures and capabilities on national policy in crises. Most of all, they should help us "stockpile" some useful conclusions about the options open to the United States in a crisis-ridden world.

At least one of these experimental devices—the political-military exercise—has caught the attention and imagination of scholars and responsible Government officials. Indeed, there is a danger that too much might be expected of it as an aid to contingency planning. Clearly, it remains highly experimental and of unproved value in the science (or art) of prediction. Furthermore, it may or may not be worth the cost and effort compared with more conventional forms of research and planning. Yet as

The Political-Military Exercise

Lincoln P. Bloomfield and Barton Whaley

an interesting intellectual innovation, it is worth investigating. Political-military exercises conducted at the Massachusetts Institute of Technology included policy-type exercises (*POLEX*) in 1958 and 1960, disarmament exercises in 1962 and 1963, and deterrent exercises in 1963 and 1964. The focus of all games was on crisis management per se.

Policy-Type Exercise

The policy-type political-military exercise is a device for crudely simulating the decision-making process at the top governmental level. It employs the technique of role-playing, with the roles of senior policymaking officials of government and international organizations taken by professionally qualified political, military, and academic specialists. It is preferable that these men have either decision-making experience at higher levels of government or close working relations with policymakers. Typically, the exercise takes a problem generating high levels of international tension and threatening, if not actually involving, the use of significant military force—in short, a major crisis.

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The chief purposes of the policy-type game are: to throw additional light on hypotheses about foreign policy and strategy arrived at by more conventional methods of research; to "pretest" strategies of action; to discover unanticipated contingencies, alternatives, or possible outcomes as a consequence of the interaction between conflicting strategies; and to examine closely one particular line of policy action that illustrates vividly what a single, plausible outcome might resemble in detail.

This kind of simulation is related only indirectly to the theory of games which applies mathematical formulas, laws of probability, or bargaining theories to determine outcomes of formalized conflict situations. The political exercise, like diplomacy itself, does not lend itself to the precise and numerically expressed wins and losses of the classic military war game.

Implications for Policy

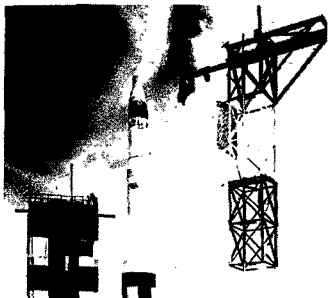
The questions raised by employing the technique of gaming for serious policy purposes are almost self-evident. One is whether Americans, however knowledgeable, really simulate the actions and reactions of people bred and trained in wholly different cultures or steeped in hostile ideology.

The answer to this, on the evidence, is a qualified yes. It would nonetheless be fascinating to run a game with real Soviet officials simulating the reactions of the Soviet Union to a potential crisis; it might even be highly therapeutic to have them play the role of Western policymakers.

Another doubt is whether reality can even be approximated under laboratory conditions, and to this we must answer that reality can never be reproduced exactly. But in gaming, as

in any intellectual undertaking, reality is represented by a model that reduces to manageable proportions the infinite number of variables.

The relevant question is whether this particular model teaches what other models of reality—whether pieces of paper, discussions, or computer simulations—do not. Our impression is that on some issues it comes closer to reality than many other methods of isolating the significant variables that condition fundamental strategic decisions.



US Air Force

Games showed that the existence of *Minuteman* missiles in hardened sites affected the communications security procedures established for the *Polaris* system

Then there is the question as to whether the action in a game bears any relationship to what will happen in real life. There is no sure way to relate the events of the game with the future until the future reveals itself. The interesting point here is that, within this obvious limit, the game may illuminate better than other methods some possibilities regarding the future that have not been examined in such depth before.

For example, in some situations involving major policy choices, the alternatives are not really infinite; they might even be limited to "yes" or "no." In such cases, we can learn a good deal about the factors that influence our choice of alternatives and about the kinds of reaction that might be expected on the part of allies and opponents, Congress and public opinion, Department of State and military services, and the intelligence community and scientific advisors.

Untested Alternatives

By exposing those options to simulated reactions and eliciting some of their potential effects, an exercise can supply useful information about policy alternatives that have not yet been tested. This also enables us to study the choice points that arise to confront the policymaker in the life of a given strategy, and the possible consequences to be expected from each, developing one or more to their logical conclusion.

As one colleague put it, the game does not create new knowledge of the world, but it does supply a unique way to put existing knowledge to work. Above all, it forces one to consider all alternatives, including the most terrifying as well as the more pleasant ones. Conventional research and planning have always sought to do this job, but they cannot do it in precisely this way. Thus, gaming is a useful adjunct to both.

Role-playing should not be misunderstood as requiring faithful emulation of the policymaking style of a given statesman or politician under given constraints. For teaching purposes, that form of role-playing may be most instructive. But in the

policy-type game, each team is usually free to choose the broad strategy it wishes to follow, an "optimal" strategy which is not confined to past strategies of the assigned country.

The team, of course, is required to evolve a strategy which is plausible, given the constraints imposed by vital national or ideological interests. It is usually specified that the Soviet team should play a "representational" strategy, duplicating as best it can the responses of current Soviet policymakers to analogous situations. On the other hand, in some games the US teams are free to be as imaginative as desired, unrestrained by fears of the reactions of various world political leaders or world public opinion.

Lessons Learned

It is possible to suggest the types of policy inferences one can derive from this species of game. Some examples, from analyses made of prior exercises, are illustrative:

- In general, it appeared that an international military force (IMF) can be helpful to both US and general peace-keeping interests in the present world; in Stage I of General and Complete Disarmament (GCD), an IMF appears somewhat more indispensable if the action is a considerable distance from the US power base.

The games' investigation of altered US strategic "reach" in a disarming world indicated that, while US naval and seapower can still be projected with relative ease through Stage I, in Stage II it pinches. In the Stage III game, US residual power appeared adequate to deal with a single hemispheric crisis, but US relations with "client" states elsewhere would certainly have to be altered radically, and international military and political action substituted therefore.

On balance, Stage II looked more attractive than Stage III in terms of a responsible US capacity to act even marginally. US disarmament planning might well consider whether an appropriate plateau for the GCD process can be found somewhere in Stage II, and how to structure the GCD process so that terminal points can be established in equilibrium without endangering the entire process.*

- The games demonstrated that, if international forces are going to be used for such politically delicate operations as racial war in Central and southern Africa, one quickly runs out of neutral countries or forces of the right national complexion (which may argue for considering the desirability of an internationally recruited police unit).

The African game (like the real-life Congo) emphasized the Secretary General's problems of internal authority, specifically his ability to discipline units which become ideologically committed to one side or the other in a civil war situation. It also suggested to some the desirability of looking again at a regionalization of peacekeeping arrangements in order to avoid some of the complications of policy escalation, as it were, in a highly complex internal situation.

- In the games there was less concern for escalation than there is today. The Soviet teams in the advanced stages of disarmament reported that they felt less constrained, thanks to the absence of US forces in Europe and the general diminution of strategic power. But the several US teams estimated that they were not particularly disadvantaged by a disarmament

* The disarmament stages were taken from the US disarmament proposals of 18 April 1962.

agreement as they examined their strategic options; their view suggested that a new equilibrium had been established in the world by GCD, embodying a system which was possibly less dangerous than that of the past.

• In the crisis the need to communicate to and from the *Polaris* system was greater than the need to protect the strategic capability by maintaining complete radio silence. The reason for this may well be the existence of other strategic weapons, particularly the *Minuteman* missiles in hardened sites which made the element of compromise somewhat less absolute.

• The games brought out rather vividly some of the radical options that might be pressed upon Soviet policy by factions in the Soviet leadership in circumstances of great strain and external pressure. In the simulated Soviet leadership group, three distinct positions took shape as the hypothetical world situation deteriorated.

The hardest line was taken by a military faction which urged a disarming strike against the intermediate range ballistic missiles and other military targets in Western Europe. The second group felt that Eastern Europe was a lost cause and that the Stalinist position was the only solution. This faction urged that Soviet losses be cut and Mao Tse-tung re-

US Naval Institute Proceedings

The political-military exercise is a useful teaching device

embraced, with concentration thenceforth on the underdeveloped world. The third group, which prevailed by a thin majority, embodied the standard Khrushchevian mixture of pressure and conciliation.

• Some were struck with possibilities they had not considered before of the existence of more possible political "firebreaks" and restraints on

strategic weapons deployment than appear on the surface—for example, keeping airplanes over national airspace rather than letting them proceed to a fail-safe line.

- By the end of the game, the Soviet team had come privately to see the multilateral force (MLF) as a lesser evil with which it could live in preference to a European nuclear force or any of the other various alternatives to the MLF. One curious feature was the rather natural way in which the European teams moved toward renewed interest in disengagement of allied and Soviet forces in central Europe as they appraised the positions in which they found themselves prior to the renegotiation of the North Atlantic Treaty.

Educational Value

So far, this discussion has concentrated on the professional use of the game technique for policy research. But the teaching and training possibilities of this method may actually outweigh its obviously moot predictive values.

One highly promising use of gaming is to teach students of international relations and foreign policy more about the process of making and executing foreign policy than they can learn from books or lectures. At best, it brings sharply into focus the more formal learning material. Colleges and universities such as the Massachusetts Institute of Technology, Northwestern and Columbia Universities, the United States Military Academy, and the United States Air Force Academy have in recent years used political games in both undergraduate and graduate courses with considerable success.

Another use of potential value is to help train military and diplomatic officers at midcareer and senior levels by having them act out the stresses and strains typical of real-life crisis diplomacy, the decisions made under pressure of time and events, the unexpected overturn of established plans, and the necessity for evaluating a multitude of factors and of having available alternative courses of action.

Factors Highlighted

Gaming is intended to highlight the complex of factors, subtle and otherwise, that weigh in on the policymaker but which are not always apparent in the neat strategic plan, the routine policy paper, or the self-assured theory. It is hard to think of a better shortrun device for the military officer who, with increasing rank, will face growing involvement in diplomatic situations, an involvement for which his academy training, his years with the troops or the fleet, his correspondence courses, and his professional readings have inadequately prepared him.

In an attempt to fill this serious gap, some US military colleges, through which pass those officers eligible for high command, have begun to look at gaming with a primarily political emphasis as a way of making better use of limited training time. The diplomatic trainee can also benefit from practice runs through a variety of crises involving global, regional, or individual country situations for which he might one day have policy responsibility.

The senior policy-type game, not primarily designed as a training device, has, nevertheless, proved itself an important educational technique. Indeed, this, rather than anything else, may be its principal enduring payoff. For, wholly apart from the policy lessons, questionnaires returned

by participants have revealed that responsible officials and, to a slightly lesser extent, scholars place a uniformly high value on the special benefits the games provide, particularly in sharpening their perceptions of alternatives that could arise in crisis situations.

The responses of military officers were, interestingly, the most explicit in this respect. Officers from all services have commented on the unique usefulness of this device in training senior officers in the sophistication of modern crisis diplomacy, with its richness of nonmilitary as well as military factors.

Leading specialists on Soviet policy have come out of games with strikingly fresh ideas about their specialty, including such things as a more acute awareness of the detailed constraints imposed on Soviet policymaking by the Communist alliance system, and the conditions under which a Sino-Soviet *rapprochement* might surprisingly take place.

Senior US policymakers who have taken part in simulation exercises have been struck by the extraordinary difficulty encountered in communicating serious intentions to one's opponents in a fully convincing way. This difficulty arose under laboratory conditions, but it mirrored some comparable problems of real-life diplomacy.

In sum, the only sure value of the political-military exercise may be the considerable one of providing not only students but also policymakers and scholars with one or more crucial lessons not learned before, but indelibly recorded in an important personal experience.

The art of the political exercise is in its infancy, but it has a modestly promising future. While it is not a magic shortcut to knowledge of the future, neither is it purely social science fiction. It can be very expensive in time, manpower, and money to organize on any substantial scale, but it can also be done for virtually nothing, requiring only willing—and able—participants. In a time when nations and individuals are communicating more but understanding the messages less, it can be only helpful to get a glimpse of ourselves as others see us, or of others as they may see themselves.

It was suggested earlier that possibly the most crucial feature of the enterprise is that it requires the players to live with the implications of their chosen strategy. Contrasted to what happens in a planning operation around a table or in the brain of a single individual, however gifted, the game sets up a process that by its nature produces a dynamic sequence of actions, responses, and counteractions.

This sequential process, once set in motion, moves ahead under a momentum of its own, often in logical and plausible directions not always foreseen. A kind of chain reaction takes place beyond the capacity of a single mind to anticipate. The reason for this takes us back to role-playing itself, for the heart of this process is the interaction of antagonistic wills; the same effect can be produced solo only by a schizophrenic.

The political-military exercise may be rated as excellent for training, useful for teaching, and potentially valuable—within limits that have been only tentatively probed—for policy research and planning.

A Single Original Thought

Major P. J. Norton,
Australian Army

IT IS possible for an officer to serve for many years in the army and to reach high rank without producing a single original thought. Unless he recognizes the many obstacles to original thinking, he will come to regard them as valid reasons for being unoriginal and eventually as excuses for lack of serious thought.

The very nature of army life is an obstacle. A young officer is busy learning his job and looking after his men. He must master a mass of facts and techniques, and he learns to react instinctively to certain circumstances.

After several years he is usually assigned as a junior staff officer. When faced with a problem, he will usually react to a set pattern. He researches the matter and talks to people who may have some knowledge of it; then he takes a blank sheet of paper and starts to write. There is no greater enemy of original thought than a sheet of paper which must be filled. However, he will pro-

duce an answer which is workable and is acceptable to his superiors, but his own contribution is only that of collecting, comparing, and writing.

At this stage of his career, his method of working and thought will start to crystallize. He will progress through a series of staff and regimental assignments producing workable and acceptable solutions. He will get a name for being reliable and will be regarded as a safe officer—one who never does anything wrong and always produces an answer.

Thought Pattern

By the time he reaches command or senior staff level, he is set in his ways. Thus, we see the commander whose thought pattern is the same as that of a junior officer. He still reacts very much by instinct. Instinct is essential for survival at lower levels, but it is the weapon of the wild animal and not of a reasoning human being.

He is conversant with current doctrine and techniques. When faced with a problem, he tries to bend it to fit the doctrine and techniques instead of mixing them with some original thought and action to allow them to solve the problem. If he is well supported, he will continue to produce workable and acceptable solutions. However, if thrown onto his own mental capabilities, he is apt to fail. He is unable to see anything but the immediate problem and cannot cope with the fact that a reasoning and original enemy is able to beat his rigid thought process.

The staff officer has a better chance of survival. His junior staff members will present him with workable and acceptable recommendations. If they do not, they can be sent away to think about the matter again. Unless he realizes that the work of his staff is only a foundation for thought which he must undertake, he will become a mere rubber stamp for other men's ideas.

Neither of these hypothetical officers is fit for higher command; however, they may get it, for it is most unlikely that they have ever done anything that would stand against them.

The required forms and conventions of army life do not lend themselves to original thought. They are necessary, however; orders and instructions must be presented in a set form for the sake of clarity and accuracy, and it is often the customs and traditions that allow an army to stand firm when all else fails.

The common mistake of the young officer is to try to think within the bounds of form and convention. He must learn to think outside these limits and express the results within them.

Further Obstacles

The increasingly complicated and technical nature of war has produced two further obstacles to original thought. It is not possible for a commander to be an expert in all fields, so he must rely on the advice of experts; nor can the commander be expected to sort out the mass of detail relevant to a problem of war.

The result is the planning team or committee, and from these we get the group decision, a compromise of many conflicting ideas. A workable and acceptable solution will be found, but it is not likely to contain any original thought. The commander must regard

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the deliberations of the group as a basis for his own thought and not as a readymade set of decisions.

One of the greatest obstacles to original thought is that infallible formula for success—the estimate of the situation. Here the officer considers all the relevant factors and arrives at a series of conclusions; he then examines the courses open to our side and the enemy and decides on the course he will adopt. By carrying out this process and adopting the most attractive course, he is bound to arrive at a workable and acceptable plan.

The formula will produce a solution with a minimum of thought, yet it is intended to do anything but that. It is designed to produce a sound basis for thought. The answer to the problem must come from a human mind.

A commander who puts down his pen after he has dealt with the factors, shakes off his experts and staff, and goes for a walk may be considered eccentric, but he will produce a better plan than the one who writes his way steadily through from aim to plan.

An examination of the borrowing cards in military libraries indicates a scramble for facts rather than a search for knowledge and understanding of the forces and reasons behind events. The works of military thinkers such as Karl von Clausewitz, B. H. Liddell Hart, and Sir John Slessor are little read, while the cards for factual accounts of campaigns and battles are well filled. The intellect of the soldier-scholar is being replaced by the analytical mind of the soldier-scientist.

There is a danger that the army will produce a mass of technically competent, safe, and reliable officers. In this mass it will be increasingly difficult to find officers of the intellect and originality of thought required for higher command.

Officers must be encouraged to think early in their careers and to produce ideas of their own, even if they are unworkable, unacceptable, and unsafe. At least, they will be the result of original thought. The philosophy of war should come into an officer's study. Instead of writing all his essays and papers on concrete subjects covered by a mass of references, he should be forced to write on abstract subjects where the only reference is his own intellect. The army could even trade some of its bachelors of science for a few doctors of philosophy.

Unless this trend away from original thought is halted, we will end up with an army that is completely workable, acceptable, and safe—even to an enemy.

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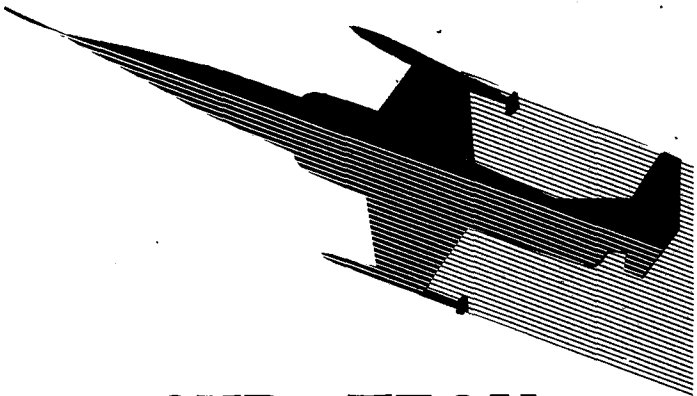


STRATEGY

General of the Army Charles Ailleret, *Chief of Staff of the French Armed Forces*

This article is a digested version of an address given by General Ailleret at the Centre des Hautes Études *on 4 November 1964. It was subsequently published in the January-February 1965 issue of the* REVUE DE DEFENSE NATIONALE *(France), under the title, "Les Études Stratégiques au Centre des Hautes Études Militaires."—Editor.*

NATIONAL strategy includes far more than just military operations. It determines the war aims, weighs the risks, and compares them to the results expected from negotiations. By its direction of the whole activity of the country, it provides the armed forces with weapons and manpower, and ensures the survival of the nation in the postwar world.

National strategy is based on operational strategy; this requires that the head of the government be assisted by a chief of the defense staff who prepares for him the major military elements of his strategy and relays directives to the various military commanders.

In Joffre's time, there was one strategy for ground forces and another for naval forces, each of which was a homogeneous entity. Today, things are

less simple. One factor which has complicated strategy is military aviation, now one of the fundamental elements of battle. The unique problems arising from this aerial weapon system caused the creation of air forces which claimed to be fighting separate battles and with a particular air strategy.

This claim could be supported during the World War II era, although it was never entirely justified. Wars are not necessarily won by simply destroying enemy airpower; it could conceivably take longer to destroy the enemy's air force than his ground forces. Even without an air force, an enemy on the ground can still win a battle if he has other compensatory advantages, as was strikingly illustrated at Dien Bien Phu.

One Battle

The speed, range, and power of modern aircraft, especially those with nuclear weapons, have made them a decisive element of warfare. Aircraft are capable of destroying the sources of the enemy's potential and logistics; they can also neutralize ground forces which engage in some rash adventure. On the other hand, ground operations can neutralize an enemy's air force by the capture of important infrastructure such as airfields and radar equipment. Furthermore, ground forces now have missiles which can attack the air infrastructure and shoot down attacking enemy aircraft even at the highest altitudes.

It is thus evident that there is only one battle to be fought—the combined air-and-land battle—and there is, therefore, only one air-and-ground strategy.

At sea, the war has become a combined air-and-naval war, and includes the use of land-based aircraft. No longer immune from land and air attack, ships can now be detected in midocean by land-based aircraft and reconnaissance satellites, and can be destroyed by bombers or missiles. The relative balance of aircraft carriers in nuclear war is totally different from the days when it took a direct hit from one or more heavy projectiles to sink a carrier.

Apart from this, greater numbers of ships are being equipped with long-range missiles which enable them to attack targets located some distance inland. Within 10 years, the main function of the navies of the modern great powers might well be to maintain nuclear delivery means at sea for use against land targets. The *Polaris* submarines are a practical illustration.

Naval aircraft, operating far inland, can also provide support for troops engaged there, and can bolster other air defense means.

One Strategy

Seen against the background of sufficiently wide areas, the air-and-land battle and the air-and-sea battle can no longer be considered as two separate battles. They are one battle which must be centrally directed by a single leader who should combine all operations in time and space. This principle has produced the concept of the theater of operations with one commander, assisted by an interservice staff, who commands all the forces operating in that theater in pursuance of a single, common, strategic mission.

This integration at the highest operational level permits operations at the lower echelons to be conducted within the traditional framework of the services. The single concept of operations achieved at theater level results in mutually supporting missions

being given to the services. This keeps them oriented in the same direction.

Circumstances have often made it necessary also to establish interservice commands at echelons lower than that of the theater. Thus, in the North Atlantic Treaty Organization Command, the Supreme Headquarters, Allied Powers, Europe, is interservice, and so are the subtheaters: Central, Northern, and Southern Europe. In concentrated subtheaters like Central Europe, these are divided into separate land, sea, and air commands. It may also happen, as in the case of Northern Europe, that the subordinate commands—at a level corresponding to army group or army—are themselves integrated on the interservice pattern.

The Modern Concept

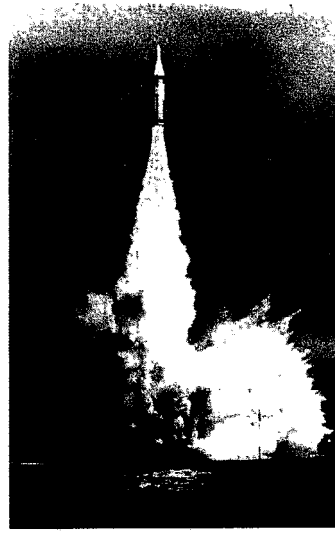
It is no longer possible to conceive of separate strategies for land, naval, and air forces, but only of a single strategy providing for the coordinated use of the three services. Therein lies the fundamental difference between the strategy of today and the strategy of Joffre's time. As commander in chief of the northeastern group of armies in World War I, Joffre controlled several armies which were not absolutely identical, but were very similar in capability and organization.

Later on, the frequent use of the army group, an intermediate operational echelon between the theater commander and the armies themselves, further simplified the task of the supreme command by reducing the number of its immediate subordinate commands.

Apart from certain special assignments such as heavy bombing, the air force in general was allocated to command echelons below theater level. Such echelons had to be high enough to exploit the high speed of the aircraft, but employment at theater level was ruled out by the limited range of aircraft then in service. Hence, the decision to combine ground and air operations at the levels of the army group, tactical air forces and armies, and tactical air command.

Today, aircraft can cover an entire theater of operations. For this reason, except for liaison or observation aircraft, it is essential that airpower on a massive scale be centrally directed at the strategic level of the theater.

The fundamental reason why operations conducted by the modern commander in chief are heterogeneous in character is that he commands forces whose operations are highly decen-



US Navy

A *Polaris* missile breaks the surface of the ocean and ignites, sending it on its preselected flightpath

tralized and whose dispositions he can only alter slowly, as well as forces whose combined operations must be conducted at his own level.

This double perspective, to which the commander in chief and his staff must adapt, has its difficulties and risks. Combining centralized operations occurring at Mach 2 with decentralized operations moving at the rate of a few kilometers per hour might tempt the commander in chief to concentrate on one field of activity to the neglect of the other.

This difficulty of coordinating such essentially different operations can result in their separation and the restoration of independent action on the ground and in the air, which would be more disastrous in the future than it ever was in the past. This underlines the importance of combined planning on a long-term basis and at every stage of the commander in chief's operations.

Plans Without Theories

Planning the maneuver of forces in a given theater can be done only after studying specific concrete situations. There is no abstract strategic theory applicable to every situation which a commander in chief may face.

Strategy is, in reality, a matter of specific contingencies which are extremely variable according to the world balance of power and to changes in the manufacture of armaments. Furthermore, the nature of strategy is essentially human and deals with what Jomini described as "a frightening and passionate drama."

To those commanding at the strategic level, strategy is far from being a purely intellectual activity. The conduct of strategic operations is not a technique like the technique of automobile manufacturing. It is more like driving a car for 24 hours at Le Mans, and it requires not only driving ability but also the will to fight, even if behind, the capacity to endure fatigue and lack of sleep, the energy to overcome poor weather conditions, and the readiness to accept the consequences for serious accidents or the loss of the race.

This explains why strategy depends on too many material and human parameters to be readily converted into a general theory from which all its applications would flow. It is unlike mechanics or electricity where basic theoretical study must logically and inevitably precede practical application.

Strategists and Authors

In forming strategy, there is no basic theory other than plain, commonsense truths as laid down in "the great principles of warfare." Presumably this explains why the great strategists—the men who were commanders in chief on memorable occasions—never produced a treatise on strategy. They often wrote memoirs describing strategic problems and how they solved them. But they probably realized that, although some useful lessons might be learned from their particular experience, there could not be a general theory suitable for application anywhere or at any time, and they refrained from writing on such a theory.

The great authors of strategic theories—Guibert, Clausewitz, Jomini, Von der Goltz, Castex, Liddell Hart—have been men who thoroughly studied the elements of war. They sometimes served in war, but were never commanders in chief in conditions of strategic responsibility. That is probably why they thought it possible to elevate war to a system.

People might argue that Foch and

De Gaulle, who unquestionably rank among the most eminent strategists, have written on strategy. But it was not Marshal Foch or General de Gaulle who wrote about strategy. It was Lieutenant Colonel Foch and Lieutenant Colonel de Gaulle who took up the pen long before they assumed the heavy burden of responsibility.

Moreover, Lieutenant Colonel de Gaulle, in his book *L'Armée de Métier*, did not write about strategy in general but—and this is quite different—about a strategy resulting from the use of the modern resources of the period and suited to the solution of the political problems confronting France at that time. His strategy opposed the obsolete military policy then followed by France which made the mistake of planning future operations on the basis of outdated military experience from the last war.

Nevertheless, systematic strategic theories are interesting and should be read by those who intend to acquire the education of a commander in chief. One often finds there original ideas which are worth knowing. However, they should be taken for what they are—namely, the result of a predigestion of military history or a subjective analysis of current political and military factors which are not always accurate. Such theories must be studied in the most critical spirit and should not be accepted as a bible. One should not hesitate to reject that which is confusing and difficult to understand and that which results from hasty generalizations or reckless extrapolations.

The two World Wars proved that it is desirable that coalitions accept such restrictions as a single supreme command

The practical study of strategy

should be based on an objective examination of situations liable to arise in the foreseeable future, and should be seen as a function of those armaments which will be available. It is useful in such a study to read the memoirs written by political leaders who were in charge of the conduct of major wars, and the memoirs of military leaders in charge of operations. They explain the kind of problems that confronted the strategic commands, but they do not provide any guidance as to how to solve problems of the future.

National Interest

Strategy, as an objective discipline, is thus determined by many parameters. One of the most important among them is the nation itself, for whose benefit strategy must be exercised.

As early as 1903, Foch, in the *Principles of War*, quoted Von der Goltz:

He who writes on strategy and tactics should force himself to teach an exclusively national strategy and tactics—which are the only ones liable to benefit the nations for whom he is writing.

Foch developed this theme by stressing the fundamental differences between the problems to be solved at that time by France, Belgium, Britain, Spain, and Switzerland.

What gives added point to the emphasis laid by Foch on the national character of a strategy is the fact that, at the time he taught at the *Ecole de Guerre*, countries did not have the tendency they now have to become deeply involved in power blocs or alliances.

The national character of practical strategic studies is even more vital today. The two World Wars proved that it is desirable that coalitions should accept such restrictions as a single supreme command of all the armed forces of an alliance engaged in a common enterprise. But an alliance comprising several countries amounts to the pooling of their combined efforts for some particular objective—an objective common to the policies of those countries; it does not entail the complete amalgamation of their policies nor of their over-all strategies.

If the policies of countries making up an alliance contain common elements, and lack outright contradictions in other elements, an alliance can be concluded to provide coordinated common efforts.

Alliance Strategy

As far as the common element of a national strategy is concerned, it is possible to agree upon an alliance strategy after making necessary compromises. Even with a common objective, however, it may be evident that there are too many conflicting opinions, or even contradictions, in assessing the means of attaining that objective. Attempting to gloss over such differences by imposing a common strategy could only violate the sovereignty of the countries concerned. If the countries then refused to accept the loss of their sovereignty, this would result in the breakdown of the alliance. It could be restored at a lower level of coordination of efforts—the lowest being the simple addition of such efforts without coordination.

Thus, there are cases where statesmen, as well as military chiefs in charge of strategic commands, might be called upon to evolve an alliance strategy for the attainment of specific objectives, mostly of a defensive character. It is necessary, however, that they should not plan such an over-all strategy as one would plan the strategy of a united country. They should

first consider the national strategy and the corresponding national resources, and then combine part of the national strategy with similar parts of allied national strategies within the framework of the common objectives pursued by these strategies.

If, as in the days of Foch, the man responsible for shaping his country's strategy must approach it from a national angle, and not from the nebulous viewpoint of a general theoretical strategy, his task today demands still greater vigilance. The existence of vital alliances might lead to serious confusion between the over-all strategy of an alliance and national strategy.

Such confusion could bring about the more or less rapid disappearance of the independence of the country, leaving it a mere protectorate of the alliance or of the dominating power within the alliance. It might also lead to the replacement of a valid national strategy by another strategy which, ultimately, would prove less effective in preserving the intrinsic security of the nation.

COMMENTS INVITED

The Military Review welcomes your comments on any material published. An opposite viewpoint or a new line of thought will assist us and may lead to publication of your ideas. If you are an authority on a certain subject, why not write an article for our consideration? If you have only an idea, query us; perhaps we can assist you in developing an acceptable article.

LESSONS FROM THE PAST

Major Jean J. M. Antonietti,
Royal Netherlands Army

IN MORE recent years, US military publications have carried a large number of articles which deal with various aspects of guerrilla and counterinsurgency operations. The US military forces cannot be accused of intellectual slackness or reluctance to adapt to changing circumstances.

Unfortunately, and with some regret, it must be noted that a number of ideas and techniques have been lost since the fierce jungle battles of World War II. This is rather strange, considering the vast experience gathered by the US Army and Marine

Corps in their campaigns in the Pacific.

This observation is not made to slight the effort, the lofty idealism, or the amount of blood and sweat spent daily by US fighting men in the Far East. It does stem, however, from a sense of regret that a number of well-known subjects had to be learned again—the hard way. A number of mistakes might possibly have been avoided if the experiences of the past had been more fully studied and applied, experiences gained not only by US forces, but also those of the Royal Netherlands (East Indies) Army.

Fighting Experience

Today, it is sometimes forgotten that the Dutch did an impressive amount of successful fighting in the Tropics. More than 300 years ago, mercenaries of the Dutch East India Company started campaigning to protect national trade interests in what is now Indonesia. In the last century, a regular army was established there. In the more than 110 years that it existed, the army was almost continuously in the field, fighting actions which varied from two or three fair-sized wars to numerous patrol clashes.

That army operated in an area stretching over 45 degrees of longitude and 15 degrees of latitude, and the combined landmass exceeded 70 times the area of the mother country.

The experiences thus gained were duly evaluated, recorded, and published. A wide range of subjects was covered—historical, ethnological, and terrain studies; regulations for the organization and logistical support of military and scientific expeditions; manuals on engineering with local materials; scouting and patrolling; minor tactics; river navigation; jungle lore; and numerous other related subjects.

As Dutch is not a widely know language, the wisdom and experience contained in this extensive library is not easily accessible to foreigners. This is true, too, because most foreigners have little incentive to learn Dutch since they find that most Dutchmen speak English anyway.

Military Manual

Still, this is regrettable, especially with respect to one military manual published originally in 1936 which contains rules and hints for small-scale actions under primitive circumstances—the *Voorschrift voor de uitoefening van de Politiek Politionele Taak van het Leger.* This tongue twister is best translated as *Army Manual for Pacification and Aid to Civil Power.*

Although the opponent dealt with in the manual was rather primitively armed with lances, swords, blunderbusses, and occasionally a few modern rifles, the climate, the terrain, and the people themselves were factors which assert their influence now as they did then.

While a number of tactical concepts are out of date, we are still confronted with the possibility of having to wage limited war under adverse weather and terrain conditions. Political con-

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siderations may also preclude the full panoply of a modern army being brought to bear upon a foe.

I feel strongly, therefore, that some of the experiences gained in the past may still be applicable—if the lessons drawn from them are applied in the light of present circumstances. The extracts which follow should prove useful, although some of them may seem redundant because they are so self-evident:

duties of troop leaders

Every detachment commander is bound to acquire a thorough knowledge of the characteristics of his area. This entails, among other things, an extensive knowledge of the topography of the area; the character, language, and religion of the population; the structure of the ruling families; and the influence of headmen and princes on their people. Much useful information can be gained from military history, unit journals, periodic reports, and the memorandums of the civil government.

Commanders and troop leaders will make every effort to offset the detrimental effects of fatigue, privation, and disappointment. To this end, they will pay special attention to subsistence arrangements.

On no account will security be sacrificed for comfort. One should constantly bear in mind that the population—and especially if it is hostile—is keenly observant. Bad habits will soon be known to the guerrillas, who will then take advantage of our shortcomings.

If peaceful contact already exists, it should be fostered by all appropriate means. Of first importance is a constantly correct behavior which is to be continued even in case of treacherous conduct by the adversary.

The indiscriminate destruction of the means of livelihood and the burning or demolition of property will only goad the resistance party to stiffer opposition. Such practices are, therefore, strictly forbidden.

The well-intentioned population is to be protected; religious customs and ancient institutions will be respected insofar as they are not contrary to humane conduct (slavery, headhunting, and vendettas).

Shrines, holy places, and buildings of historical or artistic significance will be spared unless they are forcibly defended.

Oppression, pillage, looting, and all kinds of vexations must be punished with the utmost severity; it may be necessary to impress this rule on the troops most forcefully.

The honor and right of the family, human life, and property will be respected.

All services rendered by the population will be paid for even in areas where there is active resistance.

Even in areas which are seemingly peaceful, an outbreak of secretly prepared insurgency is always possible. In view of this, security measures will be taken at all times.

During investigations and interrogations, both the accused and the witnesses will be disarmed. Special privileges of princes and chiefs will, however, be respected.

Princes will always be treated with the respect due their rank and status. On the other hand, they will be obliged to render due respect to our officers and patrol leaders.

actions against insurgents

A vigorous but humane military action is the best means to establish or restore law and order. The main objectives are the leaders and chiefs of the insurgents.

In case of actual armed resistance, it should always be borne in mind that a retrograde movement by our troops, without their having obtained a decisive victory, will appear a defeat in the eyes of the adversary. This leads inevitably to an increase in strength of the insurgents.

The insurgent party must be required to surrender unconditionally. Until that time, it will be restlessly pursued, its hideouts tracked down, and its settlements and supplies confiscated or destroyed.

Actions will generally be most successful if the guerrillas are approached from an unexpected direction.

In all encounters with guerrillas, serious efforts will be made to spare the lives of women and children.

Prisoners who do not resist will not be treated with rudeness or subjected to physical force. They will be properly fed and left in the possession of all their property except arms and documents.

It is strictly forbidden to stimulate surrender by the threat that no quarter will be given.

The population will not be forced to participate in any military action against their fellow tribesmen, nor is it permitted to extract information through corporal punishment, incarceration, or the like.

indications of pending unrest

When people are preparing for actual resistance, one or more of the following occurrences may be observed—purchase of salt in greater than normal quantities; hoarding of food supplies; the neglect of cultivation; diminishing market trade; migration and evacuation of women and children; impudent behavior toward civil and military authorities; minor disturbances of the peace; and circulation of false rumors.

The presence of insurgents can often be concluded from the uneasiness of the people, the absence of women and children, the evacuation of livestock when troops approach, and, at night, from signal fires and the beating of drums or hollow tree trunks.

patrolling

When flash floods and high water are expected, an effort should be made to reach the water courses on the line of march at such a time that a crossing can still be effected.

When a river appears unfordable due to recent excessive rainfall, it is often advisable to wait until the water level has dropped rather than leave the line of march in order to circumvent the river. This is particularly so in mountainous country.

An increase in the rate of march should not be attempted by stepping up the cadence. When such an increase is desired, it will be attained by marching during a longer period or by marching day and night.

Raising the cadence results in insufficient attention being paid to adjacent terrain, tracks, and imprints; straggling will be induced with the consequent loss of security and combat readiness.

In order to prevent insurgents from raiding bivouacs or laying ambushes, it is imperative that patrol leaders maintain the initiative at all times.

By avoiding regularity in patrolling an area, it will be difficult for both population and insurgents to keep informed about the movements and whereabouts of patrols.

When insurgents or other undesirables are known to be in an area, they must be tracked down. Through uninterrupted pursuit they will be prevented from planning and executing raids and ambushes. In this

context it is often worthwhile to forbid certain trails to the local population.

In areas where the insurgents are likely to use ambushes, falling log traps, bamboo whips, panjis, and similar devices, the trails should be avoided. This adds to the chance that an ambush site will be approached from a flank. Part of the patrol—the point—may be split up into two parties which will sweep both sides of a trail, or the whole patrol can advance in a zigzag fashion.

Only the constant vigilance of every patrol member can enhance the chance of immediate response in case of a surprise attack or ambush.

Advancing should be done as quietly as possible. The practice of idly cutting twigs with the machetes out of boredom will not be tolerated.

Streams and other obstacles will not be crossed before the patrol is well closed up and the bank secured. After crossing, the patrol will adopt the proper march formation before continuing on its route.

Every patrol will carry rations at all times so that, if contact is established, it will not be forced to break off pursuit through lack of food.

When marching at night through wooded areas, maintaining contact can be facilitated by the use of luminous pieces of wood or bark which can be tied to the packs. Phosphorescent wood will often be found in humid tropical forests.

pursuit and tracking

Insurgents must be persistently pursued.

The first step in searching for hideouts must be the collection of information about the direction in which a search should be made. It is generally preferable to postpone a search pending further information than to commence an action based on insufficient intelligence.

A first step can usually be made by apprehending insurgents who have been sent to collect food in or near the villages. If the information thus gained appears reasonably reliable, it should be acted upon immediately. If this is not done, the information will prove to be useless since a gang decamps when its supply party is overdue.

use of deception

A captive must be kept out of view from the population since there is always a chance that the insurgents will be quickly informed that one of theirs is a prisoner.

It is always worthwhile to mislead the population as to our true intentions. Departing in a direction different from that which we wish to take eventually is good practice. One can also spread false rumors about one's destination.

Searching an area must be done systematically. Trails are to be avoided, and our own tracks must be obliterated.

Jungle hideouts are usually established near streams and sometimes uphill from the sources. When tracking, special attention must be paid to the banks of streams and their tributaries. It is advisable to beat the ground from uphill and going downstream as one will be least expected from that direction.

When settlements appear to have been left in haste, the adjacent terrain and gullies must be thoroughly searched.

It goes without saying that our attention may never slacken when pursuing insurgents. Imprints; broken, bent, or cut twigs; torn leaves; remnants of food; bird snares; and digging marks will all have meaning to the attentive and experienced tracker.

The techniques of river navigation are

governed by the general character of a river in a certain area. When planning and executing river patrols, methods should not be based solely upon theoretical considerations or experiences gained elsewhere.

When flash floods are encountered, one should be careful not to attach too much value to the opinion of the native oarsmen. As long as one is not hindered by the overhanging branches of shrubs and trees on the banks, there is no reason to stop.

flash floods

Should flash floods compel a patrol to halt, the following can be expected. If the water in the middle course has been rising for 24 hours beyond its normal level, it will take at least three times that period before the water is back to its normal level. In the upper course, the water will fall much quicker, whereas in the lower course the water will neither rise so high nor cause the same amount of trouble.

On dangerous stretches, such as when shooting rapids, only one experienced person will give the necessary helm orders. The other passengers will refrain from all interference.

Every canoe should have a number of spare boathooks and paddles on board. Each rower should have a spare paddle by his side so that should his paddle break he has a new one immediately available.

Some rapids or log banks cannot be negotiated without unloading the canoes. To reduce the delay, every load must be fitted with a carrying frame or loops of rattan so that they can be backpacked.

Rowers are generally reluctant to unload. They would rather gamble on successfully negotiating the obstacle than carry the loads overland. This tendency must be guarded against.

The bow and stern oarsmen should be very experienced. Military personnel should also be made to row, and they will be placed in the center part of the canoe.

Going downstream, canoes cannot be as heavily loaded as when going upstream.

Visual contact between canoes must be continuously maintained.

When going downstream, the canoes will keep an interval of 50 to 100 meters. In this manner they will not hinder one another, and they will be able to come rapidly to each other's assistance in case of a mishap.

When going upstream, the canoes will keep closed up as much as possible so that crews can assist each other in crossing obstacles.

Only one canoe at a time will negotiate an obstacle or dangerous spot.

If the width of the stream makes is possible, a couple of rattan cables will be rigged across the river some distance below the rapids. The cables should hang just below the surface so that they can be easily caught by men who have fallen from capsized craft.

availability of weapons

Weapons must be attached to the canoe in such a manner that they will not be lost should the craft capsize, but are also readily available in case of emergency. This can be accomplished by tying the standing end of a length of cord to the board of the canoe and by tying a draw hitch around the sling or trigger guard with the running end.

If there is a chance of being fired at from the bank, a flank guard should march on the bank if at all possible. If the patrol is of sufficient strength, a point should precede the main body by several hundred

meters in faster craft. When approaching critical points, the point will debark and take up positions from where it can ensure the security of the main body of the column.

When coming under fire, one should not attempt to jump overboard. Everyone will stay put so as not to endanger the stability of the canoe. The canoe will be rowed to the bank, and, after a rapid but orderly debarkation, the passengers will move out to the attack.

bivouacs

When the tactical situation allows, bivouacs will be established on high and dry terrain which affords protection against sun and weather influences.

Before deciding to bivouac in a native settlement, a check should be made to ascertain that it has not recently suffered from infectious diseases.

It is not advisable to bivouac at the foot of cliffs as heavy rains or storms may cause tree or rock falls. In the jungle, the vicinity of dead or rickety trees must be avoided or they should be brought down first.

Near rivers, bivouacs should be made above the normal flood level. Sand and gravel banks in the riverbed should not be chosen as bivouac sites because of the danger of being isolated or swept away by flash floods.

Commanders will take care of their men before attending to their own comfort.

It is best to avoid the banks of noisy streams or the edges of large fields of kunai grass as the noise will prevent the sentries from hearing other sounds.

A bivouac is preferably hidden in the jungle so that an enemy will only discover it by accident. When establishing such a clandestine bivouac, all tracks leading to it must be carefully obliterated.

In order to give insurgents as small a chance as possible to detect a bivouac, it should be established late in the day. To this end cooking can be done in another location, after which the march is continued to the planned bivouac site.

It is unwise to bivouac near a former insurgent position since the area will be well known to the adversary.

Everybody will have his personal weapon and ammunition on his person at all times.

ambushes

Should a bivouac be harassed regularly, ambushes should be laid. The ambush site should not be approached directly from the bivouac. The ambush party should leave the bivouac a day or more before it is due to be in position and occupy the chosen site stealthily after having followed a circuitous route.

The ambush site should afford concealment in all directions, and sentries will be posted to protect flanks and rear. At night it will be advantageous if a site can be found which is enclosed by hedges or steep banks as these will keep the insurgents in a killing zone. In daylight, a site should be chosen which must be approached over open terrain, thereby ensuring maximum fire effect for the longest time.

One or two reliable and composed men will be detailed as lookouts; the remainder of the party will keep under cover until alerted.

At night regular checks should be made to ensure that every man is awake and alert. This can be done by passing some object around.

Firing will only commence on order of the ambush party commander.

Lessons Learned

The Dutch forces attached great importance to the principles of the offensive, surprise, and security in their counterguerrilla operations. Restless pursuit kept the enemy on the move and allowed him no time to recuperate. It enhanced the morale of our own troops and fostered a sense of insecurity in the opponent. Coupled with surprise, it led to swift and telling results.

Surprise was attained by thorough security measures, by moving off the beaten track, and by dominating the terrain which the insurgents had initially considered as their exclusive province. By thus establishing an aura of omnipresence, the population would sooner put their trust in our capability to protect them. They would then gradually become more cooperative and willing to furnish information and services.

Simply professing our good intentions without showing that we had the intention and the means to eliminate the insurgents and establish law and order would not have yielded results. Since, generally speaking, the majority of the people were not fanatics and preferred to be left alone to live in peace and till their fields, it was essential to create an image of goodwill and superiority of force to induce them to support the legal authorities.

The people will not support civic actions and furnish information if they fear they will come to harm in doing so. Eliminating their fear is, therefore, one of our first objectives.

If Mao Tse-tung's dictum holds true that guerrillas should move among the people as fish in the water, it is essential to poison the water for them by showing the people that their interests lie on our side and can be safeguarded by us.

Preventing the formation of a resistance movement is much easier than dealing with one after it is formed. Likewise, destroying such a movement is much easier during its early stages than when it has reached more advanced stages of development.

Department of the Army Field Manual 31-16
Counterguerrilla Operations

INTERNATIONAL MILITARY EDUCATIONAL SYSTEM

Colonel Richard J. Stillman, *United States Army*

WHEN it was established 14 years ago, the North Atlantic Treaty Organization Defense College in Paris became the first truly international school in history. Today, its students are middle-aged officials from NATO countries who spend five and a half months together studying political, economic, and military subjects as they relate to the alliance. Attendance at this college has convinced many of the need for an extensive international military educational system.

The present mission of the college is to train selected military and civilian personnel in:

- Organization and aims of the North Atlantic Treaty and major factors involved in NATO defense.
- Organization and operation of NATO bodies and staffs.
- Problems concerning the preparation and conduct of NATO forces for war.
- Language comprehension of French or English according to the needs of the individual faculty officers and members.

The college curriculum is divided into three segments. The initial eight weeks are devoted to basic factors and include the history, structure, and strategy of the alliance, the Communist threat, and how NATO is facing the threat in the military field. The middle period examines external factors affecting the alliance and covers the Communist countries and the underdeveloped regions. In the final

weeks, concentration is on the future of NATO in the next 10 years.

Hour-long language classes in French and English foster improved communication as well as cultural appreciation. Skills may vary from rudimentary knowledge to almost complete mastery.

Paramount Difference

The language and cultural barriers pose difficulties, but the paramount difference between our national military institutions and the NATO Defense College is that at our own schools we see only a slice of each problem of the alliance from an American viewpoint. The NATO Defense College provides a platform not only for obtaining each national philosophy, but also for using the impact of these interrelationships and interactions in reaching solutions. In such a multinational institution, this honest exchange provides a unique opportunity to understand other views.

Although the NATO Defense College provides its students with a fresh perspective and serves a purpose in training senior officials for important alliance billets, it appears to offer, according to a distinguished graduate, "too little too late." Sir Lawrance Darvall, former Commandant of the NATO Defense College, struck at the heart of the problem:

If we can plant the germ of new loyalties in mature men, how much deeper are the roots we could sink in the youth of the Atlantic community, if at their most impressionable period we could gather them together in residential colleges, making them members of a self-governing community which demands much of them?

If we are seriously interested in furthering the Atlantic community, it would appear reasonable to establish a strong NATO military educational system. Here we could provide schooling at all levels for highly select military leaders in international affairs—both for today and tomorrow. I would visualize, eventually, a NATO university complex located at key areas in Europe and North America.

Allied Educational Program

Over-all responsibility for this allied educational program would rest with the North Atlantic Council, although policy guidance would be furnished by a military subcommittee on education with senior officers, appointed by the committee, to administer and guide the various institutions. Levels of education would be patterned after the systems presently in use for the major national powers.

At the apex would be the present NATO Defense College, expanded to compare favorably in size, duration, and physical plant with the United Kingdom's Imperial Defense College, France's Institut des Hautes Études de Défense Nationale, and the United States National War College.

Below this top level school—colonel-general officer rank—would be a field grade NATO Staff College. General Dwight D. Eisenhower recognized a need for such a school at the same time he recommended establishing the NATO Defense College. He informed

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the Standing Group on 25 April 1951:

I am . . . having my Staff . . . consider the advisability of setting up a school for NATO Staff Officers for the study of staff procedures and tactical doctrines.

This 10-month course would be open to senior captains, majors, and lieutenant colonels. As part of the NATO Military University, it would be situated in the Paris area to take advantage, where appropriate, of speakers and other facilities utilized by the NATO Defense College. Proximity to Supreme Headquarters, Allied Powers, Europe, NATO Headquarters, and Allied Forces, Central Europe would also be helpful.

The Curriculum

The curriculum would train officers to fill NATO middle-level command and staff appointments by studying modern war on an interallied basis. Considerable time would be devoted to tactical doctrine to widen the officers' knowledge of alliance problems —such as the multilateral force (MLF), and NATO division, standardization, and infrastructure.

Highly qualified junior officers would spend 10 months at NATO Army, Naval, or Air Force Basic Schools. These schools could be situated in major training areas, with the Army and Air Force Schools located in Germany. Here, for example, NATO's young army officers would have an opportunity to be near elements of Allied Command Europe's Mobile Force.

School objectives would include the development of teamwork and would permit a basic understanding of the problems confronting NATO at the unit level. All students would be required to gain proficiency in an additional language and be familiar with the history and culture of each alliance country.

The Air Force School could be set up at Ramstein where the French, German, and US combat-ready allied tactical air forces are already located.

A NATO Naval Basic School might best be stationed under Allied Command Atlantic in Norfolk, Virginia. Its graduates could contribute much as part of the MLF concept.

Supplement Present System

This proposed NATO military educational system would normally supplement our present national schooling. For example, the selection of US Army personnel for the NATO Army Basic Schools would be made among infantry, armor, and artillery officers who had from three to six years service. These officers would have completed, where appropriate, the nine-week basic course at Forts Benning, Bliss, Knox, or Sill and served as unit commanders for at least one year. Volunteers would be accepted to fill our national quota.

Only those individuals with outstanding records—including French language proficiency—should be considered. Graduates could expect repetitive tours in NATO and would be selecting a specialized career in international assignments. Attendance at a NATO school would be required prior to being designated for any responsible alliance position.

Funds required to support the Command Staff College and the basic schools would come from NATO sources. The cost for such an undertaking is small. General Umberto de Martino, a recent NATO Defense Commandant, delighted in telling visiting dignitaries that the annual cost of running the college approximated one medium US tank.

Each college and school would have its own separate funds for administrative costs, including lecture fees, physical plant, and other requirements. The salaries of all students and permanent members of the faculty would be paid by their respective governments. The total annual cost of running these five military colleges —based upon a yearly output of 840 students—would be less than four percent of the military portion of the NATO budget. It is assumed that the bulk of initial costs—land and buildings—would be provided by host governments, or by utilizing existing facilities on NATO installations.

As a longer range program, there should be established entry-type military colleges where young men, ages 17 to 22, would receive international schooling patterned after such institutions as the Royal Military College, US Military Academy, and the École Spéciale Militaire de Saint Cyr.

A NATO university system would further strengthen the bonds of the Atlantic alliance and would certainly be in accordance with the concept advanced by the late President John F. Kennedy:

The future of the West lies in Atlantic partnership—a system of cooperation, interdependence, and harmony whose peoples can jointly meet their burdens and opportunities throughout the world. Some say this is only a dream, but I do not agree. A generation of achievement—the Marshall Plan, NATO, the Schuman Plan, and the Common Market—urges us up the path to greater unity.

ADVISING THE ADVISOR

Major Irving C. Hudlin, *United States Army*

LITERALLY millions of words have been written on the role of an advisor. There are in existence as many ways to advise as there are varieties of beans.

But after all the analyses have been made and tabulated, several questions remain unanswered. What is an advisor? What is the basic problem? What type of advisor do we need? Are we using an age-old approach to a newly developed problem?

An advisor is an implanter of information and ideas. All other considerations must be subordinated to this purpose. An advisor is a mature, dedicated individual who exercises patience and perseverance in accomplishing his mission. An advisor is an individual who does not attempt to Americanize everyone he meets; rather, he helps people make of themselves what they want, not what the advisor wants.

Every advisor can truly be considered a teacher, a diplomat, and an

ambassador of the United States throughout the world, yet the accomplishment of our advisory mission seems to become more elusive. The educational levels of our advisors are rising higher and higher, yet proportionately our understanding of man is dropping lower and lower.

Basic Problem

The basic problem, I feel, is the lack of empathy on the part of our advisors, our soldiers. In essence, it is understanding and appreciating another person's viewpoint, ideals, mores, and objectives in life. In most cases, there is no compatibility except in the field of warfare.

Stereotypes of nations and of people often arise too quickly and are accepted by the advisor as fact, without a thorough investigation. The advisor tends to regard his counterpart as a national, not as an individual. Frequently, understanding is based on whether the counterpart accepts the advisor's suggestion and not on frank, open, face-to-face discussion of the points in question. Often, as a last resort, the advisor uses bargaining power in the form of military aid to achieve his objectives rather than to establish a closer personal and working relationship.

If an advisor can place himself in the shoes of his counterpart and truly understand and appreciate the counterpart's problems and frustrations, then he can assist in the alleviation of these problems and frustrations. Unfortunately, an advisor frequently arrives on the scene with preconceived ideas and charges full speed ahead without the slightest idea or care about the effect that it has on the counterpart.

Shaping the Individual

What does it take to shape the type of men we need to fill the role of advisors? We must consider the parents, the home, the environment in which he is reared, and, of course, his ideals, ambitions, and objectives in life. Intermingled with these are his religious beliefs and personal convictions.

In our modern society, torn with emotional crises which range from racial conflicts to attaining status, there is a great amount of pressure on the individual. Folkways and mores are crumbling, and the individual seeks the answer.

The US Army has made tremendous strides in shaping the individual through its schools and its social community. The war in Vietnam has demonstrated that we cannot win that type of conflict just by killing the enemy. We have to demonstrate by acts and deeds that the enemy cause is a false one. Above all, the advisor must be sincere, honest, and forthright in his relations with his counterpart. He cannot bless them in public and damn them in private.

We are still using the age-old approach to our newly acquired problem, and professional competence and military know-how are considered as the dominating factors in selecting advisors. From a strictly military viewpoint, this is a correct determination.

Major Irving C. Hudlin served with the 1st Special Forces Group (Airborne) in Okinawa and has also participated in Special Forces missions in Thailand, Korea, and Vietnam. He is a graduate of the US Army Infantry School and holds a B.A. in General Education from the University of Omaha. He is presently assigned to the US Army Test and Evaluation Command, Aberdeen Proving Ground, Maryland.

On the other hand, empathy on the part of advisors has seldom been formally encouraged as a need-to-have personality factor. Advisors who possess both empathy and knowledge are rare, indeed, but possessing military knowledge alone is not sufficient.

In order to instill in our advisors a better understanding of peoples, we must place more emphasis on such subjects as philosophy, psychology, sociology, and economics. These subjects should be mandatory requirements in all military schools. The time is not too late to train our advisors, our soldiers, in this school of thought. Our successes, particularly in southeast Asia, depend upon our advisors accomplishing their mission using knowledge gained through the study of these subjects.

The United States of America, in her role as a superpower, needs "super people" to carry out her worldwide mission. How do we obtain them? Certainly not in the myth of selective breeding. Psychology and sociology are not warlike subjects, but in counterinsurgency they are important factors in winning the hearts and minds of the people. A better grasp and understanding of this by our military personnel would help us to achieve our goals both at home and abroad.

There is really no difference in the basic nature of man whether he be American, Thai, Greek, Chinese, or Malayan. The basic problem lies in how we help him to achieve his basic goals. No man likes to be bought, or sold, or to have his mission overshadowed by open or veiled threats of aid being discontinued. A man likes to be considered as an individual, a man among men. He likes the respect due him according to his rank, position, and station in life. He wants recognition for his achievements in his steady climb toward his goal.

We need mature people as advisors, people who are soldier-diplomats. We do not need advisors who sacrifice their mission because of concern for efficiency reports and their chances on the next promotion list.

To be successful, we must go beyond the impersonal approach and tear down the fences with which we surround ourselves. We must sink our feet deep into the soil of the host country so that our planting will someday bring a bountiful harvest of peace.

MILITARY NOTES

UNITED STATES

'NV-105'

A new low-cost target drone aircraft has been developed by a US manufacturer to fill a "gap" between low-speed and supersonic targets now in service with the Army and Navy.

Designated the *NV-105*, the small jet-powered aircraft will fly by radio control at speeds up to 400 knots and altitudes from sea level to 25,000 feet. It is intended to provide realistic training for military gunnery and antiaircraft missile crews. The drone could also be used for exercising a wide range of operational missiles.

The *NV-105* is being proposed to both the Army and Navy as a low-cost recoverable drone to fill the medium-range requirement between the 200-knot *MQM-33* (*KD2R-5*) and the supersonic *AQM-38* (*RP-76* and *RP-78*).

Powerplant for the new medium-performance drone is a 100-pound-thrust turbojet engine, weighing 30 pounds. It will provide a flight endurance of one-half to 1.5 hours, varying with flight altitude and percentage of power used.

The *NV-105* is 153 inches long with a wingspan of 52 inches. It weighs 335 pounds when fully fueled. It can be flown from the ground or shipboard using standard zero-length launchers.—News release.

Project 'HARP'

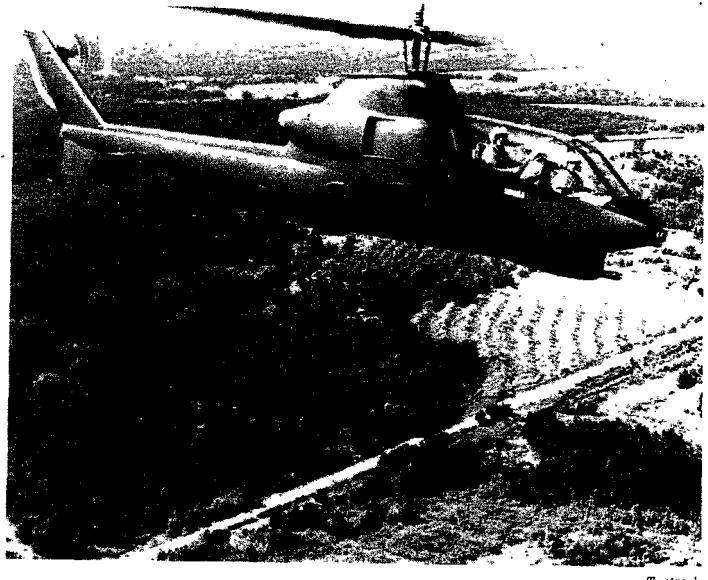
A new generation of rocket motors built in the United States for high-altitude research studies has been successfully tested by the Space Research Institute of Canada's McGill University.

Two 8-inch-diameter motors, each containing 120 pounds of high-energy, rubber-based, polycarbutene propellant designed specifically for Project *HARP* (High-Altitude Research Project), were launched using a 16-inch naval gun specially modified for rocket launching.

The motors were complete flight test vehicles, but were not ignited following launch. The firings merely tested the propellants and cases using 40-inch-long motors with end-burning propellant grains. Later tests will include motors which are 15 inches in diameter and 75 inches long and contain over 600 pounds of polycarbutene propellant in light-wall motor cases.

One of the main problems associated with gun-launched rockets has been supporting the propellant grain against high acceleration loads encountered in the barrel during firing. Recent tests indicate that the newly designed propellant grain and case bonding methods show promise of providing a solution to this problem. —News release.

'HueyCobra'



Textron's Bell Helicopter Company

The *HueyCobra*, specially configured for the armed helicopter mission, makes one of its first test flights. The manufacturer reports that the retracted gear, stubwings, improved rotor system, and aerodynamically clean configuration add to the speed and maneuverability capabilities of the new aircraft.

The *HueyCobra* version has been proposed to the Army as a design change for the *UH-1B's* currently on contract. The proposal is being considered by the US Army Materiel Command.—News release.

Fuel Cells

Plans for development of this country's first air-breathing, lightweight fuel cell system to power forward area military radios, radars, and other electronic equipment were announced recently by the US Army Electronics Command.

A contract for exploratory and advanced development models of this sophisticated electrical power source has been awarded.

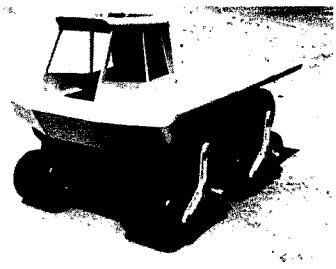
Since active development started more than a decade ago, fuel cells, which have no moving parts but generate electricity silently through chemical conversion of fuel, have been considered highly promising for forward area tactical use.

As long as they have fuel, they can operate without attention, and they have a much higher power-to-weight ratio than other electrical power sources. Since they make no noise, as do gasoline generators, they are more difficult for an enemy to detect.

Up to now, technical difficulties, including the necessity of handling gaseous fuels such as oxygen and hydrogen in heavy compressed-gas tanks, restricted tactical application.

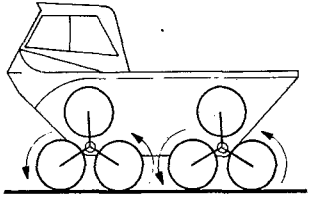
The new tactical fuel cell will obtain its oxygen from the air, and its hydrogen is contained in hydrazine, a liquid fuel that can be handled and transported like gasoline. The contract calls for both exploratory and development models that will produce 720 watt-hours—60 watts for 12 hours—on one 2-pound fueling. The final model of the system will weigh 10 pounds and occupy less than one cubic foot of space. The exploratory and advanced development models are to be manufactured in 12 and 24 months, respectively.—US Army release.

Multipurpose Vehicle



One-fifth scale model

A new multipurpose vehicle designed by a US firm can "walk" through deep mud and marshland. Amphibious models can "paddle" through water at relatively high speeds and "walk" up and over unprepared river banks.—News release.



Hard surface

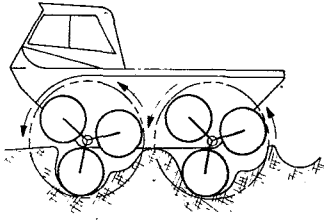


Photo and sketches courtesy of Lockheed Aircraft Service Company

Soft soil

Presidential Documents

The first issue of a new information service, the *Weekly Compilation of Presidential Documents*, was published on 2 August by the General Services Administration.

The indexed compilation, published each Monday, carries transcripts of the President's news conferences, messages to Congress, public speeches and statements, and other Presidential materials released by the White House.

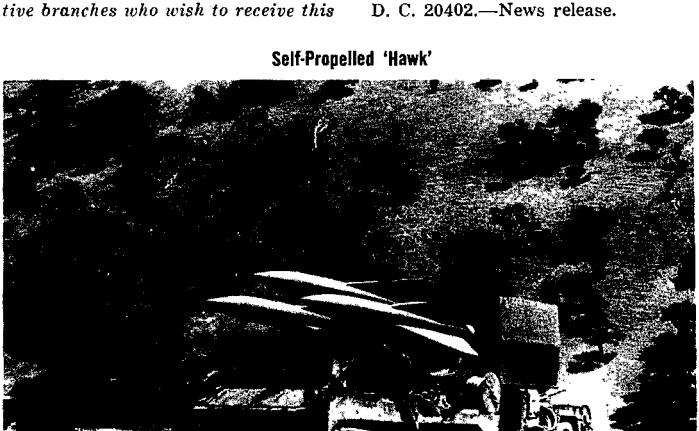
A note in the first issue said:

Members of Congress and officials of the legislative, judicial, and executive branches who wish to receive this publication for official use should write to the Director of the Federal Register, stating the number of copies needed and giving the address for mailing.

The new service is being provided by the Office of the Federal Register of the General Services Administration which publishes similar material in annual volumes entitled *Public Papers of the Presidents.*

The publication is sold to the public on a subscription basis by the Superintendent of Documents, US Government Printing Office, Washington, D. C. 20402.—News release.

Self-Propelled 'Hawk'

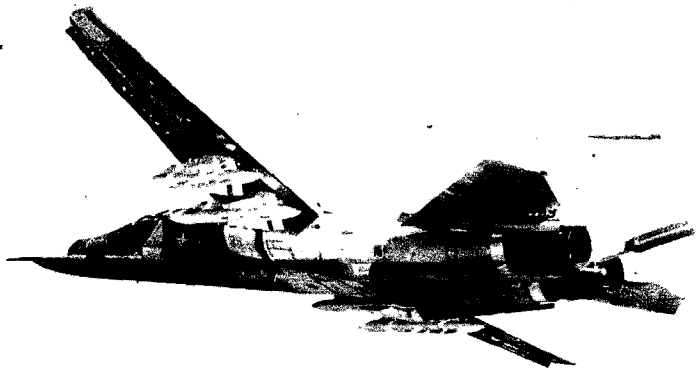


US Army

The Army has announced plans to develop and produce a self-propelled *Hawk* air defense guided-missile system for use in forward areas.

A research and development contract which provides for the installation of the *Hawk* launcher on the *XM548* full-tracked vehicle was recently awarded. —DA release.

'F-111' Pylons



General Dynamics Corporation

The first *F-111* equipped with underwing pylons that keep the biservice fighter's externally carried weapons parallel to the fuselage during changes in wing-sweep angle has begun flight tests at Edwards Air Force Base, California.

The test aircraft has been fitted with two weapons pylons with simulated missiles under each wing. The *F-111* takes off with its wings set at a 16-degree angle, then sweeps them back to 72.5 degrees for supersonic flight. The rotating pylons automatically compensate for the change in wing sweep.

Because of its variable wing, the *F-111* is capable not only of relatively short takeoffs and landing, but also of long-range, subsonic flight and supersonic strikes at more than twice the speed of sound. It is being developed as a tactical fighter for the Air Force (*F-111A*) and as a carrier-based air superiority fighter for the Navy (*F-111B*).—News release.

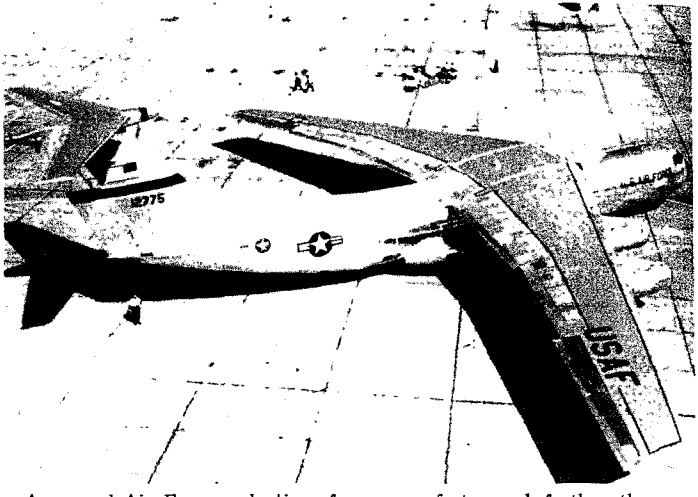
Ice Chipper

A special piece of equipment has been designed to assist in road and runway construction on polar icecaps.

The new item is an ice chipper, a rapidly spinning auger attached to the front of a tractor or front-loader. It uses standard chipping teeth, or bits, common to all mining machines. With the added weight of a 1,500-pound counterweight, the ice chipper moves slowly across the ice hummocks and pressure ridges, whittling them down to an evenly textured surface.

Together with its tractor and accessories for snow blowing and removal, the ice chipper is a complete road construction unit in an air-droppable package weighing 6,800 pounds. The developing agency is the US Army Cold Regions Research and Engineering Laboratory at Hanover, New Hampshire.—DA release.

'C-141A StarLifter'



Army and Air Force evaluation of the *C-141A StarLifter* (MR, Nov 1963, p 97) is underway at Fort Bragg, North Carolina.

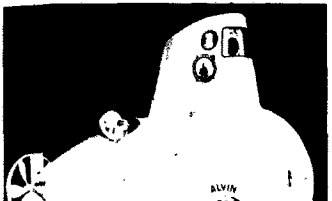
The Army Airborne, Electronics and Special Warfare Board, a major field agency of the Army Test and Evaluation Command, is evaluating the troop and cargo-carrying abilities of the Air Force's new turbojet aircraft. Of special concern to the Army is its suitability for use by parachutists and for air drop of Army equipment and supplies.

The trials are part of a comprehensive test program being conducted by the joint test force organized for this purpose at Edwards Air Force Base, California.

Designed to carry almost twice the number of combat-equipped paratroopers as the standard *C-130* aircraft now in use, the 145-foot *StarLifter* can carry more passengers and cargo faster and farther than any other aircraft now in use. It is the first all-jet aircraft capable of dropping troops and equipment.

The aircraft's maximum passenger load is 154 troops or 123 fully equipped paratroopers in four rows of side-facing bucket seats. With standard passenger seats installed six abreast, 138 troops can be accommodated. Provisions are also available for carrying 80 patients in litters clipped to removable stanchions and for eight medical attendants.

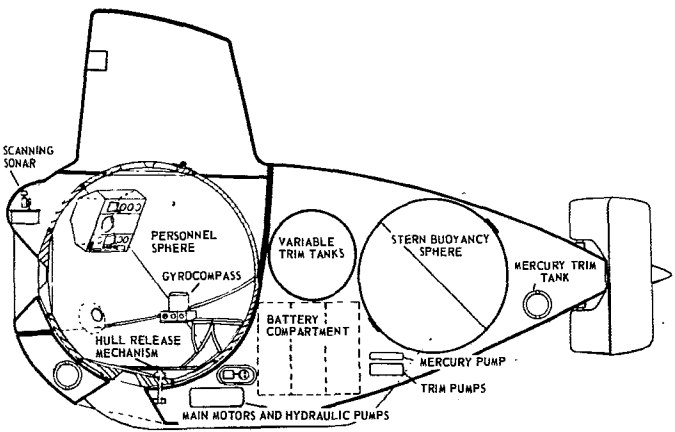
As a cargo ship, the *StarLifter* is equipped to handle a wide variety of tasks. Deck space in its 70-foot cargo compartment is more than 10 feet wide and nine feet high. An additional 11 feet over the aft ramp is also available. With a maximum payload of 68,500 pounds, cargo space in the aircraft totals 7,340 cubic feet.—US Army release.



'Alvin' Research Submarine

Alvin, the Navy's first deep-diving research submarine, successfully completed its initial deep dive to a depth of 1,800 meters off Andros Island in the Bahamas, 190 kilometers southeast of Miami, Florida. *Alvin* stayed on the bottom for 20 minutes, and all systems checked out satisfactorily. Further dives are scheduled for later this year. As the first phase of a long-range, deep research vehicle program, the seven-meter *Alvin* is a research tool which will enable oceanographers to make "on site" observations of deep-water conditions.

With much greater range and maneuverability than "deep sea elevator" bathyscaphes like *Trieste*, *Alvin* will be capable of more extensive research. For example, biologists will be able to observe directly the concentrations and behavior of marine life in deep water in the same manner as *SCUBA* divers do in shallow water. Geologists will be able to inspect appreciable areas of the sea floor and take samples of the bottom. The temperature structure, underwater currents, magnetic field, gravity field, and various other properties of the ocean environment can be measured more accurately from a vehicle such as *Alvin*. Instruments for performing all these operations are installed or planned for installation in the program for *Alvin*.—DOD release.



US Navy Photo and Sketch

Weapons Control System

A Tactical Air Weapons Control System (*TAWCS*) designed by a US defense manufacturer has been selected by the governments of Belgium, the Netherlands, and West Germany to control the air defense weapons of their countries.

The company will deliver ground environment equipment—general purpose computers, electronic displays, data-processing units, and communications equipment—to provide a modernized capability for rapid detection, identification, and tracking of potential enemy air threats, and for the control to the target of supersonic fighter interceptors, such as the North Atlantic Treaty Organization's new *F-104G's*, and air defense missiles.—News release.

Radar Surveillance

An airspace surveillance and weapons control system, similar in function to a recently completed system in West Germany, has been proposed by the Air Force for future installation in the Ryukyu Islands.

Through the use of semiautomatic data processing, the Ryukyu Air Defense System (*RADS*) will pick up airspace intruders in its area almost instantly and will considerably enhance the defense capabilities of the Pacific Air Force in that area.

The system will consist of radars, ultrafast communications, data processors, display consoles, and command posts where decision makers can direct manned or unmanned weapon interception. Returning aircraft can be directed home or to alternate bases through the system.

When operational, *RADS* will perform the same basic functions as the *412L* Air Weapons Control System in Germany.—US Air Force release.

'SECOR' Surveying Satellite

The fifth *SECOR* surveying satellite (MR, Jun 1964, p 105) was recently launched into orbit at Wallops Island, Virginia, by the National Aeronautics and Space Administration. The launch vehicle was a four-stage *Scout*.

According to the Army Corps of Engineers, measurements will continue until the entire chain of Pacific islands is tied together. Eventually, these islands will tie in with the North American Continent as the ground stations move down the western Pacific chain, on to Hawaii, and then to the United States.—News release.

'Mauler' Dropped

The Department of the Army has canceled its development program for the *Mauler* which was to serve as a mobile, air defense missile system for the protection of frontline troops against high-speed enemy aircraft and short-range missiles and rockets.

The *Mauler* program started in 1960, with the objective of developing an all-weather, air defense system which could be completely contained in a single, tracked vehicle. It was expected that the system could be fielded by 1964 or 1965. Technical difficulties associated with mounting a fire control radar and guided-missile launcher on the same vehicle caused significant delays and increased costs.

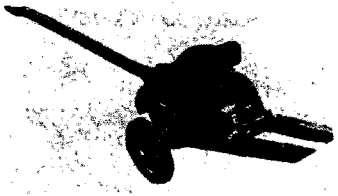
As a result of problems encountered, *Mauler* was reevaluated. This reevaluation took into account recent improvements in the *Hawk* missile system and the promise of new types of forward area defense systems simpler and cheaper than *Mauler*. The new systems involve combinations of automatic guns and the *Chaparral* (*Sidewinder* missiles mounted on a self-propelled vehicle).—DOD release.

EUROPE

Light Artillery In Europe

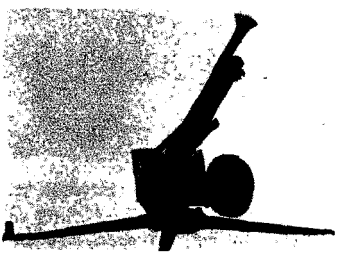
Some of the light, towed artillery weapons currently in use in Europe are shown below. Photos and information are from the June-July 1965 issue of *L'Armée*. All ranges are effective ranges. Armor-piercing capability shown is for a range of 1,000 meters.—News item.

The Czech 100-millimeter M53 cannon weighs 3.5 tons. It has a range of 20 kilometers and a 15-centimeter armor-piercing capability.



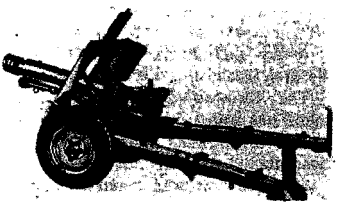
The Soviet 100-millimeter *M55* weighs 2.5 tons and has a range of 20 kilometers. It can pierce 25 centimeters of armor.

The British 88-millimeter weapon, the 25-pounder, weighs two tons and has a range of 12 kilometers



The Swedish 105-millimeter *M42* howitzer weighs 2.7 tons. It has a range of 15 kilometers and has four trails which permit it to fire at all azimuths without shifting trails.

The Italian 105-millimeter *M56* howitzer is designed for use with airborne units. It weighs one ton and has a range of 10 kilometers.



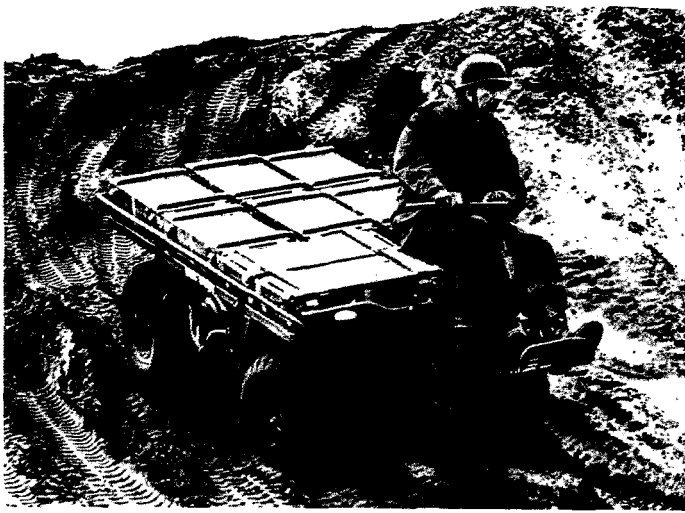
L'Armée Photos

The Yugoslav 76-millimeter howitzer is for mountain troops. It weighs .7 tons and has a range of eight kilometers.

The Soviet 85-millimeter *M44* weapon weighs 1.5 tons. It has a range of 15 kilometers and can pierce 10 centimeters of armor.

THE NETHERLANDS

'Pony' Utility Vehicle



Consulate General of the Netherlands

A new type of general utility vehicle for transporting 1,000 pounds of military equipment, personnel, and ammunition over difficult terrain and across shallow bodies of water has been developed. Known as the *Pony*, the vehicle weighs 1,100 pounds when empty, has an automatic transmission, and can be operated from either the front or the rear.

Maximum speed attainable with the new cross-country vehicle is 25 miles per hour. The vehicle is 30 inches high, and its over-all length is 112 inches.

The *Pony* is said to be suitable for airborne operations.—News release.

COMMUNIST CHINA

No Army Ranks

The Chinese Communist Government has announced that the system of military ranks in the army has been abolished.

The decision was reportedly made by the Standing Committee of the National People's Congress and announced by the New China News Agency.—News item.

PAKISTAN

Naval Craft

An unofficial European source reports that the Pakistani Fleet currently consists of one cruiser, five destroyers, one submarine, three frigates, eight minesweepers, some small fighting ships, and special vessels. Ships are almost exclusively of British origin. Most of the crews were trained in Great Britain.—News item.

MILITARY BOOKS

UNITED NATIONS FORCES. A Legal Study. By D. W. Bowett. 579 Pages. Frederick A. Praeger, Inc., New York, 1964. $15.00.

BY LT COL ROBERT E. MILLER, *USA*

The creation and use of international military forces, particularly United Nations forces, is discussed in this volume. It is a fascinating and highly informative mixture of history, fact, conjecture, and law.

In Part I, Dr. Bowett discusses several early *ad hoc* international forces, and then examines in detail the use of UN forces. These forces ranged from the relatively small UN observer groups, such as those employed in Israel and Lebanon, to the much larger UN forces in Korea, the Congo, the Egyptian-Israeli dispute, and Cyprus.

Part II is the heart of the book. Here, the author considers the myriad political, constitutional, legal, and practical problems involved in the creation of an effective UN force within the present limits of the UN Charter and in the absence of any agreement on general and complete disarmament. He makes frequent references to historical examples described in Part I, and discusses past and future problems. It is a realistic discussion and proposed course of action for the immediate future.

Part III is devoted to disarmament and to a proposal for an International Peace Force under conditions of disarmament, to be created in four stages over a period of 10 years.

RED STAR OVER AFRICA. By Anthony Harrigan. 109 Pages. Nasionale Boekhandel BPK, Parow, South Africa. $2.10.

BY LT COL WILLIAM E. BURR II, *USA*

Anthony Harrigan, Director of the Foreign Policy Research Institute of South Carolina, and frequent contributor on diverse subjects to US and foreign military journals, has expanded some of his earlier writings to a book that is best epitomized by its final statement: ". . . European counsel and direction must prevail over Africa."

Mr. Harrigan believes that "Africa for the Africans" would really mean Africa for the Soviet Union, Red China, and other Communist powers. He feels that the choices for Africa lie between regression to primitivism, submission to communism, and the acceptance of renewed ties with Europe.

Red Star Over Africa is based squarely on views such as: "liberals" do not understand Africa or the Communist and Indian threat to it; the United Nations is becoming a device with which to destroy Western strength; the African inheritance is the antithesis of Western civilization; and the Afro-Indian world is the key world arena.

Although Mr. Harrigan has ignored African nationalism, racism, and economic exploitation, the book focuses on some important problems and presents several suggestions for their solution.

SICILY AND THE SURRENDER OF ITALY. United States Army in World War II. By Lieutenant Colonel Albert N. Garland and Howard McGaw Smyth Assisted by Martin Blumenson. 609 Pages. Superintendent of Documents, US Government Printing Office, Washington, D. C. $9.00.

This volume of the US Army's World War II historical series is the first to cover the fighting in the Italian theater. Among the major subjects covered are the largest amphibious operation thus far in the war, the airborne miscarriage that marred the invasion of Sicily, the disintegration of the pact between Italy and Germany, and the dilemma of the Italian Government caught between the threats posed by the Allies and the Germans.

There is a great deal of drama in this history, which is not surprising when one considers some of the people whose actions it describes—Roosevelt, Churchill, Hitler, Mussolini, Patton, Skorzeny, Rommel, Kesselring, Badoglio, Victor Emmanuel, and Ciano. The volume is based upon a wealth of captured German and Italian documents and a vast store of Allied primary sources.

A highly readable book, it contains clear evidence that the high standards of scholarship which have characterized other works in the series are being continued. Colonel Garland, an experienced infantry officer, was Assistant Editor of the *Military Review* from 1962 to 1965. He is now in the G3 Section of 1st Corps in Korea. Dr. Smyth served with the Office of Strategic Services and Department of State in World War II, was a staff member with the Office, Chief of Military History from 1946 to 1952, and is now at the Department of State Historical Office.

MALAYSIA. By K. G. Tregonning. 98 Pages. Publication Centre, University of British Columbia, Vancouver, Can., 1965. $2.50.

BY COL WILLIAM C. ESTERLINE, *USMC*

The first of a series concerning countries with which Australia and New Zealand have close relations, designed to appeal to nonspecialists, both teachers and students, in Australia and New Zealand.

Professor Tregonning, Raffles Professor of History at the University of Singapore, deals factually and dispassionately with the history of Malaysia through 1964. It is an excellent reference for further study.

ELECTRONIC DATA PROCESSING. An Introduction. Revised Edition 1965. By E. Wainright Martin, Jr. 561 Pages. Richard D. Irwin, Inc., Homewood, Ill., 1965. $11.35.

BY LT COL CHARLES B. ABLETT, *USA*

Professor Martin presents one of the most complete, readable, current, and interesting introductions to the subject yet available.

Although it is primarily aimed at the managerial level, practicing information technologists will find the author's examples and comments informative and well worth reading.

The early chapters contain details of equipment and programing and will require some determined digging by the newcomer. Although important, the details need not be a barrier to the general reader's benefiting from the rest of the book. Some very cogent and wide ranging management level information is presented, particularly in the last five chapters.

This book is recommended reading for all military officers. Those concerned with computer systems planning, acquisition, supervision, or operations will find it a valuable addition to their personal library.

ON REVOLUTION. By Hannah Arendt. 343 Pages. The Viking Press, Inc., New York, 1963. $6.50.

BY DAVID RODNICK

The blurb on the dustcover of this volume says:

With nuclear power at a stalemate, revolutions have become the principal political factor of our time. To understand them may mean to understand the future.

This book emphasizes the classic revolutions of the 17th and 18th centuries, however, and contains few insights useful in understanding contemporary revolutions and those that will erupt in the future.

THIS AWESOME CHALLENGE: The Hundred Days of Lyndon Johnson. By Michael Amrine. 283 Pages. G. P. Putnam's Sons, New York, 1964. $4.95.

BY CAPT ROBERT M. WORCESTER, *USAR*

Michael Amrine's analysis of the events that followed Lyndon B. Johnson's assumption of the Presidency provides a deeper understanding of the Chief Executive.

It digs deeply into the working relationship that evolved between the Kennedy staff and Johnson's own people. It probes the sensitive area of White House relations with Congress that endured beyond the first 100 days to provide the most successful Presidential program of legislation since the days of Franklin D. Roosevelt.

A sharply drawn picture of Johnson's problems in his relations with the press is included. Mr. Amrine knows the Washington press corps, and his painstaking analysis of the 100 days provided him with cases in point to describe the President's problems with the press.

PEACE AND WAR IN THE MODERN AGE. Premises, Myths, and Realities. Edited by Frank R. Barnett, William C. Mott, and John C. Neff. 421 Pages. Doubleday & Co., Inc., New York, 1965. $1.45 paperbound.

BY COL WILMOT R. MCCUTCHEN, *USA*

An attempt to increase public understanding of the meaning of communism and of the strategies and tactics employed by the Communists in the cold war.

All but three of the articles, which are devoted to the role of the military, address various aspects of this general topic and America's possible responses.

The editors, all officers of the National Strategy Information Center or the American Bar Association Standing Committee on Education Against Communism, have collected an impressive array of thought-provoking writings by such authorities as Hans J. Morgenthau, Gerhart Neimeyer, Robert Strausz-Hupé, and Richard L. Walker.

Also included are views of national figures such as Arleigh A. Burke, Dwight D. Eisenhower, Dean Acheson, and Dean Rusk. Collectively, these writings seek to describe the complex and challenging threat of Soviet-style communism.

In the concluding article, Mr Barnett assesses the problem of what the citizen in a democracy such as the United States can do to help combat the "political warfare" being waged by the Communists.

His recommendation is increased effort in education and action in the private sector, such as that now being done by the American Bar Association, the American Federation of Labor and Congress of Industrial Organizations, and the National Association of Manufacturers.

THE GERMAN OFFICER-CORPS IN SOCIETY AND STATE 1650-1945. By Karl Demeter. Translated From the German by Angus Malcolm. Introduction by Michael Howard. 414 Pages. Frederick A. Praeger, Inc., New York, 1965. $10.00.

BY LT COL LUIZ DE ALENCAR ARARIPE, *Brazilian Army*

The soldierly qualities of discipline, courage, patriotism, and professional skill were typical of the German officer corps, from Frederick I until Hitler. Nonetheless, the superb performance of the German officer, and his sometimes tragic shortcomings, have perplexed many people.

Professor Demeter sheds some light on this subject in his study of the German officer corps and its relationship with the state and society.

The author, who now holds a readership in Army History at the University of Frankfurt am Main, brings to his book many documents of the German State Archives, whose staff he joined in 1920.

The immediate "aim of the book was simply the dispassionate laying bare of facts." Although it supplies few conclusions, it surely will "help to rediscover the authentic tradition of the corps of officers and sift the timeless in it from the rest," as the author hoped.

It provides much food for thought concerning several problems that are common to all officer corps, such as the question of civil-military relations, or how an officer can best fulfill the concept so well synthesized in West Point's motto of "Duty, Honor, Country." This is one problem that each officer may be called upon to solve, and its solution will not be found in the textbooks. For its historical value, this book well deserves a place in the staff officer's library.

POLITICAL SUCCESSION IN THE USSR. By Myron Rush. 223 Pages. Columbia University Press, New York, 1965. $5.95.

BY JOHN R. CAMERON

Myron Rush, a Rand Corporation staff member on leave at Cornell University, analyzes the successions following the deaths of Lenin and Stalin. He discusses the institutions which play competing roles, their interests, and their tactics.

A discussion of the "limited dictatorship" aspects of Khrushchev's rule highlights an essential element in the government of the Soviet Union. There is no organ which has the power to determine the succession, nor is there an organ which can govern. In fact, there appears to be a continuing struggle for leadership between party and governmental elements.

Succession in the Soviet Union is a highly personal matter determined largely by the original leader, and later by the interaction of the interests and personal appeals of his principal lieutenants and factions representing the army, the provincial parties, and the economic planners.

Mr. Rush provides many clues to future developments in the current succession and those which will follow.

AMERICAN NATIONAL SECURITY. A Reader in Theory and Policy. Edited by Morton Berkowitz and P. G. Bock. 448 Pages. The Free Press, New York, 1965. $9.95.

BY MAJ JACK G. CALLAWAY, *USA*

A collection of the most significant contributions to the theory and policy of national security, arranged so that it can easily be used as a textbook.

Contributors include Anatol Rapoport, Gunnar Myrdal, Thomas C. Schelling, Hans J. Morgenthau, Samuel P. Huntington, and Alain C. Enthoven, among others.

ROYAL MARINE. The Autobiography of Colonel Sam Bassett, C.B.E., R.M. With a Foreword by His Royal Highness Prince Philip and an Introduction by General Lemuel C. Shepherd, Jr., United States Marine Corps, Retired. 224 Pages. Stein & Day, New York, 1965. $4.95.

BY 1ST LT CHARLES E. BEARD, *USA*

Sam Bassett, with 54 years in the Royal Marines, holds the longest record of service in this organization.

His autobiography provides an interesting personal view of the British Navy and Royal Marines during the first half of the 20th century.

THE BURDEN OF GUILT. A Short History of Germany, 1914-1945. By Hannah Vogt. Translated by Herbert Strauss. 318 Pages. Oxford University Press, New York, 1964. $6.00.

BY 1ST LT FRANZ L. HELBIG, *USA*

. . . the German never grasped a decisive and fundamental idea: the necessity to act freely and responsibly even if it impaired his work and his calling.

These words were spoken by Pastor Dietrich Bonhoeffer, a Protestant theologian executed by the *SS*. They attempt to define the reasons for the capitulation of Germany before Hitler.

These same words are echoed in the conclusions which Hannah Vogt draws after a brief and factual review of the most tragic years of German history. The author seeks to destroy those ideas and myths with which Hitler betrayed Germany and, more important, with which Germans betrayed themselves.

Germans are told that it should not be difficult for them to understand how the disaster of 1945 was brought about, because the evidence is clear how Germany's political and civic traditions, responsibilities, and duties were trampled into the ground. More than anything else, the author emphasizes the need for Germany to base her concept of law on the idea of justice, not on the dangerous "law is the law."

While addressing herself specifically to all younger Germans, Hannah Vogt speaks to all who are struggling to regain for Germany, with political and civic action, that which she lost at the hands of those millions who were not prepared to make sacrifices for their liberty.

YEARS OF URGENCY 1938-1941. From the Morgenthau Diaries. By John Morton Blum. 443 Pages. Houghton Mifflin Co., Boston, Mass., 1964. $7.50.

BY COL MITCHEL GOLDENTHAL, *USA*

Professor Blum, a distinguished historian at Yale University, has condensed into meaningful terms a great mass of material.

As Secretary of the Treasury, Henry Morgenthau was greatly responsible for supplying the British, French, and Chinese with weapons; for confronting the Japanese and Germans at every opportunity when most of the Nation was basking in a dream of isolationism; and for pushing through huge orders for French aircraft, which resulted in gearing up our own factories for desperately needed production.

He devised ingenious financial schemes such as "Cash and Carry" and lend-lease which kept the Allies in the war, and was responsible for fully developing the powers of economic warfare for use in national power.

Professor Blum makes it clear that the Nation owes Mr. Morgenthau a tremendous debt of gratitude for imaginative vision and productive results.

VIETNAM: Inside Story of the Guerilla War. By Wilfred G. Burchett. 253 Pages. International Publishers, Inc., New York, 1965. $4.95.

BY COL ROBERT B. RIGG, *USA*

Unvarnished propaganda and anti-US invective have long been a livelihood of Author Burchett. He reported from behind enemy lines in Korea, and now this book chronicles his eight months with the Viet Cong (VC).

Crusading for the VC and cursing "the lunatic fringe in Washington," the text attempts to create a new image of the Ugly American. VC sources predict a long war: "If our generation cannot finish it, our sons and grandsons . . . will."

Burchett claims the VC have more fighting men than US estimates indicate. He attempts to refute the fact that arms come from North Vietnam. He interviews some Americans in VC hands, and gets around the countryside with ease. He claims that the difference in firepower between two warring sides is balanced in favor of the VC by virtue of their higher morale.

The author reveals little that is new about the VC, but does provide a good index to the excellence of VC military intelligence.

By syrupy narrative he takes the reader into tunnel systems, among tribes, and into VC arsenals and command posts. Of interest is his description of the VC's "Dien Bien Phu kitchens," designed to hide smoke.

Burchett's solution to the war is the complete withdrawal of the United States from Vietnam.

EXPERIENCE IN WAR: The United States in World War II. By Kenneth S. Davis. 704 Pages. Doubleday & Co., Garden City, N. Y., 1965. $7.95.

BY MAJ. RICHARD D. LAWRENCE, *USA*

To what might otherwise be a sterile retelling of history's greatest conflict, Mr. Davis adds tense drama, intrigue, and warmly human moments with the perceptive, brilliant touch of a great storyteller. The result is a history of World War II which reads like an epic novel.

The thread which weaves this vast history is the story of the atomic bomb, beginning in 1939 with the actions of several of America's great scientists and ending with the destruction of Hiroshima and Nagasaki.

Although only a subplot, this story provides a central theme relating the personalities, decisive battles, and historic decisions of five years of war. The book successfully portrays such totally different things as the personal conflict of a lonely Marine on Guadalcanal, and the tenseness of Eisenhower's command post at Gibraltar, deftly placing both in a pattern of global strategy.

Mr. Davis is well suited for telling this story. He was a novelist before accepting an assignment as a special war correspondent in Europe in 1944. He has also written biographies of General Eisenhower and Charles A. Lindbergh.

The 37 pages of source material and notes form one of the best compilations of historical references to be found on the Second World War.