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Photo: Australian War Memorial, Canberra.

NEW GUINEA 1943

After its capture of Lae in conjunction with 7 Division in September 1943, 9 Division made another amphibious landing at Finschafen with the object of opening way for an Allied advance along the north-eastern New Guinea coast. After repelling a strong Japanese counter-attack the division turned to the capture of Satelberg, a fortified hill rising to a height of some 3,200 feet.

The work of 1 Army Tank Battalion (less B Squadron) contributed strongly to the success of this difficult operation. The tactics employed had been previously worked out and practised with the infantry, and were devised for the extremely enclosed and rugged terrain. Generally, a tactical group of an infantry company, a tank troop and an engineer section or platoon was used. Sometimes a second tank troop followed close behind as an outflanking, exploitation or relief force.

The picture shows Matilda tanks crossing a kunai flat during the coastal advance.

SOCIOLOGICAL WARFARE

Major E. M. McCormick
Royal Australian Infantry

THE potential of raiding forces was ably demonstrated in World War 2 by such exponents as Colonel Stirling of the SAS, Lieutenant Colonel Peniakoff of Popski's Private Army and the German Colonel Otto Skorzeny. Their methods were unconventional and their successes rapidly became legendary. This tended to convince many people that these successes were due either to the personal luck or some other supernatural power inherent in the individual leader, and this in turn tended to divert attention from the techniques employed.

In many of their operations the raiders moved unchallenged, with apparent ease, through heavily defended areas in order to get to their actual target or to the spot where they could carry out their task. A study of such operations reveals that such successes were in no small way due to the special tenhcique employed, and that this technique was in fact an expansion of the old military maxim "Know Your Enemy". This technique not only took in the normal study of enemy tactics, training and organisation, it included a sociological study of the enemy which enabled the raiding leader to accurately predict the enemy's reactions to various situations. The technique is an accurate appreciation based on knowledge of the enemy as can be seen from the following examples.

When Popski's Private Army commenced operations in Italy it was able to move at will in enemy occupied territory with the help of the Italian peasants who provided intelligence, work forces and food. This was a direct result of Popski's study and knowledge of the Italian peasant. Amongst other things he learned that the peasants had, for years, been exploited by the landowners and that this had created two separate worlds between which there was little communication or understanding. In addition to this, the peasants were extremely insular in outlook and considered persons from outside their own immediate area to be foreigners. They persisted in old and well established traditions of conspiracy, banditry and secret societies. They tended to keep to themselves and were not active in collaboration with the Germans, who were to them just another authority similar to the landowners. The landowner, on the other hand, with more to

lose, was more prone to collaborate with the Germans. Popski's understanding of this and of the peasant's attitude, enabled him to align his aims with those of the peasants, gain their confidence and receive intelligence and support without which he would not have been able to carry out the tasks he did. PPA's success was clearly linked to its commander's understanding of the sociological factors existing in his area of operations.

The normal soldier, unless under continuous airborne or guerilla threat, does not expect to meet the enemy running around openly in his own rear areas. Add to this the normal human propensity for seeing what he wants to see rather than what is actually there, and you find many situations where you can wander about openly, undisguised, and apparently invisible in your enemy's rear areas. The application of such knowledge was demonstrated, again by Popski, at Derna in August 1942, when he carried out a reconnaissance for a proposed POW break, by walking through the main street of the town, in daylight and in British uniform. He reconnoitred the POW camp by walking to within 50 yards of the perimeter fence, smoking and staring curiously at the prisoners. On his return through the town he began to lose confidence in his apparent invisibility and, realising that, if this happened, he would start to act furtively and become conspicuous, he had to do something to restore his confidence. This he did by purposely bumping into an Italian and abusing him in a nonsensical guttural gobbledygook. The bemused Italian took off as quickly as he could and Popski continued happily on his way, his confidence in his own invisibility to the enemy completely restored. He used this technique again in North Africa when reconnoitring the main German L of C behind Mareth in jeeps, and repeated this performance on other occasions in Italy. Other examples were the wanderings of Stirling and Fitzroy McLean around Benghazi and its harbour.

Perhaps the classic example of sociological warfare was the capture of Castle Hill, the Budapest residence and strongpoint of The Regent of Hungary, by Otto Skorzeny, a feat which saved a million German soldiers and kept Hungary on Germany's side to the bitter end. This feat was the direct result of Skorzeny's understanding of the Hungarian officers' and soldiers' attitudes. He used the officers' overdeveloped sense of chivalry and the rivalry between the Army and Navy to get his path into the fortress cleared. He then used the normal soldiers' attitude to penetrate the defences; the political tendencies of the officers to reach the general commanding the garrison, and the general's sense of chivalry and personal egotism to obtain the garrison's surrender. By similar methods he then obtained the garrison's support and friendship. By his deep understanding of the Hungarian Army's attitudes he captured an impregnable fortress with a handful of men, kept the garri-

son and the whole Hungarian nation on his side and prolonged the war by as much a year.

At this stage many readers will say, "This is all very well but the examples given are of Europeans operating against Europeans. Will the technique work for Europeans operating against Asian soldiers?" The answer is "yes", as the following examples from the operations of Captain Raymond "Turk" Westerling will show. Westerling had a sound understanding of the Indonesians and their outlook, and he used this knowledge to advantage in attaining his aims.

At the time of the British occupation of Sumatra a band of terrorists was operating, with apparent immunity, from a village outside Medan. As a result of a bet Westerling undertook to neutralise the terrorist leader within 24 hours. Knowing the local people did not move around after dark, as they believed the dark was filled with malignant spirits, he decided to base his plan of operations on this local attitude. He then, operating at night, penetrated the terrorist encampment with two companions, killed the terrorist leader and completely removed his body. In the cold light of day it appeared that the terrorist leader had been removed without trace by the malignant spirits of the night. Such an enemy was too much for the remaining members of the band, morale dropped to zero and the band dispersed. Thus an unconventional operation based on a knowledge of the people of the area achieved success where conventional methods had failed. Had the leader just been killed and left or had traces of his removal by human agencies been left, the unconventional attack would also have failed in its aim

The operation was an example of premediated use of knowledge of a people, but there are also times when such knowledge can be put to use as the opportunity presents itself, as it did during one of Westerling's pacification operations in the Celebes. *Wes*terling had lost contact with a band of terrorists but was still following their trail when, late in the afternoon, he came to a village. It was the time of the evening prayer and the whole male population appeared to be so engaged outside the village mosque. Being interested in Islam and its ceremonial, Westerling stopped to listen. He suddenly realised that the Imam was not conducting the prayer but just repeating the same thing over and over again. When he further realised that the worshippers were not facing in the direction of Mecca he knew something was seriously wrong. Investigation proved the congregation to be the men he was after. They had baled up the Imam and camouflaged themselves as villagers. But for Westerling's knowledge of Islam and its customs they would have probably succeeded and disappeared without trace.

The foregoing examples give some idea of the variety of results which can be obtained from a thorough understanding of an enemy's attitudes and way of life. A man's attitudes and reactions are a direct result of

the various instructional agencies which influence his life. They are the direct result of such things as his cultural background, education, beliefs, superstitions, religion and politics. Man arrives in the world without knowledge or opinions and he absorbs them from the various agencies which influence his early life. He may end up a Jew-hater, an anti-white or an anti-Asian, but he did not arrive with such attitudes. He developed them as a result of various influences on his early life. When a man's attitudes have crystallized he will then react to various situations in a predictable manner, and if you can predict his reactions you can use this knowledge to further your own ends.

You can predict a man's reactions with more than a reasonable accuracy if you have sufficient knowledge and understanding of the man. This knowledge is not intuitive, it must be obtained, and to obtain it you must first define its source and the source of this knowledge is the social sciences. The required information is obtained from such fearsome sounding subjects as anthropology, sociology, psychology and history. Bemusing names for what is in actual fact only a study of human beings. It is not necessary to become an expert on these subjects, rather you must have a sound working knowledge of the facets of each subject which will increase your understanding of the particular man under investigation. Knowing where to find this knowledge alone is insufficient, as little will be gained from a misguided approach to the subjects under study. You require guidance, and this guidance takes the form of instruction by experts on the particular subject. Not only must the instruction be expert, but it must be given by an instructor with an up to date practical experience of the people under study as well as the required theoretical experience. A very untrue picture can be obtained from an expert on China who has never lived in China or experienced intimate contact with the Chinese people. Similarly, the brand new psychologist filled with theory but lacking in practical experience tends to regard people as ciphers to be fitted into theories and not as individualistic human beings who may not fit the recognised pattern. The practical experience of the instructor must be carefully evaluated. It is not sufficient for an instructor to have simply lived in a country for a period of time. He must have lived and mixed with the indigenous people of the country. Experience gained solely from life in a European environment in Asia will give a distorted image of the people of the country. The instructor must be capable through training and practical experience of looking at a situation through the eyes of a normal inhabitant of the area under study.

The knowledge gained by the student during this period of study is essentially theoretical but a necessary background for practical study of the subject. Once he has sufficient background, the student must be given the opportunity to obtain some practical experience of the

people. This experience can be gained relatively cheaply in two ways. He can be exchanged with a friendly army, but this exchange must be complete, especially in cases where the cultures of the two peoples differ greatly. Where a Euroepan is filling an exchange posting with an Asian he must live and work in exactly the same conditions as his Asian counterpart. He must not be given special privileges on the excuse that his normal way of life is different. His job is to attain a state where he can think and see situations through the eyes of his Asian counterpart, and he can only do this if he is fully integrated with the Asian mode of life.

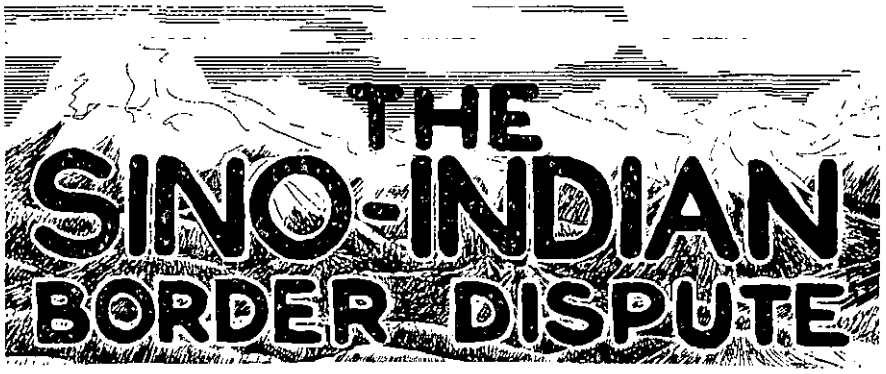
The second method of obtaining practical experience cheaply could be described as the tourist method. The student is given an itinerary, route and a specific time in which to complete his tour. He then enters the country as a normal civilian and carries out his task by arranging his accommodation in local estabments as he goes, mixing with the locals and taking part in their daily life. By this method the student can gain good practical experience at low cost in countries with which his own has no military interchange. He gets no special allowances apart from his normay pay, and this sort of experience can be combined with initiative training to overcome transportation costs. The overall result can be a useful and rewarding experience for the student and his service at very low cost. No matter what method of practical training was used the trained soldier would then be available to instruct other students with up-to-the-minute knowledge of the people under study.

The examples shown in this paper have demonstrated the advantages the technique will afford to raiding forces, but the technique is equally advantageous in other forms of warfare, especially guerilla warfare. Such knowledge is essential for groups responsible for organising training and running guerilla bands. Its essential importance was clearly demonstrated by the French GMAC groups in Indo-China. These groups operated amongst primitive peoples in the mountainous regions of the country. The operator's success and virtual existence depended on rapidly gaining an adequate knowledge of the people with whom he was working. The French approach was extremely logical. If the operator was still active after a year, he obviously had a few clues and was valuable. If he disappeared before this time he was obviously a weak link and it was as well that he had been eliminated. This attitude was unavoidable in the beginning, when little or nothing was known about the culture of daily life of such primitive people, but to persist in this attitude, after operators had obtained the required knowledge and experience, resulted in undue strain and losses amongst valuable men. This could have been avoided if a few successful operators had been pulled out and used to instruct new operators, and would have resulted in an increased all round efficiency in operations. The work of the

GMAC group clearly demonstrated the importance of sociological warfare in guerilla operations. The success or failure of the operations themselves and the loss of the operators depended basically on the individual operator's knowledge of the people. This is a lesson which must not be forgotten.

In conventional warfare such knowledge is again useful, even if not vital, as in the case of the raiders and guerillas. It will do much to create understanding between allies of different ethnic groups and cultures, promote better co-operation and remove much of the distrust and misunderstanding which exists amongst large sections of the population, e.g., between Asians and Caucasians. This is especially important to a nation like Australia, which is an outpost of European culture living in an Asian area.

In conclusion it can be said that knowing your enemy has always been important in war, but it is now even more important. It is equally important to know and understand your friends and allies. While friends or enemies are of basically different cultures, such knowledge can be gained only by study and practical experience. Knowing how your enemy's or friend's mind works, and the reason for his outlook and attitudes will often provide the key to successful raiding. It is essential for guerilla operations and it can do nothing but good for the conventional armed forces. In these days of revolutionary warfare the application of such knowledge is a technique we cannot ignore. The application of the technique demands trainng, and ths training should be commenced before it is too late.



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Part II
CHINESE MOTIVES IN THE DISPUTE

WHEN the Sino-Indian border wrangle came to light in 1959, the question was widely asked—why the switch in Chinese policy? For six or seven years the slogans of "panch shila" and "Hindi Chini Bhai Bhai" had appeared to be a permanent feature of the international scene. China seemed to have much to gain from Indian friendship. India had refused to recognize Chinese aggression in Korea, had sponsored China's demand for a seat in the United Nations and strongly supported her claim to Formosa.

In fact, there had been no switch. Relations had been deteriorating for years and the point of open disagreement would have been reached sooner or later.

As shown in Part I, Chinese border incursions and "cartographic aggression" had occurred long before the 1959 revolt in Tibet. Regarding the situation in historical perspective it would seem to be clearly inevitable that sooner or later Han expansionism would clash with Indian nationalism. The only reasons for the absence of significant disputes on the Sino-Indian border for 2,000 years have been the remoteness of the border from the main centres of the two empires. For centuries there have been minor Chinese incursions into Indian territory, the earliest being reported in AD 647. The expansionist view of China's rightful frontiers were held in common by the Chinese Communists and the Nationalists. Chiang Kai-shek stated his claims in his book "China's Destiny". Mao Tse-tung, writing in 1931, had claimed that China proper had been nibbled away by Imperialists and others and must restore its territorial entity. He specifically laid claim to all of Burma and certain other nearby border areas, Bhutan,

Nepal, all of Korea, the Pescadores and Formosa. With this sort of attitude in the background, to which may be added a traditional dislike of Indians, the growing strength of China throughout the 1950's and steadily improving communications, the Sino-Indian border dispute was inevitable.

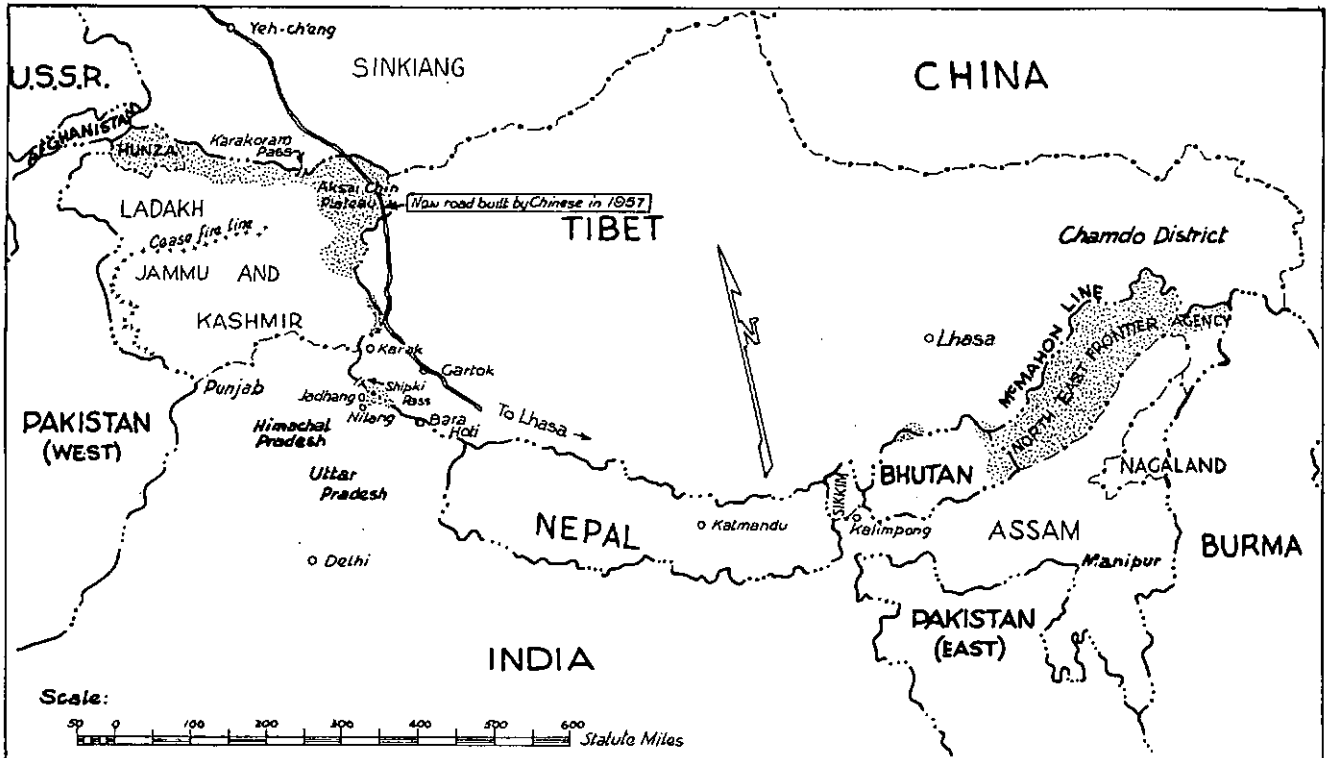
There is no doubt, however, that the troubles in Tibet which started in February 1959 were the cause of this dispute being brought into the open. The Indians were seriously disturbed by the Chinese measures to suppress the rebellion and by the activities of the Chinese army in the border areas. When the Longju incident occurred in August 1959, the strong denunciation by the Indian government faced the Chinese with the alternative of either publicly stating their territorial claims (which had previously only been implied on their maps) or backing down. It appeared to the Chinese that their national interest was threatened, and they were not prepared to sacrifice this for the sake of retaining Indian goodwill.

The question of Tibet has always been a most sensitive area of Sino-Indian relations and the Chinese obviously considered that they could not afford to show the slightest trace of weakness over the issue. There was also a good deal of truth in Chinese allegations that in 1959 aid to the Tibetan rebels was being supplied from across the Indian border and that Kalimpong was being used as a control centre. There was, moreover, probably a genuine feeling held by the Chinese that they needed to hold at least part of the territory they claim if Tibet is to be effectively controlled and sealed off from external interference. The occupation of the Aksai Chin plateau, for example, was undoubtedly seen as a strategic necessity to permit the construction of the Sinkiang-Tibet road. (The Chinese saved about 500 miles by building the road across the plateau.) Finally, the Chinese were extremely angry that the Dalai Lama had been given asylum in India and permitted to issue statements hostile to China. They even claimed that these statements were prepared by the Indian Ministry of External Affairs.

However, in assessing Chinese motives for their conduct in the border dispute with India it would no doubt be profitable to look at other questions in addition to traditional Chinese expansionism and jealousy over the status of Tibet. In the context of China's struggle for ascendancy in Asia the only possible rivals are India and Japan. Because of this the Chinese leaders consider that they must not adopt any attitude towards India which would appear to be too conciliatory, whereas they can afford to be magnanimous in their dealings with their lesser neighbours. Peking has seen that this pressure on the frontiers has caused India to step up her military expenditure at some cost to her economic development. This result is seen as a gain by the Chinese, who realise not only that economic progress is the foundation of a nation's

strength, but also that most of the smaller nations of Asia are carefully watching the respective progress of the Chinese and Indian economic and social systems. During the last three years in particular, in which the Chinese have suffered such severe setbacks, any policy which had the effect of hindering the economic progress of their great rival must have been especially attractive to them.

The Sino-Indian dispute should also be considered in ideological terms. To the hard core of Chinese leaders who are fanatical, doctrinaire Marxists, Mr. Nehru has always been anathema. Mr. Nehru himself has categorically rejected Communism and has expressed the view that it will ultimately fail "because of its rigidity, and even more so because it ignores certain needs of human nature" and that there existed "contradiction in the rigid framework of Communism itself. Its suppression of individual freedom brings about powerful reactions. . . Its unfortunate association with violence encourages certain evil tendencies in human beings . . . means distorted ends." Such sentiments could not fail to arouse the bitterest animosity in the Chinese Communists. The Nehru government's action against the Communist government in the State of Kerala in 1960 and increasing Western aid for India served only to increase their hostility and belief that the Indian government was turning even more to the West. Certain Communists, as for example the present Soviet leaders, have been and are prepared to work with a Congress Party Governent, regarding Congress as the Party of the national bourgeoisie, with which at this stage of Indian development it is, from the viewpoint of Marxism-Leninism, permissible to co-operate. This had not been the view of the Chinese ideologists, who, particularly from 1956 onwards, have pressed for a much "harder" line in Communist international relations as well as in domestic policies. It was this doctrinaire spirit which finally precipitated the Sino-Soviet dispute of the last two years. These were the Chinese extremists who insisted that the pressure on the Indian Government be kept up. It is of some interest to speculate that they were responsible for what at times in the past decade has appeared to be a dichotomy in Chinese policies towards India. As noted earlier, there have been several instances, for example, of Chou En-lai addressing friendly statements towards India, couched in the spirit of "panch shila", at the same time as Chinese propaganda was attacking the Nehru Government. Such incidents could, of course, be explained simply as a reflection of Communist duplicity but it is also possible that they are the result of a clash between the Peking dogmatists and Chou En-lai. Chou is normally regarded as one of the more flexible of the Chinese leaders and it may be that he, with the confidence born of other international successes, felt himself able to achieve good short-term results for Chinese policy in regard to India by diplomatic means.



SINO-INDIAN BORDER - DISPUTED AREAS

NOTE: The boundary between India and China is that shown by the Indian Ministry of External Affairs (Political Map of India - 1959) and differs slightly from the border normally drawn on international maps. Shading shows Chinese Communist claims.

Chinese Policies

China thus has a powerful set of motives which result in her hostility to India and her desire to force the Indians to accept second place in Asia. Broadly speaking, there are three ways in which China can bring such pressure to bear on India that she will be able to achieve this aim—military, political (including propaganda) and diplomatic. Economic intercourse between the two countries is not great enough for economic pressure to have any effect.

So far, Chinese military pressure on the borders has been relatively light. It seems unlikely that it will ever develop beyond small scale operations—probably only up to about battalion level—because of the logistic difficulties involved in military activities in the region. Political pressure has consisted mainly of a propaganda barrage against India which has continued virtually non-stop for the last three years. On 5 June 1962, for example, Radio Peking was still charging the Indians with "great power chauvinism". Anyone who persists in an attitude of great power chauvinism in international affairs will invariably knock his head against a stone wall." The other way in which China might have been able to apply political pressure on the Indian government was through the Communist Party of India (CPI). However, after an initial attempt to defend Chinese actions in 1959, the chronically faction-ridden CPI has fallen under the domination of the pro-Moscow wing of the Party. It is now following a "patriotic" line of supporting the Indian Government's resistance to Chinese incursions.

China has therefore relied mainly on diplomatic means to exert pressure on the Indians. She has attempted to bring about the diplomatic isolation of India by coming to terms with all her other neighbours—most of whom have in the past themselves been the consistent object of Chinese territorial claims. This policy has the advantage not only of obtaining for China the goodwill of her smaller neighbours, but also of showing by implication that India is unreasonabe in not coming to an agreement with China. In 1960 China signed boundary and friendship agreements with both Burma and Nepal, and she is now working for a treaty with Pakistan. It is of particular interest to note that, in their boundary agreement with Burma, the Chinese displayed a remarkably generous attitude and were prepared to recognize the eastern end of the McMahon Line as the "traditional" Sino-Burmese frontier.

Bhutan has been another target in China's diplomatic campaign against India. Despite the provision of the 1949 treaty that Bhutanese foreign affairs should be under the guidance of India, the Chinese have, since 1959, made several attempts to deal directly with the Bhutanese Government. They have offered to negotiate with Bhutan over her claims to her enclaves in Tibet, presumably intending to discuss at the same time Chinese

claims to 300 square miles of Bhutanese territory. Regardless of Indian protests, there are reports that the Chinese have not only repeated these overtures but have also offered any aid needed should the Bhutanese decide to break their ties with India. However, some sections of the Indian press have charged that these reports are fabrications of the Bhutanese designed to force the Indian Government both to provide more funds for the economic development of Bhutan and to give Bhutan a greater say in the spending of money already granted by India for road construction.

The Chinese have also tried to ignore India's rights to control the foreign relations of her Protectorate Sikkim. China recognizes the traditional demarcated boundary between Tibet and Sikkim, but has tried to avoid discussion of this boundary with India. In a letter to Nehru on 8 September 1959 Chou said, "Like the boundary between China and Bhutan, this question (the boundary between China and Sikkim) does not fall within the scope of our present discussion". This was sharply contradicted by Nehru in the Indian Parliament when he retorted: "I beg to differ from Chou En-lai. It does very much fall within the scope of our present or future discussion. If he thinks he can deal with it as something apart from India, we are not agreeable to that."

Both Bhutan and Sikkim have been subjected to military threats as well as the diplomatic blandishments described above. In 1959 there were reports of public meetings organized by the Chinese in Tibet calling for the "liberation" of Bhutan and Sikkim. There were claims that both states should be incorporated in the Chinese People's Republic and that military steps might be taken to accomplish this. Chinese troops are reported to have been active on the Bhutanese border. India has responded by firm declarations of her intention to honour her pledges to defend the two states and Nehru has said that any incursions on their borders will be regarded as "the same thing as interference with the border of India."

Indian Reactions

Throughout his fifteen continuous years as the Prime Minister of India, Pandit Nehru has always devoted a large part of his time and energies to foreign affairs—more than he, as the leader of a huge and troubled country could afford. With the exception of Kashmir (and recently, it may be argued, Goa), he has pursued a policy of neutrality and non-alignment which was based in part on the premise that, other than that from Pakistan, India could be exposed to no foreign threats. For years he adopted the mildest possible tone in his correspondence with Chou En-lai on the frontier question and tried to help China in a number of ways in the international field.

The Chinese attitude on the border dispute, from 1959 onwards, represented the failure of Nehru's policies. His firm stand against China since then

is no doubt in some small degree a reflection of his irritation with the Chinese on this account, although there are also other more powerful reasons which have caused Nehru to change his attitude. Although there are few Indians who think that China's rulers actually contemplate an invasion of their country, there is a strong body of feeling in India that the Chinese, in their campaign to embarrass and harass India politically, militarily and economically, have made some dangerous assumption about Indian vulnerability and docility. With the exception of certain members of the Communist Party, all sectors of Indian public opinion have called for resistance to Chinese encroachments. In its manifesto for the 1962 general election, for example, the ruling Congress Party declared that India would "recover such areas as are occupied by China" "at all costs". During the election campaign the Congress Party was itself attacked by opposition parties for its "appeasement" of Chinese and Pakistani aggression.

This indignation of the great mass of Indian public opinion was inspired not only by Chinese designs on Indian territory itself but also by Chinese activities in other areas of especial importance to India. Chinese moves in Nepal, Bhutan and Sikkim are seen as threats not only to India's traditional special position in these states, but even to their existence as buffers against an invasion of northern India. The Sino-Pakistan intention to come to a boundary agreement in regard to Pakistan held parts of Jammu and Kashmir involves a wide range of issues for many Indians—many of them emotional—and is a particularly sensitive point with Nehru himself. The whole question of the Chinese domination of Tibet is one which has disturbed a large body of Indian sentiment for years.

Recently, alleged diplomatic slights and the activities of the Chinese Embassy and nationals in India have occasioned a renewed demand from certain Members of Parliament and others in India for "retaliation" against the Chinese.

There is no doubt that the mood of Indian public opinion is such that no Government of India will be able to do other than continue to resist Chinese encroachments. Since 1959 Indian military expenditure has increased steadily and the size of the armed forces expanded. Much effort has been expended on the improvement of communications to and within the disputed areas, including the construction of airfields. Much more attention has been paid to the situation in Sikkim and Bhutan and attempts have been made—without much success—to restore relations with Nepal. All this activity has required the expenditure of resources which should have been devoted to India's struggle to achieve economic growth in the face of a rapidly expanding population.

The Future

The way the dispute develops will depend largely on the attitudes and policies of the Chinese.

In China's present circumstances these policies are more than usually difficult to forecast. As far as domestic affairs are concerned, it would appear that the disasters of the last three years have forced Peking to switch to a more realistic and less doctrinaire approach. It may well be that this trend will also be seen in the realm of foreign affairs and that the growing strength of the moderates in Peking will cause the Chinese Government to devote its energies to the creation of a healthy economy and to the pursuit of a more cautious foreign policy than hitherto. There are already signs of a rather "softer" line in Tibet and it is conceivable that the Indian border dispute may be "put on ice".

However, I consider that this development is unlikely, unless unforeseen changes occur in the Chinese Communist leadership. Switches in economic policy will probably not affect Chinese policies towards India, which will continue to be influenced by the factors discussed earlier. The Chinese have shown themselves to be surprisingly ready to disregard economic considerations on the quarrels with both the United States and the USSR and they will probably continue to display the same attitude in their dealings with India. There is also the continuing possibility that the Chinese government may seek to allay dissatisfaction with living conditions within China by indulging in adventures abroad.

There is a likelihood that the Sino-Indian border will increasingly become the favoured area for Chinese expansionist pressures, disregarding the Taiwan and off-shore islands issues. I believe that the Chinese will become more wary of even covert action in South-East Asia as stronger Western reaction to communist moves in that area increases the risk of their becoming involved in open war. On the other hand, the Chinese will probably assess that the scale of any action against India will always be within their power to control. The Indian response will be essentially defensive and the Chinese could, if they thought it necessary, stop their incursions without difficulty. The Chinese may assess that no Indian Government of the foreseeable future is likely to permit direct Western military support and thus that aggression on the Indian border will carry no risk of a clash with the West.

There are a number of factors connected with the border situation which can, and probably will, be exploited by the Chinese. The Indo-Pakistani dispute affords the opportunity to score off India in a particularly sensitive area — Kashmir. For over 18 months now the Chinese have been threatening to come to an agreement with Pakistan on the demarcation of the border between Tibet and the Pakistani held area of Kashmir. On 27 May 1962 it was announced that Pakistan and China would "shortly" exchange maps, preparatory to border negotiations. The leisurely fashion in which these negotiations are being conducted lend credence to the suggestion that the main Chinese

aim is to exert pressure on India. Pakistan may well consider that there are good reasons for her to co-operate with China. Chinese support could prove useful not only against India but also against the Soviet influence behind the bellicose attitudes of Afghanistan. Pakistan is disenchanted with her role as a reliable Asian friend of the West—believing that more assistance and sympathy is given to the less co-operative type of neutral. She may see in accord with China a good prospect of putting pressure on the West for more aid and for support against India.

There seems to be every prospect that China will continue to develop the situation in Nepal to her advantage. King Mahendra's quarrels with India seem to be having the effect of driving him into the arms of the Chinese. Nepalese - Indian friction stems from such things as the activities in India of the ousted Nepali Congress Party, the propaganda against Mahendra in certain sections of the Indian press and the fact that Nepali "rebels" are said to be operating from bases in Indian territory. The Indians are well aware of the dangers inherent in this situation and are making efforts to improve their relations with Nepal. They have recently held talks with Mahendra in Delhi, for example. However, Chinese influence in Nepal still appears to grow unchecked. One Chinese move of much strategic significance is their proposal to build a road from Tibet to Katmandu.

Chinese domination of Nepal would bring her considerable advantages in her dispute with India. In one stroke the Indians would be deprived of their traditional northern s h i e l d — the Himalayas. China would be able to circumvent the logistics problems posed by actions on the Indian border by developing Nepal as a powerful base. She would be able, at her will, to debouch into northern India—aided by the road network now being developed by the Indians. She would hope that the mere threat of such an operation would be enough to achieve at least her short term aims in India.

If Nepal fell under China's control, Chinese pressure on Bhutan and Sikkim would become intense. There is a likelihood that they would succumb, thus further reducing India's capacity to resist. Such moves would also be coupled with Chinese Communist activities among the dissident minorities in the frontier regions of India.

It is certain that the present central government of India, and any foreseeable successor, will continue to refuse to give up any Indian territory in the face of Chinese aggression. However, hampered as they are by their military commitment against Pakistan in Kashmir (which seems likely to continue) and by the problem of stimulating economic growth in the face of an expanding population, the Indians will have to look abroad for help in their resistance against the Chinese.

In the past the great bulk of foreign aid has come from the West, primarily from the United States. But India, under Nehru,

may in future also turn more and more towards Russia—although no non-communist Indian political leaders are under any real illusions about ultimate communist aims. Soviet aid to India first began in1954 and up to 1961 the total aid delivered amounted to US $298.79 million (compared with United States aid in the same period of US$1,676 million). The Indian proposal to purchase MIG aircraft from the Soviet Union has occasioned protests from Western countries concerned at the prospect of such an intimate Russian link with the Indian armed forces. The Indian Government replied that it has been forced to consider this because the Russians offer the best terms—pointing out that India is currently experiencing her worst ever crisis of foreign exchange reserves. Another reason why India accepts arms and aid from Russia, and why she will probably continue to do so, is that in this way Russia is a kind of reinsurance against China. The Russians have attempted to adopt a neutral stand on the India border issue ever since it first became public in 1959, but as the Sino-Soviet dispute has intensified they have even shown an inclination to shift to the Indian side. The main Soviet intention is no doubt to retain Indian goodwill, although they also see in the situation an opportunity to embarrass the Chinese. (Note the "patriotic" line of the Moscow-oriented CPI discussed earlier.) Indo-Soviet collusion will probably serve to increase Chinese aggressiveness.

The complexion of the central government of India will clearly have an effect on the dispute with China. It could be that the successor to the present Indian Government may be somewhat more ready to co-operate with the West and to recognize that the real external threat to India comes from communism. Another factor which must be considered is the ever-present and probably growing threat of disintegration in India. It is quite conceivable that in the next decade strong separatist pressures will gravely weaken India and significantly reduce her ability to stand up to China. The Indian communists have consistently made political capital out of local communal grievances and this is a technique that the Chinese could try to use in the disputed border areas; they may attempt to use Tibetans as an instrument of infiltration. The Nagas are also an obvious target for subversive activity—particularly as their contiguous border with Burma provides an easy means of access for the Chinese.

Conclusions

It appears that the Chinese will continue to press their territorial claims and take every opportunity to put pressure on India. Their tactics will include the use of armed force if necessary, but this will be restricted to small scale operations which can easily be halted if they desire. They will use every possible diplomatic means and will in particular make great efforts to bring Nepal under their dominion. The Chinese recognize that the outcome of their dispute with India will have an important bearing on their achieve-

ments in the rest of Asia. They may even calculate that a display of bellicosity against India will render more effective their "peaceful" diplomacy against the smaller states of Asia.

The Indians will continue to resist but are hampered by many problems — economic, military and social. They will enlist all the foreign support they can, both from the West and from the USSR, but will try to retain their neutrality. It is possible—though by no means certain—that the Indian Government after Nehru will be more disposed to co-operate with the West. This could provoke a strong reaction from the Soviet Union and the CPI which would create more difficulties for India.

It is sometimes suggested that a settlement may eventually be achieved on the border issue which would involve Indian concessions in Ladakh in return for Chinese recognition of India's claims to the North-East Frontier Agency. It is argued that the Aksai Chin plateau has a strategic value for China as it contains the Sinkiang-Tibet road, whereas it has none for India; the NEFA, on the other hand, is an area of great strategic importance to India. Clearly, such a compromise could be reached if both sides were prepared to make concessions. However, the dispute has now reached the stage where it is of wider significance that simply a border issue, and it seems that the variety of other factors which now affect it and which have been discussed in this paper, will continue to apply. The likelihood therefore appears to be that China and India will be unable to resolve their differences during the next few years and that relations may even deteriorate still further.

Suggested Reading

A. P. Rubin, "Sino-Indian Border Disputes", International and Comparative Law Quarterly, 1960.

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THE 106 mm. RIFLE M40-A1 ANTI-TANK WEAPON

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The author raised the first ARA unit to be equipped with the 106 mm M40-A1 Recoilless Rifle. On completion of its initial training on the armoured range at Puckapunyal in Victoria, the unit moved to Queensland, where further training was carried out at the Jungle Training Centre and in the rain forest areas of the Macpherson Ranges.

—Editor.

THE introduction of the 100 mm Rifle M40-A1 anti-tank weapon into the Australian Armed Services has brought with it the need to study again the anti-tank battle, and the tactical employment of anti-tank weapons.

Without doubt the 106 mm rifle is the most effective anti-tank weapon ever employed in the Australian Army. This statement does not decry the potential of such weapons as Malkara or Vigilant, or other "self-homing" or "guided" devices. However, the 106 mm rifle is in service in quantity, and possesses a field effectiveness and rate of fire not yet achieved by more scientifically sophisticated devices.

In considering the employment of anti-tank weapons in an army, the first broad and basic factor to be appreciated is that the anti-tank battle is not the sole province of anti-tank units. The anti-tank battle is fought by many agencies, and the anti-tank unit is just one of them, to be employed where the effectiveness of other types of anti-tank defence cannot be guaranteed.

The anti-tank battle is fought by deploying forces in the field behind obstacles both natural and artificial. Natural obstacles include rivers, dry wadis, broken ground and stony outcrops, timber, swamps, soft sand, and mountainous terrain. These types of terrain deny the tank full use of its tremendous mobility and "shock action" characteristics and permit effective counter-measures by lightly equipped troops. The most effective artificial anti-tank obstacle is the anti-tank minefield. To this may be added anti-tank ditches, concrete and steel fences (dragon's teeth) and cratering.

It will seldom be that any obstacle in itself will be completely effective against tanks, and therefore a combination of obstacles may be necessary. Placing

of anti-tank mines in craters and demolitions will increase the effectiveness of such demolitions, or the digging of an anti-tank ditch through a minefield will complicate the enemy's problem of breaching the obstacle. However, the final and most important factor in determining the effectiveness of any obstacle to stop tanks is the fire power deployed to cover the obstacle, whatever its particular nature might be. This fire power may be in many forms, including:

(a) Small arms and short range anti-tank weapons from the infantry localities.

(b) Field artillery, both medium and 25 pounders.

(c) Long range anti-tank weapons (106 mm rifle).

(d) Tanks of Armoured Regiments.

The co-ordination of covering fire agencies, and the siting of artificial anti-tank obstacles in the overall anti-tank battle, is an interesting problem in itself but will not be dealt with in this short article.

Technical Data

Having determined the general context for the employment of the 106 mm rifle in the field, knowledge of the technical capabilities of the weapon is essential to its effective siting on the battlefield. This technical data is taken from United States Field Manuals received with the weapons.

Description

The 106 mm rifle is a lightweight recoilless weapon intended for use in both anti-tank and anti-personnel roles. It is an air cooled, breech loaded, single shot rifle that fires fixed ammunition. The rifle is equipped with a manually operated breech mechanism, and a percussion type firing mechanism. It has a 360 degree traverse, and an extreme range—not battle range—of 8,400 yards.

The 106 mm rifle and the calibre .50 spotting rifle comprise a weapons system of two separate weapons. This weapon's system is matched at calibration (zeroing) between 1,000 and 1,100 yards, and gives pin-point accuracy against all types of targets, moving or stationary, up to 1,200 yards.

At ranges beyond 1,200 yards ballistic instability of the calibre .50 spotting rifle reduces its accuracy as a ranging device, and the sights alone, with a ranging technique, are used to produce accurate and effective fire up to 2,200 yards from the 106 mm rifle.

Ammunition

Depending on the type of projectile, ammunition for the 106 mm rifle is classified as high explosive anti-tank (HEAT) or high explosive plastic (HEP-T).

The high explosive, anti-tank cartridge employs the shaped-charge principle to defeat armour. It does not depend on velocity at the moment of impact for its effect. It relies upon a concentration of the effect of the explosive filler through its shape. The conical shape of the filler concentrates the force of the explosion into a hot jet that blows its way through armour.

Spaced armour, skirting plates, or external bins in no way defeat the effectiveness of the HEAT round.

The high explosive plastic cartridge is designed primarily for use against armour. It uses a comparatively new principle to defeat armour. Detonation of the explosive charge sets up shock waves that cause a "spalling' or chipping of the interior tank surface. It is completely effective without necessarily penetrating the exterior surface. The projectile achieves maximum efficiency against sloping armour, rather than vertical armour.

Because of its characteristic plastic filler, this projectile, sometimes called "squash head", has a tendency to spread out over the target surface on impact. It is very effective against concrete, timber or log barricades and bunkers. Its fragmentation makes it an excellent anti-personnel projectile. This projectile will defeat any known tank armour thickness.

Characteristics

Handing of the 106 mm rifle since its introduction into the Australian field force has highlighted the following characteristics of the weapon:

(a) Light weight:
Weapon: 287 pounds.
Mount: 196 pounds.
Total: 483 pounds.

(b) Small size of the weapon and the mount, especially when dismounted from the carrying vehicle.

(c) Lack of protection for the weapon and the crew.

(d) The effective long range of the weapon compared with previous anti-tank weapons in service.

(e) Pronounced flash and dust blast on firing.

Study of the above characteristics indicates that the basic concept behind the employment of the 106 mm rifle on the battlefield should be mobility.

If sited in fixed positions in the forward defended localities, the lack of protection for the weapon and crew may result in the early destruction of the weapon during the battle by covering fire alone, before even targets, for which it exists to destroy come within range.

This does not mean that the weapon will never be sighted and concealed on the battlefield in static or semi-static positions. All that the characteristics do indicate is that the idea behind the design of the weapon is mobility, rather than capacity to take a battering during the covering fire stages of an enemy assault.

Fire Positions for the 106 mm Rifle

First reactions to siting the 106 mm rifle in the field is to dig it into some sort of gun pit. This thinking is a natural corollary arising out of the absence of any protection for both weapon and crew in its design. Furthermore, all the experience with anti-tank weapons up until the present has required the digging of a fairly massive gun pit from which to fight the anti-tank weapon.

From field experience with the 106 mm rifle so far, the following useful facts have emerged:

(a) A gun pit type of structure is unsuitable as a field emplacement for the 106 mm rifle. There is a danger to crew from flash and blast in confined spaces.

(b) No simple weapon pit can be devised that will give all round protection as well as overhead protection to weapon and crew, and which at the same time will not endanger the crew from blast, flash, or concussion.

The above observations further vindicate the mobility concept in the design of the weapon, and indicate that it should be fired from the vehicle on which mounted, whenever possible.

Acknowledging the need, at times, to fight the 106 mm rifle dismounted from its carrying vehicle, the weapon emplacement most favoured for this is illustrated in Figure 1.

The limitations of this weapon pit are:

(a) No protection for the weapon itself.
(b) No protection for the gunner when aiming.
(c) Limited arc of traverse.

Points considered favourable in the weapon pit illustrated are:

(a) Protection for commander and loader.
(b) Protection for gunner, other than when firing.
(c) Simple to construct—minimum digging.
(d) No danger from flash or blast.

To facilitate the somewhat awkward task of the loader in loading the weapon in the confines of a slit trench, a sandbag step at the weapon end of the pit enables the loader to more readily climb out of the slit

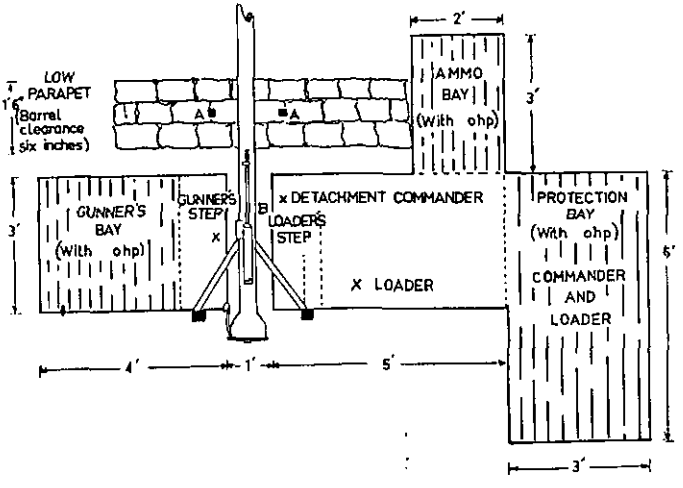


FIGURE 1.

NOTES:

1. A - Traverse stops.
2. Ammo bay located to prevent damage by 'BACKBLAST' in event weapon traverse is excessive.
3. Camouflage net may be used to conceal weapon site provided kept clear of the weapon and the 'BACKBLAST' and 'MUZZLE BLAST' patterns.
4. Protection bays (with ohp occupied only when 106 Rifle NOT in action.
5. For ease of construction the dividing wall B under the 106 mm may be excavated completely and replaced with sandbags.
6. Fighting bay depth - 4'6"

trench. Assembling the breech with the operating lever underneath the breech further assists the loader in his duties.

The whole of the emplacement in Figure 1 is then concealed, using the camouflage net and scrimmage, ensuring no part of the net fouls the blast patterns of the 106 mm RCL.

Other types of weapon sites that may be constructed, and from which the 106 mm rifle may be brought into action, are illustrated in Figure 2. These weapon sites are more suitable

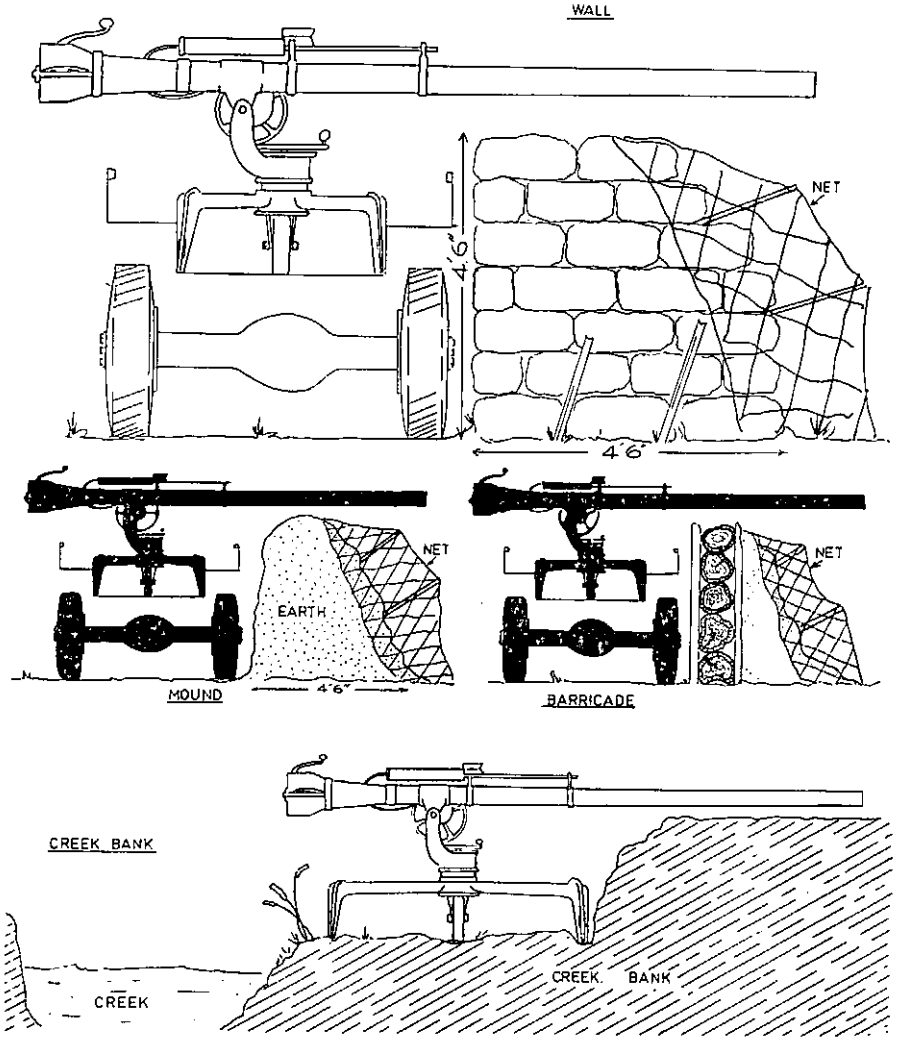


Figure 2

to the 106 mm rifle when mounted on its vehicle, although lower version of the "wall" may be employed when the weapon is dismounted. However, the crew is at some disadvantage when the weapon is dismounted behind a "wall" as they may have to adopt a lying position to obtain maximum protection frontally. This does not permit efficient gun drill, and the carrying vehicle has to move to protection elsewhere.

Tactical Siting of the 106 mm Rifle

Apart from the technical and safety considerations to be borne in mind when siting the 106 mm rifle, tactical siting of the weapon on the battlefield demands that its other characteristics receive their due weight under the prevailing operational circumstances:

(a) The long range of the weapon must be used to destroy tanks in front of the forward defended localities, and to achieve defilade from which to affect this destruction;

(b) Where possible, mobility should be retained in the defensive battle. This may require the selection and preparation of a number of fire positions, reconnaissance of concealed approaches to selected positions, and the choosing of suitable OPs by Troop Leaders. The Troop Leader may then direct his weapons located in a convenient "hide", to fire positions either in a sniping role, or as part of the anti-tank covering fire on obstacles or the tank approaches to the forward defended localities;

(c) Siting of the 106 mm rifle in forward defended localities; invites early destruction of the weapon and limits the effective range of the rifle in the battle to that of the Energa Rifle Grenade or 3.5 inch Rocket Launcher. This is because the 106 mm rifle cannot be effectively fought from the forward defended localities whilst the covering fire for the enemy assault is falling. A diagrammatic illustration for the possible deployment of an anti-tank platoon of an infantry battalion in a defensive situation is shown in Figure 3.

The following assumptions are made in respect of the covering fire employed by the enemy in the attack illustrated in Figure 3:

(a) 75 per cent or higher of all covering fire will be directed against the objective under assault.

(b) 25 per cent of covering fire available will be distributed upon objectives from which support may be given to the objective under assault.

(c) Of total covering fire falling on any feature, at least 90 per cent will fall on top of the objective or forward of it. The remaining 10 per cent or less, representing the upper end of the mean point of impact zone of a weapon, wall fall on reverse slopes of the objective or beyond.

On the above mathematical assumptions alone, it is abun-

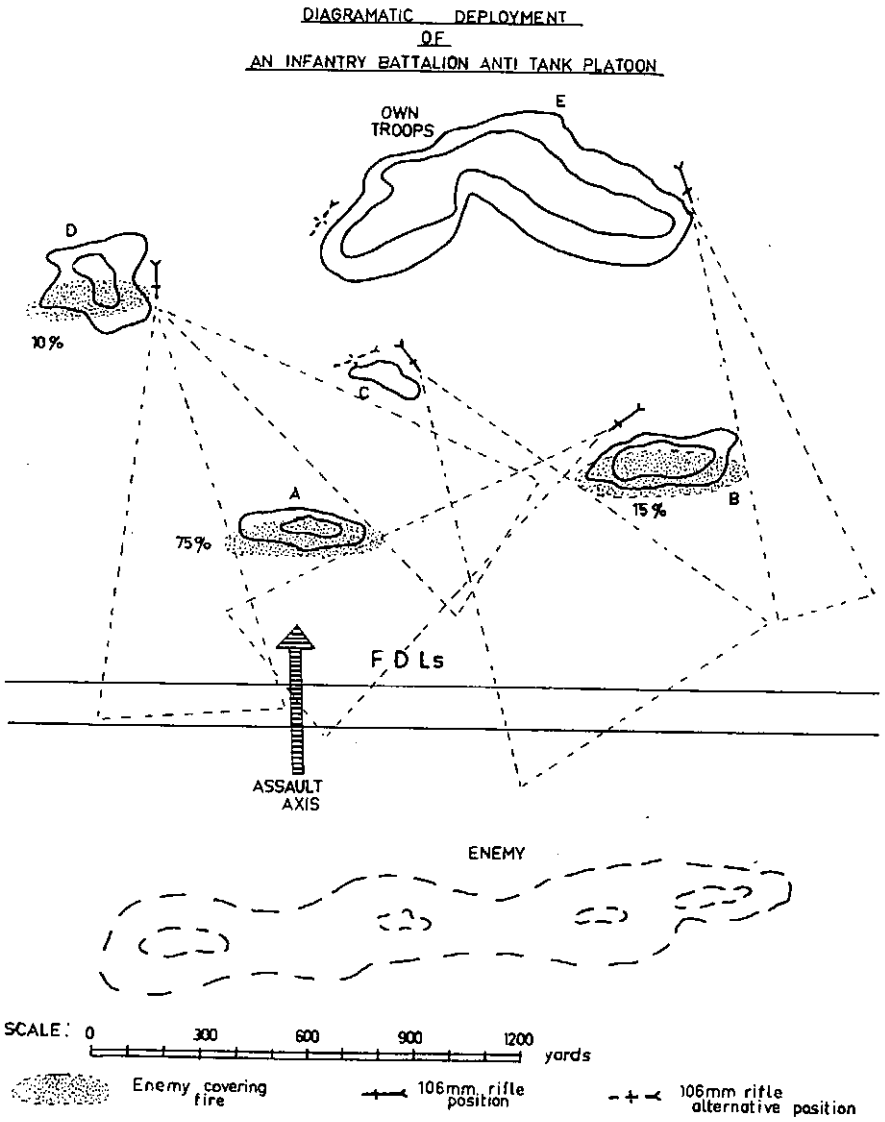


Figure 3

dantly clear that the anti-tank platoon commander should look for 106 mm rifle battle positions in rear of features B and C, or to the flanks of features D and E. It is to be appreciated that the suggested sites for the 106 mm rifle have been selected in respect of an assault on objective A.

Points to note are:

(a) Forward defended localities of likely enemy objectives are avoided.

(b) 106 mm rifles are sited in deflade.

(c) A degree of mutual support exists between 106 mm rifles.

(d) Depth and flexibility is achieved in the anti-tank layout by having alternative positions.

Greater flexibility and a more effective anti-tank defence may be achieved under the circumstances illustrated in Figure 3, by not deploying the 106 mm rifles in fixed positions as indicated, but by keeping the rifles concentrated in one or two groups, and on their vehicles. Anything up to ten or twelve fire positions may be prepared in the area occupied by the battalion, covering the likely tank approaches to objectives. Upon the enemy attack developing, the platoon commander could then deploy his 106 mm rifles, by previously reconnoitred routes, to the best fire positions to repel the assault. This mobility and flexibility would achieve a greater concentration of anti-tank fire at the critical point when most needed.

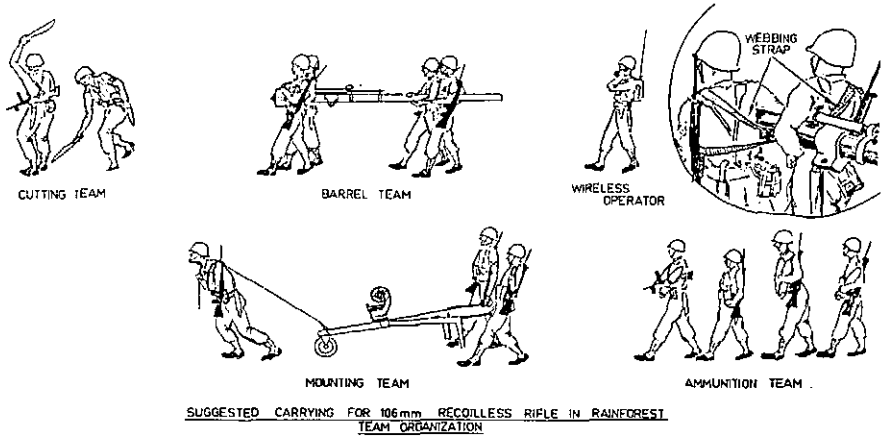
It is emphasised the diagrammatic presentation in Figure 3 is merely to illustrate ideas and principles, and to promote thought. It does not take into account obstacles, natural or artificial, or the many features of ground which may limit the effective employment of anti-tank weapons in an operational situation.

In some circumstances, when cover is thick and ranges comparatively short, it may be preferable not to attempt to deploy 106 mm rifles in an anti-tank role. Such circumstances may well demand the weapons be held concentrated until more suitable ranges and tactical localities are available. Under adverse anti-tank conditions the rifle may well be employed in its secondary roles of bunker busting and against personnel, or in giving overhead covering fire to own troops in the assault. Such roles will usually be undertaken from "sniping" positions specially selected for the task.

Problems of Rain Forest

Manhandling the 106 mm rifle through rain forest has shown that this form of terrain is no barrier to the successful deployment of the rifle under such conditions. However, the crews of the rifle as organised in current establishments in infantry battalions and anti-tank units are insufficient in numbers to efficiently move the weapon over distances of one hundred and fifty (150) yards or more, without undue loss of time in bringing the weapon into action.

The rain forest area selected for experiment included all types of rain forest vegetation. No track existed from the point of dismounting the 106 mm rifle from its vehicle to the selected fire position, and ground conditions were wet. The rain forest was on generally flat country, but steep country would merely increase the labour requirement for carrying, and the time taken



SUGGESTED CARRYING FOR 106mm RECOILLESS RIFLE IN RAINFOREST
TEAM ORGANIZATION

Figure 4

to move the weapon to its destination.

Organisation of a team to move a 106 mm rifle through rain forest is shown in Figure 4.

The team is organised to ensure the rifle and four rounds of ammunition are moved as an entity. The amount of ammunition required at the weapon position will determine the number of ammunition carriers in the party, or the number of lifts needed, before firing opens. The wireless set ANPRC 10 should accompany the weapon.

Tasks which may require the 106 mm rifle to be manhandled through rain forest include:

(a) Bunker busting.
(b) Fire support in the assault, or covering such operations as river crossings in rain forest.
(c) Anti-tank protection during the re-organisation phase of an attack, before tracks have been cleared of battle debris enabling vehicles to come forward.

Tasks selected for the 106 mm rifle should be those that require pin-point accuracy, or a high degree of safety to own troops. Engagement of area targets, or harassing fire tasks are not suitable roles.

No special equipment is needed to manhandle the 106 mm rifle in rain forest. Toggle ropes, rifle slings, OMC slings, web belts are all that are necessary. Two long, broad webbing straps, ten feet long by three inches wide, would assist the members manhadling the rifle barrel, as the narrower straps and ropes tend to cut into the shoulders of the carrying teams. A barrel clamp with handle as illustrated in Figure 5 would assist when handling the barrel when hot.

Careful selection and marking of the route to be followed by carrying teams is necessary to ensure:

(a) Maintenance of proper direction in the rain forest.
(b) Circumnavigation of major ground obstacles such as

dead-falls and tangled vegetation, or the crossing of dry water courses, without loss of direction or great increase in distance of carry.

(c) Selection of easiest ground conditions in respect of gradient.

Careful selection of the route to be followed not only speeds up movement of the equipment through the rain forest, but contributes greatly to reducing noise and fatigue in the handling of the weapon under such conditions.

Tasks of the various teams in the carrying party illustrated in Figure 4 are as follow:

Cutting team: Two men. Clears vines and other vegetation likely to snag carrying teams—removes fallen branches, rocks and any other obstacle likely to impede progress. If reconnaissance and marking of the route has not been done, a navigator with compass may be included in this group.

Barrel team: Four men. Using carrying straps and positioned two at the breech and two at the muzzle, carry the barrel. Weight, 287 lbs. The breech cover only is removed to permit access to the breech carrying handles. Other covers remain in position to prevent damage, and slowing down of movement from vines and vegetation catching in protruding components. The covers also prevent the possibility of altering the calibration of the 106 mm rifle and the calibre .50 spotting rifle whilst manoeuvring the barrel through thick vegetation.

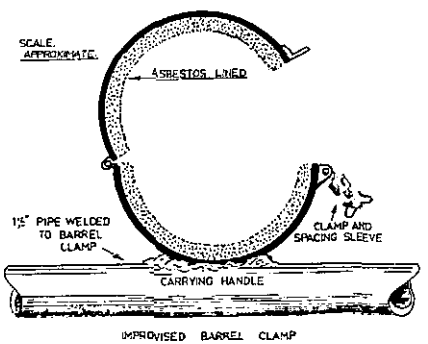


Figure 5

The Mount team: Three men. It is easier for the team to push the mount as illustrated rather than drag it. The crewman at the nose wheel with a lifting strap is of great assistance when crossing over tree roots, stones, or in mud. The mount legs should be locked in the closed position. Weight of load is 196 lbs.

Ammunition team: One man is required to carry each round of ammunition. Weight of the round is 37 lbs. The round should *not be removed from the pack*, as this prevents moisture, mud and pieces of vegetation fouling the perforations in the cartridge case, which may lead to danger and inaccuracies on firing. The round in the pack is an awkward load for one man, as no suitable carrying grip is included in the design of the pack.

Safety Factors

Because of the danger to personnel from the back blast of recoilless weapons, the danger area for the 106 mm rifle is illustrated in Figure 6.

The back blast area is triangular in shape, with the apex at

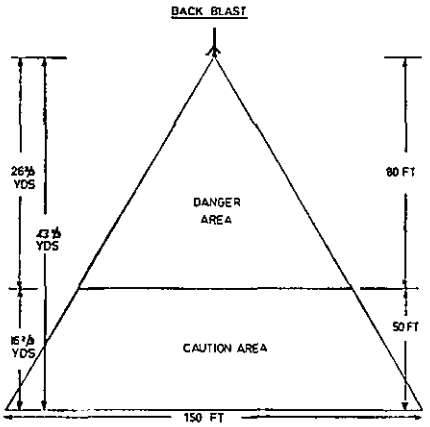


Figure 6

the breech. It extends 130 feet to the rear and has a 150 foot base, 75 feet on either side of the bore axis extended. It is divided into two areas — a danger area and a caution area.

In the danger area, which extends 80 feet to the rear of the breech, serious casualties or fatalities are likely to occur, due to blast and flying debris.

In the caution area an individual is relatively safe, providing he does not face the breech. The danger area and the caution area are always kept clear during training.

Rates of Fire

Firing rates for the 106 mm rifle are:

(a) Maximum sustained rate: One cartridge a minute indefinitely.

(b) Maximum rapid rate: A firing rate not to exceed one cartridge per six seconds, with not more than five cartridges being fired at this rate. A 15 minute cooling period must elapse between two successive rapid rates.

(c) A sustained rate may follow a maximum rate immediately.

(d) A 15 minute cooling period must elapse between a period of sustianed fire and a rapid rate period.

Nuclear Thought

Siting the 106 mm rifle in a nuclear concept emphasises the need to preserve the mobility of the weapon, and not to commit it to fixed positions. Where greater distances exist between defended localities, the capacity to manoeuvre the anti-tank weapons to counter penetration by armour is paramount.

Summary

Knowledge of a weapon's capabilities and characteristics ensures its proper employment in the field. The 106 mm rifle is new to the Australian Army, but its versatility and usefulness are already apparent. Its light weight and long range, together with its ammunition, have introduced a deadly punch into our battlefield anti-tank defence hitherto lacking. Much more has still to be learnt about the new weapon, and the ways and means of siting it on the battlefield. The prime purpose of this article is to present some basic facts about the weapon to a wider audience, together with some initial thoughts on its field siting and handling.

BRITAIN AND EUROPE

THE general impression that emerges from press reports of the Prime Ministers' Conference in London is that the Dominions, while refraining from an expression of outright opposition to Britain's proposed entry into the European Economic Community, insisted that she ought if possible to hold out for better terms, terms which would safeguard their own particular interest to the greatest possible extent. The reports further suggest that Britain will now resume negotiations with a view to gaining admittance to the E.E.C. on the best economic terms she can get. Commentators on the results of the Conference appear to assume that Britain is determined to enter the Community on this basis and that a commercial accommodation is all that has to be negotiated.

As has already been pointed out in these notes, there is much more at stake than an agreement about tariffs and trade. But even in this sphere the reports generally stress the difficulties confronting the British in negotiating an agreement that will be even moderately satisfactory to their traditional trading partners within the Commonwealth. Few of them present a clear picture of the difficulties facing the continental negotiators. As a result, most people are trying to form an opinion without taking into account what has been happening in Europe during the last fourteen years, and without fully appreciating what the Europeans are aiming at. They are thinking in terms of the old Europe instead of the new.

In 1948 Belgium, Holland and Luxemburg formed a customs union known as Benelux. Five years later these three countries, together with West Germany, France and Italy, formed between them a common market in coal and steel. The success of this project encouraged them to go further, and in 1955 they decided to work towards a common market for all products traded between them. Two years later, on 25 March 1957, they signed two treaties in Rome, one instituting the European Economic Community, the other the European Atomic Energy Community. The latter treaty is concerned with the development of atomic energy for peaceful purposes and does not bear directly on the question of Britain's entry to the European Economic Community (EEC), usually referred to as the Common Market.

The EEC Treaty provides for the formation of a customs union

between member countries, for a common policy in transportation, for the free movement of capital and labour across national frontiers, and for a joint fund to assist economic development. Most of these objectives were to be achieved by stages.

In formulating the treaty, particular attention was paid to the development of European agriculture on more efficient lines. A point often overlooked in Australia is that European countries, particularly France, have large agricultural populations. French farmers are as well organized politically as Australian farmers, and no French Government can afford to ignore their economic interests. And in recent years the efficiency and productive capacity of French agriculture has strikingly improved. For instance, the yield of wheat per acre has increased by more than one half over that of prewar levels. France now has an exportable surplus of some 4,000,000 tons over and above the requirements of her own population.

As the EEC has developed it has become, fundamentally, a bargain between French agriculture and Western European secondary industry. France is able to sell her surplus in basic foods —wheat and meat—under the protection of a common tariff against imports from non-European countries. In return, German, Italian, Belgian and Dutch secondary industry enjoys the benefit of free trade within the area, also protested by the common tariff against imports from the outside world.

The common tariff, of course, operates against British industry, since it places her products at a disadvantage in the continental market. The British Government apparently believes that it is vitally necessar yto remove this disadvantage, and the only way to do that is to join the EEC. But, under existing trade arrangements, Britain buys most of her food from non-European countries at world prices well below those obtaining within the EEC system. Thus the British industrial worker has the advantage of cheaper food than his continental counterpart.

Continental farmers, particularly French farmers, who now have food for export, see in Britain a market for their surplus products. But, like all farmers, they are interested in good prices, and the prices which Britain now pays for her foodstuffs are below those ruling on the continent. They do not see why British manufacturers should be given access to the vast European market while their own agricultural products are excluded from the British market by the lower prices at which other people are able to sell. They argue that if British manufacturers are to be given an even break in the continental market, then European farmers should be given an equally even break in the British market. To give them this even break Britain would have to adopt the common EEC tariff, which would operate adversely against the agricultural products of Canada, Australia and New Zealand. This, of course, does not weigh very heavily with the French farmers.

The central point in their argument is that no French government can afford to ignore it.

Besides these economic considerations there are other political forces which have to be taken into account. The first of these is the rapproachment between France and Germany that has taken place under the leadership of General de Gaulle and Dr. Adenauer. Actually this rapproachment is not so astonishing as it may appear for, despite their wars during the last century, there are many historical and cultural links between France and the western part of Germany. Of recent years these links have been strengthened by the marriage between French agriculture and German industry, a union which has placed them at the head of an economic system which is already so dynamic and so rich that its bargaining power exceeds that of the British Commonwealth and rivals that of the United States.

Most Europeans see the success of EEC as a first step towards closer political integration, but there are different schools of thought about the shape this integration should take. The de Gaulle-Adenauer school visualizes it as a very loose confederacy with no supra-national government, led and dominated by France and Germany. The other school advocates actual federation somewhat on the lines of the United States or Australian models. On political grounds alone the Adenauer-de Gaullists can hardly be enthusiastic about Britain's admission to the club, for she could then become a serious rival for the leadership. The other school, which above all wishes to avoid a recurrence of the struggle for power, is not likely to be enthusiastic either, unless they had some assurance in advance that Britain would support their views. Thus, quite apart from economic considerations, it is not altogether certain that the EEC would be willing to accept Britain as a member, though Belgium, Italy and Holland would probably support her inclusion in order to secure a compensatory balance to Franco-German strength.

In the realm of military strategy pretty well all Europeans believe that the nuclear stalemate is an accomplished fact. In this situation they believe that the United States would refrain from using strategic nuclear weapons to repel an invasion of Europe. General de Gaulle holds that this state of affairs makes it imperative for France to acquire a strategic nuclear capability of her own.

The Americans are by no means convinced that nuclear stalemate can be accepted as an accomplished fact, perhaps because they have to make such constant and expensive efforts to keep up the race. They believe that any extension of membership of the nuclear club increases the dangers of nuclear war on the grand scale. They maintain that the strategy of peace can best be served by a single deterrent force under a single command—American. To this the de Gaullists reply that the essence of deterrence is the credibility of the threat, and that the threat to American cities is now great enough to lessen the credi-

bility of the American response to a nuclear assault on Europe. Europe, therefore, must have a credible response in her own hands.

This difference of opinion has a bearing on the question of Britain's proposed entry to the EEC, because the United States shares nuclear secrets with her while refusing to share them with anyone else. Why, ask the de Gaullists, is Britain trusted with these secrets and France is not. Further, there is the practical consideration that if Britain joins the Community she will have to speak with two voices. She can discuss strategy with the United States in terms of nuclear secrets, but she could not even mention them when discussing the same subjects with her partners in Europe.

To the American argument that a small power armed with a few atomic bombs is capable of distorting the play of forces and depriving the Great Powers of the astery of their fate, the de Gaullists ask, "Then why help the British?" To this the Americans reply that Anglo-American co-operation in the nuclear field is a heritage of World War II, and that in any case the British have an effective nuclear striking force. This reply is not very convincing to Frenchmen, who are on the way to building up a similar force of their own. They simply cannot accept the arguments which place Britain in this special position in the field of strategic nuclear weapons.

This special position of the British is a real obstacle to her admittance to the EEC. Technically, the American argument against extension of the nuclear club is flawless, but it fails to give sufficient weight to the political considerations which the European statesmen have to take into account. It has been hinted that if de Gaulle or his aged partner Adenauer were to depart the scene the opposition to admitting Britain, special position and all, would not be so formidable. It is at least extremely doubtful whether any French government could accept Britain without some extension of her special privileges, though Adenauer's successor might.

Evidence that the British and Americans are trying to resolve the difficulty is afforded by reports about the underlying reasons for the recent visit of the British Defence Minister to Washington. Some reports say that the discussions aim at the creation of a three-power directorate to control the strategic nuclear weapons of the West. Other reports point out that de Gaulle has already rejected the idea. However, all reports agree that the Minister crossed the Atlantic to discuss this problem. On the face of it, it does seem that they will have to produce a substantial modification of the present position to allay French fears and to satisfy European statesmen. Britain is not in the European Economic Community yet.

25 Sep 62 —E.G.K.

THE VALUE OF CW TRANSMISSION IN LONG RANGE PATROLLING

PACIFIC ISLANDS REGIMENT

COMPLETELY reliable communications for long range patrolling are essential if success is to be assured. This applies not only in peace where, for instance, air drops must be guaranteed or assistance must be organised in the event of accident, but also in war, where vital information must be passed quickly or supporting fire accurately directed.

In order to provide excellent communications for all long range patrols, PIR has had to overcome two major difficulties:

(a) Poor reception conditions;
(b) Limited power output from the wireless sets in use.

The reception conditions in this part of S.E. Asia are recognised as the worst in the world. This is mainly so because of the ionospheric conditions, which impose high noise levels at all times and also induce intense fading in the late afternoon and night. However, the area is also subject to a high degree of man-made interference, as many countries in the area pay no attention to international frequency controls.

To contend with ionospheric condintions it has been imperative to use the Ionospheric Prediction Chart. This has enabled ideal frequencies and transmission times to be allocated to patrols. It is vital, however, to ensure that the aerials both at base and on patrol are sited to be directional and that all aerial sites are carefully chosen and cleared. Under good conditions excellent results have been achieved with the wireless set A510 using voice. It is not unusual for patrols located at Green River to establish communications with Battalion Headquarters at Port Moresby, 500-600 miles away. The standard of voice communication has improved generally, and when it is realised that most long patrols traverse 400-500 miles and often operate 200 miles from base, the value of careful planning can be appreciated.

The wireless set A510 has proved to be excellent in all respects for long patrolling, except that its size does impose a limitation on the power output. It would not be desirable to have a set which is any larger and it

will be some time before a more powerful equipment is provided. It is therefore extremely important that the maximum use is made of all the facilities provided by the present equipment.

Despite the great success achieved with the voice facility, it has been found necessary to use CW on many patrols. It is not always possible to transmit at optimum times, and there are often severe limitations imposed by the great ranges over which patrols operate.

Allied with these problems is the one of man-made interference. This type of interference occurs frequently and does not always emanate from regular programmes or schedules. The only consistent aspect is that this type of interference comes from stations operating with a greater power output than the PIR equipments.

At such times, PIR patrols must use the maximum power available from their wireless sets. As the A510 transmits on .15 watts using voice and .5 watts using CW, the increase gained by using CW is of tremendous value. It has, in fact, enabled communications to continue in close country and at night, overcoming the high degree of ionospheric and man-made interference.

The need to train regimental signallers in CW has imposed a burden on the existing resources of the unit. However, by instituting a carefully planned programme of instruction, excellent results have been achieved with the native operators. Operators have already been trained to a guaranteed 10 words a minute in six months and the advanced operators are expected to reach 20 words a minute at the end of the year. The advantages so gained far outweigh the difficulty of the burden created.

It is strongly recommended that units training to operate in S.E. Asia consider carefully the advantages which CW offers. Communications are vital in this theatre and careful planning and training are necessary to ensure that they can be maintained under all conditions. Within PIR, all officers, regimental and company signallers, are being trained in CW and its procedures.

AN ACADEMY OF MILITARY ART

Major R. M. C. Cubis
Royal Australian Artillery

IN former days the question was often asked "Is war an art or a science?" The soldier found the question difficult to answer because it was phrased in mutually exclusive terms and felt cheated by the customary solution that war was a "little bit of both".

For war really is both and the solution was correct in so far that it acknowledged the existence of two divergent strains. Perhaps the solution failed in not making clear a distinction in principle between them. The matter is a study in itself.

In the past few decades, however, the emphasis on one strain, the scientific side of soldiering, has become most prominent. In passing, one must regret that the students of the purely physical sciences have arrogated to their field the monopolistic use of the word "science", and the process has gone so far that, in the contemporary mind, a distinction between the aspects of science in its true sense is regarded as pedantic.

All armies have followed, and are still following, this tendency to emphasise the scientific side of the profession. This is a result, in the first place, of the aura of the age in which we live. For ours is an age in which the portents of physical science are manifest and easily comprehended by all. In less than 20 years, to mention but two of the most shattering events, the world has seen the practical application of nuclear power and evidence of the pending fact of interplanetary travel.

In the second place, we live in a materialistic age which is impressed by physical facts and, in the realm of ideas, accords validity only to pragmatism, of all the conclusions which cannot be measured in physical terms.

In our profession this tendency is apparent in several instances. Two are specified.

First—the creation and growth of the Royal Military College of Science, Shrivenham, which so many of our officers have attended. This admirable institution was created for a direct purpose and fulfils it. The importance of science to the army and the necessity for scientifically trained officers are recognised and, what is more to the point, provided for.

Second—The Royal Military College, Duntroon, now emphasises the importance of scientific prowess in the army's future officers to a marked degree, not, let it be said, intentionally to increase the significance of the academic against the military (although that, perhaps, is an unsought result), but rather, within the academic field, the scientist against the humanist.[1]

Herein lies a source of trouble, confusion and decline in the years to come, since an unwholesome emphasis on the scientific side of our profession will produce officers who are scientists first, soldiers second, and generals never. The pattern is already clear and compensation must be sought for this tendency if our army is not to be commanded by tradesmen, boffins, and laboratory assistants; for it is the particular genius of the scientist to show us "how" but it requires the humanist to show us "why".

It seems time, therefore, to take positive measures to fit our officers for the art of war and thus complement those trained in its science.

It is a matter of historical record that every great commander in military history has been an historian and, in some fields, erudite. Caesar, the student and his own propagandist, Alexander, determined to equate Macedonia with the historic and civilised Hellenic states, Bonaparte who sought to re-establish the Roman Empire, are the illustrious predecessors of our time. Wavell, the poet, Patton, the historian and traditionalist, Allenby, the "Gift of God", with his obsessive determination to fight Armageddon, Lee, the gentleman, are the inheritors.

Still, one cannot become a great commander solely on this basis, and one doubts if a Regius Professor of History could make an adequate Commander-in-Chief of NATO. Within all the great commanders — and the author trusts he uses the adjective correctly; he is not referring to the competent and successful — lay other qualities contributing to their greatness. Men cannot be educated to greatness but education can bring out the latent qualities of those born with the potentialities to achieve it.

There is nothing new in this. All armies have admitted the importance of the study of history and its associated subjects. Alas, subsequent reasoning has gone rather as follows: Granted all the great commanders have been students of history, if we, therefore, make all our officers read history, they will all be great commanders. Naturally they cannot devote all their time to something which is more than a lifetime's study, but they can spend a few panic stricken weeks each year learning at least a part of history which seems to be relevant, namely Military History. Not only is the conclusion invalid but also, and this is the rub, the policy serves only to upset regimental officers at annual examinations for no palpable gain. The matter needs review.

1 The author understands that RMC is seeking to raise the Arts course to the status level of the others.

We must be clear. Military History cannot be studied in isolation from history as a whole, for history is universal experience and can only be dissected by those who comprehend the whole. Moreover, while history remains a subject of compelling importance to any person professing competence in public affairs, it is, by itself, insufficient. For the complete leader (and who is so complete a leader as our soldier in time of war?), requires knowledge of many facets of learning not ordinarily gained from the pages of a book or even from a life's experience. There are aspects of knowledge which require elaboration from the specialist in his particular field. Where else can this better be provided but at a centre of traditional learning?

There is need, therefore, for a military academy where our future commanders and generals may study the humanities under conditions most encouraging to true learning. This academy ought to be complementary to the Royal Military College of Science and provide for our commanders what the latter does for our scientists and technicians.

The Academy of Military Art, to pluck a name from the air, may be modelled on the Arts faculty of a University and, as a suggestion, could embrace the following subjects:

I *History*
- Ancient
- Mediaeval
- European
- British and Commonwealth
- American Continental
- Asian and Pacific Ocean
- Contemporary (including Current Affairs).

II *Language*
- Greek
- Latin
- German
- French
- Russian
- Chinese
- Spanish.

III *Psycho-Sociological*
- Psychology and Logic
- Economics
- Political Science
- Philosophy.

IV *Military*
- Grand Tactics and Strategy
- Higher Military Administration and Organisation.

V *English Language and Literature*

Of these subjects, the Degree course should embrace the English and Military groups and two Histories compulsorily. The remaining six credits (if English is accepted as two), should be drawn from any group, provided there is at least one drawn from each of Groups III and IV. Twelve units comprise the course.

The civil subjects are intended, for award purposes only, to be identical with those covered at a University. Some may be puzzled by the inclusion of Greek and Latin. The matter is arguable, but the author believes that a knowledge of the "dead" languages, apart from their few "practical" merits, imparts to one's own writing clarity, simplicity, and elegance.

A word of explanation is needed for the military subjects.

Grand Tactics and Strategy should cover the conduct of war from the political level to that

of the forces in the field. There is a case for reviving the old term "Grand Tactics" and using it to describe the study of the operations of the forces within the theatre of war but excluding that of the conduct of forces in actual contact with the enemy. The latter is properly the field of tactics.

Higher Military Administration and Organisation should embrace a study of the design and composition of the armed forces, their establishments, and non-operational handling. The subject could include defence mobilisation, financial administration, public relations and the formulation of equipment requirements. Perhaps some of the latter may be better studied apart as an additional comprehensive subject called, perhaps, Defence Planning.

At certain levels some of the subjects suggested above impinge on matters studied at various staff colleges. This is intentional. The Australian Staff College should revert to the purpose for which it was originally designed — the training of Grade 2 staff officers. Tactics above pentropic battalion level (i.e., Grand Tactics), Military History, and English expression are really beyond the scope of the Staff College and, in the author's opinion, cannot be adequately dealt with there. It could be interesting to speculate that the very fact of the inclusion of some of these subjects at the Staff College may well indicate a necessity for their study in more detail and that the army finds it necessary to take positive measures to overcome the inadequacies of the Australian state education systems.

The expense and physical difficulty of implementing such an academy are considerable and, as mere suggestions, some of the points given below may afford means of saving without detracting from the Academy's purpose.

The civil subjects, for example, may be studied in a two year period at a recognised University, and undergraduates would join the Military Establishment proper only for the military subjects.

Candidates should not be expected, or even encouraged, to attempt the Degree course as a matter of career planning. The course should be optional and by selection. In order to weed out the idle and the faint hearted, the civil course, at least, should be undertaken entirely at the undergraduate's expense. The army would be more generous in making the candidate available for the course and affording him his army pay.

The selection of suitable candidates is a difficult matter. While Matriculation would seem a proper level of entrance qualification, recognition should be given to those officers, e.g., RMC "Arts" graduates (but not to RMC Science and Engineering graduates) who have already attained prior credits similar to those in the course.

Certain other priority qualifications are desirable and may even be essential. An undergraduate ought to have considerable regimental and regular experience, preferably with a strong infantry bias, which

should include a minimum of two years in command of an infantry company or equivalent. One realises that this will work in favour of officers from the "teeth" arms — and a jolly good idea too. The candidate ought to be, but not essentially, a graduate of the Staff College. If certain subjects are dropped, as suggested above, the Staff College could revert to a twelve month course, if not less).

There are, possibly, three immediate objections which may be raised to the whole idea.

First — It can be argued that the Joint Services Staff and Imperial Defence Colleges, both under different and separate terms of reference, already fit out future commanders for their high positions. This is undeniable and granted; but, despite the high quality of theory and interchange of ideas which occur at these colleges, they are not, essentially, academic, and they do not, therefore, provide the background for which the Academy would be specifically designed.

Second — Some will be quick to point out that this Academy will compel the Army to select its Bonapartes at an early age, that this is most difficult, if not impossible, and that, therefore, the course should be open to all or none. (Certain Corps have previously used this argument to push their members through University and Technical College courses). The author is unconvinced. The simple measures of making the Academy selective and at the candidate's own expense will discourage many. And there is no nonsense about democracy in the proposal. After all, the qualities of a commander and of greatness are not distributed throughout the race on a democratic basis. If the Academy produces but one Bonaparte in a thousand graduates it will have justified itself. Further, officers following the scientific strain should be excluded both for their own and the army's good and no officer should be permitted to try and ride both horses. From among the officers left, selection may not be so difficult as at first supposed. The matter cannot be discussed fully in this short article, but the general lines are clear.

Third — That capable, overworked, and tremendously patient officer, the Military Secretary, will point out that Australian officers are already so busy undergoing theoretical training that there are not enough available to do the important jobs in the regiments, and, further, when they finally do get to their regimental postings, they are likely to be removed at short notice for another batch of training. Well, there is at least one time honoured rule in the Australian officer's career planning which will shortly have to be resolved. That is the matter of regular officers serving in CMF units. The changing roles and respective strengths of the two elements of our army will shortly bring about a situation where, for good or bad, many regular officers will not serve in CMF units anyway. The comparative few who would be Academy candidates could well be spared from this particular posting

without prejudice to their professional experience or damage to the CMF units to which they might otherwise have been posted.

These latter points are some thoughts on ways and means. If the idea of an Academy of Military Art has merit in the eyes of others, and if the will to create it is aroused, then such difficulties will be solved.

It is impossible today for one man to comprehend the full extent of human knowledge if, indeed, it ever were possible. Thus a degree of specialisation is forced upon us all. But the army can derive only strength from the breadth of knowledge owned by its members, even if the members, themselves, tend to be specialists. If for no reason other than this — to provide salvation for an age obsessed with the importance of science, an age contemptuous of the validity of human and classical standards, an age which equates competence with success and quality with income, an age which has destroyed much that was inferior as well as much that was good but has failed signally, in the field of human progress to produce a single constructive moral ideal — the restoration of the humanities is essential.

The army has been, in tradition, the instrument of reaction and its ideals held to be those of a failing era. We believe otherwise and ought not to be frightened of leading a renaissance.

COMPETITION FOR AUTHORS

The Board of Review has awarded first place and the prize of £5 for the best original article published in the September issue to "Tactical Examinations" by Major K. E. Gallard, Royal Australian Infantry.

COLDITZ, by P. R. Reid, MBE, MC (Hodder and Stoughton Ltd., London, and 425 Little Collins Street, Melbourne).

Quite early in World War II the German authorities devised a scheme which they thought would be the complete answer to prisoners of war with a talent for devising means of escape. The idea was to concentrate such prisoners in a place which possessed formidable natural barriers to escape, to reinforce it with a vast array of artificial obstacles, and to provide it with a very strong and alert garrison.

The place chosen was the Castle of Colditz, a towering medieval stronghold build high above the surrounding countryside on the edge of a sheer cliff. On every accessible side the castle was surrounded by high barbed wire fences, every inch of which was under the watchful eyes of sentries on towers. By night the whole area, even the interior courtyards, was so well flood-lit that there was scarcely a shadow to be found. The garrison, helped by an assortment of tracking-dogs, exceeded in number the prisoners within the walls.

Only officers were incarcerated at Colditz, and to qualify for admittance a prisoner had to have made at least one partially successful attempt to escape from some other POW camp. Even the most determined of them must have experienced some moments of despair when, on detraining in the village, they beheld the sheer walls of the old fortress towering above them. If they did, it was not for long, for no sooner had the great doors clanged behind them than they were caught up in the escaping spirit that pervaded the whole atmosphere of the place.

Colditz had once been considered impossible to break into, and the Germans thought they had made it impossible to break out of. But many prisoners not only broke out; some of them made good their escape to their own countries.

Confinement in Colditz produced many hidden talents in many men. Some became expert in forging identity papers, some developed an uncanny knack of quickly mastering the mechanism of new locks as fast as the Germans fixed them in position. Some made passable civilian clothes from anything they could lay their hands on, from paper to bits of blanket and canvas. The manufacture of tools and the reproduction of maps became major industries. Engineers made such a thorough survey of the building that they

knew far more about the peculiarities of its ancient construction than the owners did.

Tunnelling seems to have been the most common means of escape. By war's end the place must have been literally riddled with tunnels, not merely tunnels that started at ground level and came up outside the wire, but tunnels that started in the attic and worked down to basement level through shafts driven behind ancient false walls. One French tunnelling team even equipped themselves with improvised helmets for protection against stones falling down their shaft. Colditz had one great advantage for tunnellers—the warren of attics and little roofs provided ample space for the spoil from the workings. The prisoners must have taken tons and tons of earth and rock up there.

Many other bold and ingenious means of escape were tried, not a few of them successfully. One team with inexhaustible patience built a false wall to conceal a workshop in which they constructed a glider. This was towards the end of the war, when air raids in the surrounding districts were becoming frequent. The idea was to assemble the machine on a launching trolley on a ridge roof during a night raid, and give it the necessary velocity by means of a rope running over a pulley and attached to a large rock dropped down a light well. However, by the time the glider was ready the Allied armies were getting pretty close, and the attitude of the SS troops which had come to occupy the village towards the prisoners looked more than unpleasant. The senior officers decided to keep the machine in reserve for rapid communication with friendly forces if the SS men turned really nasty.

Towards the end, the Gestapo collected all prisoners of any prominence in their own countries and took them off to Hitler's 'last stand' fortress in Bavaria. Apparently the Nazis planned to bargain them for their own lives. But their organization fell apart too quickly, and the German guards were caught between what the Nazis might do to them if they disobeyed orders and what they were assured the Allies would certainly do to them if harm befell the prisoners. Most of them agreed that the Nazi cause was lost.

This book, illustrated with reproductions of some of the original sketches made by the prisoners, is a splendid story of courage and high resolve, of patience and determination, above all of the refusal to accept defeat despite heartbreaking setbacks. It is a story of soldiers of several nationalities who continued the battle when they might well have rested content with their efforts.

It has been said that POW escape stories should not be published lest potential enemies learn from the methods that their prisoners might use on some subsequent occasion. This view overlooks the fact that our people will also learn, and will exercise their ingenuity in devising variants of the methods.

After all, there are not many basic methods of escaping. It is variants and the meticulous attention to detail that bring success.

This is a good soldier's book which can be confidently recommended for its instructional as well as for its entertainment value.

THE SECOND STEP, by Adrian Hayter, MBE, MC (Hodder and Stoughton Ltd., London, and 425 Little Collins Street, Melbourne).

This book is, to quote the dust cover, "a chapter of autobiography the autobiography of the military part of Mr. Hayter's life. It deals with that period from adolescence in New Zealand to the time of leaving the Gurkhas in Malaya. He then embarked on a seven-year lone yacht trip from Britain to New Zealand, which trip is the subject of another book, "Sheila in the Wind".

Mr. Hayter lived on 'an' island in New Zealand and availed himself of a chance to enter Sandhurst under the Dominion entrance scheme. The subject of Sandhurst and entry into a Gurkha regiment covered in this book has been written about in greater detail by John Masters in his book "Bugles and a Tiger". Mr. Hayter then writes about the rest of his service, including the war and the splitting up of the Gurkha regiments between the British and Indian Armies. About this division Mr. Hayter has a lot of comment and the book closes after descriptions and comment on the anti-communist operations in Malaya.

This book is probably the most anonymous autobiography ever written. It is not that Mr. Hayter is anonymous. Far from it, he lays open his soul, but almost everyone else is, from Great Uncle Willie (who ended up as C in C) to Mr. Hayter's wife and family. Throughout the book only ten people, six of them Gurkhas, are identified by surname and probably another four by christian name. No Commanding Officer is named, they are identified by such means as: "the new CO"! "the CO who . . ."; "a new CO arrived . . .". Perhaps the wisdom, or kindness, of this is that, as the author criticises some, by keeping them all impersonal none can be identified. However, by following the text closely, assuming that two Phillips are the same, one could be identified as Watson.

Dates are something else Mr. Hayter does not worry himself with. Apart from a couple of references to the year, none are given. One chapter starts: "I must have been about twenty-five at that time". This detail was of course unimportant. The author had merely become acting CO of the battalion on operations.

There is a description of an operation in the Arakan. The reader is put right into the picture, object, method, battalion and company roles and taken to the start line with Mr. Hayter's company. The attack goes in and a description of fighting is given, not as so much action but odd events mixed up with the

author's innermost thoughts. He *is wounded and goes to hospital* and the reader never discovers whether the attack succeeded or not. This inconclusiveness is also to be found in other descriptions of operations.

The book has two aspects to it. A military one and a personal spiritual mystic one. The military is the history of the author's career and the personal one covers his thoughts, beliefs and theories. On the personal aspect little can be said, for though the author appears to keep nothing back from the reader, all this is primarily a matter of opinion. On the military aspect the reader must form an opinion of the author as a soldier. This review, however, is not concerned with the author's character but with the book as such, from a military point of view. By the vague *references to Commanding Officers*, the lack of dates, the general anonymity of characters, the inconclusiveness of incidents described, the casual reference to ranks and appointments, the book is hard to follow militarily. One gets the impression that the autobiographical part is merely there to provide a background for the spiritual/mystic part.

The opinion of Mr. Hayter, as a soldier, that the reader forms will be based entirely on what the reader can glean from between the lines, though the author's explanation of why he *chose a military career is illuminating*. Socrates comes into it all and there is either the problem or the explanation, depending on the point of view.

—G.M.C.