

UNCLASSIFIED

Australian Army History Unit

16 July 2014

Notified in AAOs for 31st December, 1959

MILITARY BOARD

Army Headquarters
Melbourne
1/12/1959

Issued by Command of the Military Board

A handwritten signature in dark ink, appearing to read 'B. W. Smith', is written across the bottom of the rectangular box.

Distribution:

The Journal is issued through Base Ordnance Depots on the scale of One per Officer, Officer of Cadets, and Cadet Under Officer.

AUSTRALIAN ARMY JOURNAL

A Periodical Review of Military Literature

Number 127

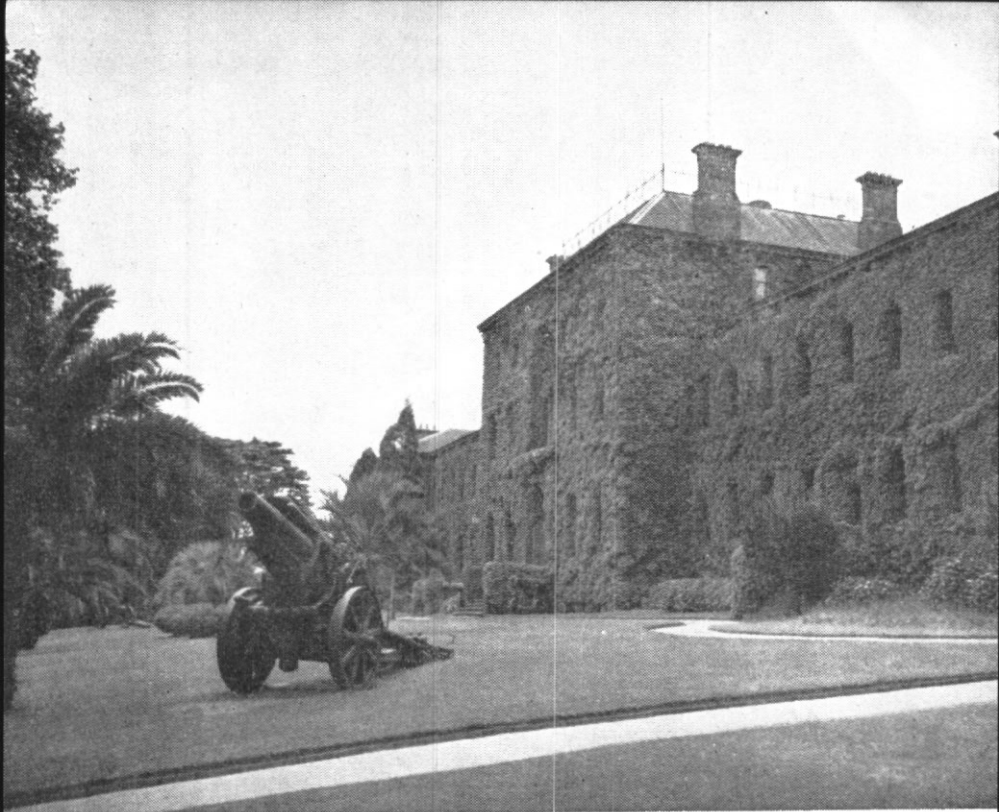
December, 1959

CONTENTS

	Page
US Army Pentomic Division <i>Army Information Digest, USA</i>	5
Strategic Review	13
The Two Tigers <i>Captain J. O. Furner</i>	18
The Army Design Establishment <i>Major J. T. Ashenhurst</i>	22
On the Issue of Orders <i>Captain H. B. Chamberlain</i>	29
The Study of Military History <i>Lieutenant-Colonel E. G. Williams</i>	33
Book Reviews	36
Index	39

The information given in this document is not to be communicated
either directly or indirectly to the Press or to any person not
authorized to receive it.

UNCLASSIFIED



Victoria Barracks, Melbourne

AUSTRALIAN ARMY JOURNAL

Editor:

COLONEL E. G. KEOGH, MBE, ED (RL)

Assistant Editor:

MAJOR W C. NEWMAN, ED.

Staff Artist:

MR. G. M. CAPPER

The AUSTRALIAN ARMY JOURNAL is printed and published for the Directorate of Military Training by Wilke & Co. Ltd. The contents are derived from various acknowledged official and unofficial sources and do not necessarily represent General Staff Policy.

Contributions, which should be addressed to the Director of Military Training, Army Headquarters, Melbourne, are invited from all ranks of the Army, Cadet Corps and Reserve of Officers. £5 will be paid to the author of the best article published each month. In addition, annual prizes of £30 and £10 respectively will be paid to the authors of the articles gaining first and second places for the year.

THE U.S. ARMY PENTOMIC DIVISION

Adapted from articles published in
ARMY INFORMATION DIGEST, USA

SOME time ago the United States Army adopted a new infantry divisional organization which has come to be known as the "Pentomic" Division. The reasons leading to the adoption of this organization are set out in the following extracts from an article by Lieutenant-General C. D. Eddleman in the September 1958 issue of ARMY INFORMATION DIGEST.

The Challenge

The main problem of the Army is that of meeting the nuclear challenge, both as it relates to our use of such weapons and as it relates to our vulnerability to nuclear weapons in the hands of the enemy. This challenge is becoming more and more acute, due to continuing increases in the numbers and yields of weapons and the rapid development of modern missiles to deliver them.

Possession by the enemy of these highly destructive weapons has caused the Army to develop organizations and tactics which will reduce the vulnerability of its operating forces. There are three principal methods by which Army forces can reduce their vulnerability to nuclear weapons:

First, by dispersion into formations smaller than those considered to be lucrative atomic targets. Dispersion must be coupled with other passive measures designed to reduce the susceptibility of our forces to detection, such as concealment and camouflage.

Second, by mobility, so that the enemy would be presented only with fleeting targets.

Third, by physical protection against heat, blast and radiation, including the use of armoured fighting vehicles and carriers.

The Pentomic concept embraces all of these methods; however, we must recognize that our current capabilities with weapons and equipment on hand do not permit us to enjoy the full benefits of the new concept. Figuratively speaking, there is a gap between our more advanced concepts and our present capabilities. It is to the closing of this gap that we should direct our attention.

Problems of Dispersion

Dispersion of the type required in active atomic warfare is not an unmixed military virtue—it is, however, a necessity. Concentration,

not dispersion, has always been the principal technique by which combat power has been used to achieve decisive results—the principle of concentration, if you wish to call it that. Dispersion generally dissipates strength and combat power and renders infinitely more difficult the conduct of effective operations, both tactical and logistical.

Additionally, there is a level below which units cannot be fragmented and still survive on the battlefield. This level will fluctuate with local conditions and may well sink lower in the future; however, it will always be determined largely by the interaction of two factors. The first is the size and nature of the enemy's tactical nuclear stockpile, as well as the efficiency of his delivery means and his ability to find targets. The second is the ability of the small independent tactical groupings to survive and execute their missions.

Theoretically, at least, the amount of dispersion required would be determined largely by the willingness and ability of the enemy to expend his tactical nuclear stockpile on ever smaller targets. Theoretically, again, one of the techniques of nuclear war would seem to be to drive one's opponent to disperse into such small units that these units could not survive in the local environment of conventional arms, or at least so small that they could perform no useful task.

There is no alternative to a dispersed posture in an atomic environment. The degree of dispersion will vary; however, undue concentration must be avoided at all costs. Our problem, then, is to provide the tactics, techniques, fire support, mo-

bility, control, weapons and equipment to make the philosophy of dispersed warfare fully effective. In doing so, it is essential that we consider not only the organic means of the small dispersed tactical groupings but also those reinforcing and supporting elements available to them from higher echelons. The combat power of any unit is much greater than the power of its organic means. That is particularly true in our Pentomic organizations, due to extended use of the pooling concept.

Mobility Needs

At this point the second factor comes into play—that is, the necessity for ever smaller units to possess greater mobility and firepower.

Mobility has always been a military asset, but never more than today when it has been called to the centre of the stage, not only on its own merits but also as an antidote to dispersion.

It has been recognized for some time that a force fully equipped with nuclear weapons could force its opposition into a degree of dispersion largely incompatible with the execution of traditional missions in a manner associated with past wars. Therefore, it has been recognized that the design of forces must change.

In addition, it has been recognized that it may be necessary to bring together two or more of the small dispersed formations to produce the necessary "mass" of conventional and small nuclear weapons to attack, block, or counter-attack effectively. Each basic combat element must be capable of moving to concentrate with other such forces when

required, executing rapidly an assigned mission, and returning to dispersal and concealment before the enemy can retaliate with his nuclear weapons. This sequence calls for a high degree of battlefield mobility; however, this is not a simple objective to attain.

There are several prerequisites to mobility on the nuclear battlefield:

First, ground and air vehicles of advanced design, in proper proportion.

Second, forces able to use each form of movement, including foot movement at times, in that environment to which it is best suited.

Third, mobile firepower, both atomic and conventional, at all echelons, sufficiently powerful, accurate and responsive so that dispersed formations can move literally at will through enemy infested terrain.

Fourth, specialized, air mobile forces for reconnaissance and security.

Fifth, command mobility in terms of adequate communications and imaginative tactics.

Sixth, a logistics system which can survive and operate effectively on the nuclear battlefield.

With respect to vehicles, there has been some misunderstanding regarding the significance of the fact that the infantry and airborne divisions do not have tracked or wheeled mobility for all of their combat echelons. This is not a decision *against* vehicles or against tactical mobility; rather, it is a decision for strategic mobility and for logistical feasibility. This is simply another case of a gap between what we want and what we can get at the moment.

The full development of the Pentomic concept is incompatible with

foot speeds. Therefore, we must have vehicles, both ground and air. Because we also must have strategic mobility, our task is clear. We must develop ground and air vehicles of types which can be moved economically by air. There are no insuperable obstacles in this direction, and this gap should be closed in due course.

Next, there is the question of mobile firepower—atomic and conventional. We must accept as a permanent feature of modern war the necessity for Army forces to disperse into relatively small combat formations operating semi-independently. Our problem is to invest these formations with sufficient combat power so that they can survive and operate.

However, the pattern of development and support of these units must be such that when they are confronted with tasks which exceed their organic capabilities, they can call for and receive rapidly appropriate combat support from adjacent and higher units. Otherwise, they could be neutralized, isolated and destroyed selectively by an alert and imaginative enemy. Our concepts do not and must not anticipate habitual loss of control by higher units or complete loss of mutual support by adjacent units.

Elements of Combat Power

Each basic combat element must be provided sufficient combat power to enable it to move through comparatively light opposition almost at will. This will enable the larger force of which it is a part to attain and maintain a most important advantage on any battlefield—the INITIATIVE.

The ability to move at will requires that each unit be equipped with powerful weapons and possess superior combat power. The organic and supporting means must enable each unit to withstand prolonged attacks while dispersed, and then move with relative ease through local opposition when called upon to concentrate with its neighbours in order to perform some blocking, counter-attack, or exploitation mission.

There seems to be a good chance that the same nuclear weapon which created this problem may also be able to solve it. In the past the nuclear weapon has been what must be termed a general support weapon rather than a close-in fighting weapon. At this point let me coin a term or two. Until now, the nuclear weapon has been an "outside" weapon; however, it is now clear that it soon will become an "inside" weapon, as well.

Inside firepower could be described as the kind which small combat units use as they go about their business. This is fighting firepower. It is largely a centrifugal force generated within the fighting unit, which it can hurl outward around its periphery. Inside firepower is close, immediate, and directional. It comes from rifles, machine-guns, tanks, recoilless rifles, mortars, small missiles, and light artillery. It even comes from close combat air support when that support is designed for the purpose and directed by the unit on the ground.

All of this inside firepower has one common characteristic. It can be brought to bear on the problem which confronts the basic fighting mechanism, whether it be a squad, a tank, or some other small ground

fighting force. Inside firepower can kill the enemy, stop his attack, or overwhelm his defence.

Outside firepower, on the other hand, is indirect, probably more powerful, usually slower in coming, and its effects are more remote from the problem of the basic fighting unit. This kind of firepower is not centrifugal and in some cases may not be directionally oriented to the ground action.

The boundary between outside and inside firepower is, of course, not clear. However, the important point to note is that nuclear firepower, which has been on the outside, is now crossing the boundary. In the not-too-distant future we may expect to see our smaller units equipped with their own accurate, mobile, low-yield, nuclear weapons.

I am confident that this part of the gap between advanced concepts and current capabilities will be bridged successfully and that small combat units will be provided with firepower of such force that they will not only be able to survive in a widely dispersed posture, but will be able to move decisively and accomplish their missions.

A major problem exists in providing adequate conventional firepower in situations in which the use of atomic weapons is not authorized or has not been initiated. Our Pentomic organizations are designed for either atomic or non-atomic warfare. This dual (atomic/non-atomic) capability, coupled with the principle of pooling, results in a clear recognition that the organic artillery means of the Pentomic divisions must be augmented by appropriate reinforcing fires, particularly in non-atomic warfare.

In such an environment, the dis-

persal pattern must reflect a measured balance between dispersion on one hand and concentration for improved combat power on the other. Non-availability of atomic firepower is thus offset by increased concentration plus increased non-divisional reinforcing fire support.

While it is recognized that this combination might, in some situations, be inadequate to accomplish the mission effectively, it is a calculated risk which, under current manpower and budgetary ceilings, must be taken. The alternative is to be prepared to employ tactical atomic weapons in a discriminating and selective manner designed to prevent the limited action from spreading to general war.

Logistical Problems

There is a last requirement for battlefield mobility which involves the necessity for a logistical system which can survive under nuclear attack and which can function in any operational environment. Other advances cannot be completely meaningful in the absence of a solution to this problem.

Mobile operations as we now know them require heavily mechanized forces and forces moved by air. These, in turn, demand a rich diet of fuel, spare parts and maintenance. These supporting functions are massive, clumsy, and readily susceptible to detection and vulnerable to destruction. This problem sometimes fails to attract the attention it deserves because it is so large, hydra-headed, and colourless.

Some progress is being made; however, in comparison with the distance yet to be covered, that progress is slow. None the less there are bright spots on the horizon which must not be ignored. Nuclear

power, in the distant future, may solve a large part of the fuel problem; and even before then we may see other new fuels which will give us such range that mobile task forces will be able to operate for days without replenishment. Nuclear weapons, when used, may very well reduce appreciably the ammunition supply problem. Irradiated foods may provide most of the rations.

In the meantime, however, we must eliminate or harden what is now the softest link in an otherwise fairly sturdy chain—the problem of logistic vulnerability. Not all of this problem lends itself to solution within Army jurisdiction. There is, for example, great potential value, for support of Army forces, in nuclear transport submarines and nuclear aircraft, including those which could be based on water.

Notwithstanding the fact that the world seems to be obsessed with the novelty of missiles and outer-space, a major advantage will accrue to that nation which gains a decisive lead in reducing its logistical vulnerability and in developing new logistical support capabilities.

The Pentomic Division

An editorial article in the May 1957 issue of ARMY INFORMATION DIGEST describes the Pentomic divisional organization thus:

Under the planned Pentomic organization, the strength of the new Infantry Division is 13,748 (as opposed to 17,460 of the current division), organized as follows:

The Division Headquarters contains, in addition to the commanding general and his staff, the division military police and an alternate headquarters with a staff for the assistant division commander. This

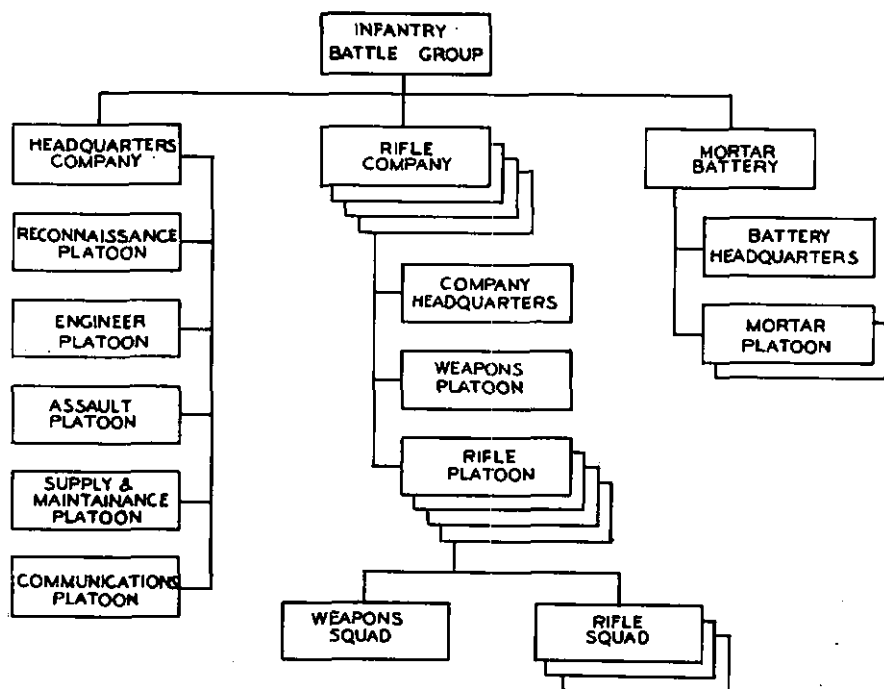


CHART 1

enables the assistant division commander to command a segment of the division consisting of two or more battle groups for task force operations and to act as an alternate headquarters. This capability is especially important in the conduct of fluid, mobile operations of greater depth and width than in the past and reflects the increasing importance placed on an alternate division headquarters under atomic conditions.

The Infantry Battle Group is an administratively self-contained unit. The division contains five battle groups. Each group contains a headquarters company, four rifle companies, and an artillery heavy mortar battery. The headquarters company possesses the necessary com-

mand and control units, as well as an assault gun platoon of 90 mm SP guns and a reconnaissance platoon of light tanks, armoured personnel carriers, and mortars. The rifle company consists of four rifle platoons and a weapons platoon. The company weapons platoon possesses the 81 mm mortar and the 106 mm recoilless rifle, both formerly found at the battalion level. The mortar battery contains eight 105 mm mortars. (See Chart 1.)

A Tank Battalion has been retained in the division. This particular type organization of five tank companies provides for the attachment of tanks to each of the battle groups; and yet it incorporates the pooling principle by retaining this capability in one unit under divi-

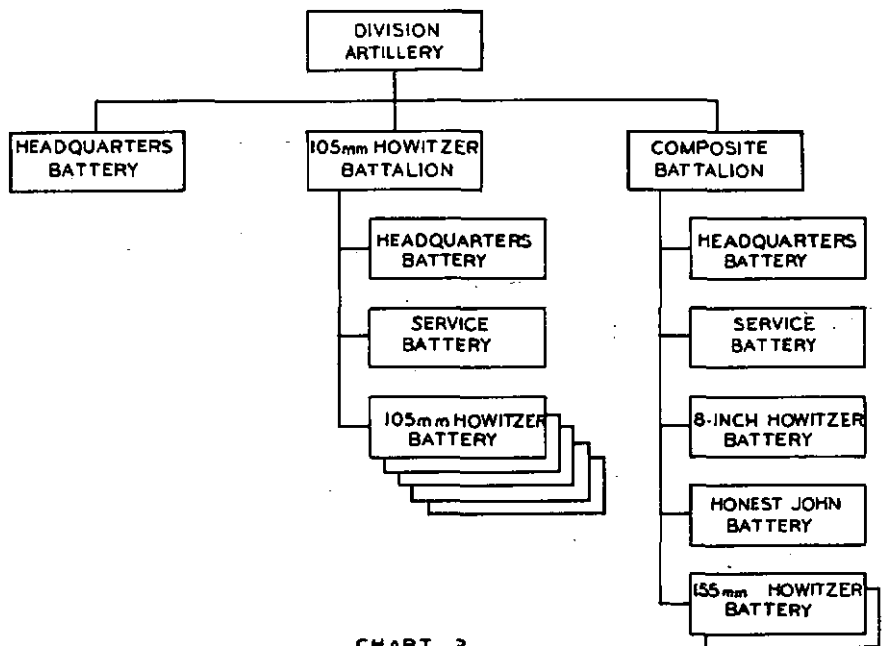


CHART 2

sion control for employment as an armoured task force.

A Reconnaissance Squadron has replaced the current reconnaissance company. In addition to its normal mission, this battalion has been assigned the division target acquisition function—a capability which enables the division to fully exploit its increased firepower, permitting engagement of targets with organic and supporting weapons while the targets are forming.

The Signal Unit has been enlarged to provide for an area communication system similar to the airborne division.

The Engineer Battalion is designed with five companies to permit ready attachment of company units directly to the battle groups when required.

Division Artillery has undergone considerable change. It now con-

tains one battalion of 105 mm howitzers built on the five-battery concept of six guns per battery for support of the five battle groups, and a composite battalion consisting of a battery of four 8-inch howitzers, a battery of Honest John rockets with two launchers and two 155 mm. howitzer batteries of six guns each. (See Chart 2.)

Establishment of Division Trains is also a new concept in the new Infantry Division organization. Here are centred all the normal logistical elements, and such new units as the aviation company, administration company, and transportation battalion.

The Aviation Company includes all of the division aviation which provides the reconnaissance squadron with the necessary aircraft to accomplish its target acquisition function; it provides the artillery

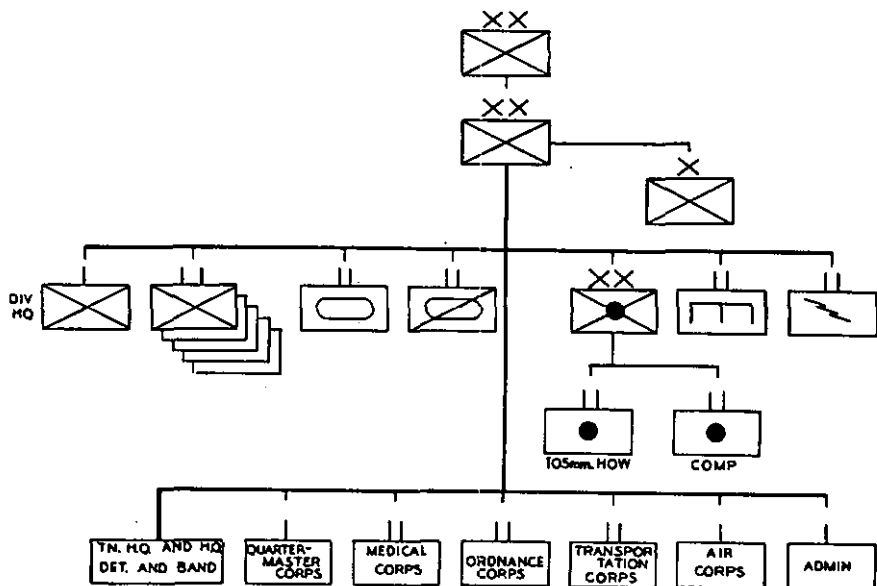


CHART 3

with aerial means of fire control and furnishes the battle groups with reconnaissance aircraft. In addition, it contains a small tactical emergency airlift for medical evacuation, combat resupply and combat patrol operations.

The Transportation Battalion is a completely new concept. It incorporates an armoured personnel carrier lift for one of the basic tactical elements, so that the division commander can exploit the effects of his tactical atomic weapons. In addition, it will be used for tactical supply. The truck transport company is the main source of the logistical life of the division; it also has a troop lift capability.

In comparing personnel and major equipment items of the current and new Infantry Divisions, it is noteworthy that proportionate to the strength of the new division, a greater firepower has been pro-

vided. Division strength has been reduced by approximately 3700 spaces; however, the infantry elements that directly engage the enemy have been increased by about 450 due to the larger size of rifle squads.

Aircraft increases are due primarily to the inclusion of the target acquisition function.

The number of tanks, although less, still provides a satisfactory ratio of tanks per supported unit.

A slight increase has been made in anti-tank weapons. The division artillery now possesses an atomic capability.

Medium and heavy mortar tubes have increased.

A decrease in wheeled vehicles is somewhat offset by an increase in armoured personnel carriers."

The organization of the Pentomic Division is shown diagrammatically at Chart 3.

Strategic Review

BIRTH OF A STATE

Reprinted from the July 1959 issue of *An Cosantoir*, Eire

THE Constitution giving Singapore freedom over its internal affairs came into effect on the 4th June last; the former colony is now a self-governing state within the British Commonwealth, with Great Britain retaining responsibility for Defence and External Affairs.

The Parliament of the new state is a freely elected legislative assembly of fifty-one members, to which is responsible a Council of Ministers of nine members presided over by the Prime Minister and drawn exclusively from the legislative assembly. The Head of State is Crown representative with much the same functions as the former Governor-General.

Singapore is an island situated off the southern extremity of the Malay peninsula, to which it is joined by a causeway carrying both a road and railway. The island is about twenty-six miles long by fourteen miles wide. It has a population of over one and a quarter million, of which almost eighty per cent. are Chinese; the remainder are Malaysians, Indians, Europeans and Eurasians.

Earlier History

Not a great deal is known of its early history. In the thirteenth century it was of considerable importance until destroyed by the Javanese. From the end of the fourteenth century it remained almost uninhabited until 1819, when the East India Company founded a trading settlement there; at that time there were fewer than two hundred inhabitants. In 1824 the entire island was ceded to the East India Company by the Sultan of Johore, and two years later it was combined with Penang and Malacca to form the Straits Settlements administered by the Company until 1830, when the India Office took over. In 1867 the Settlements became a Crown Colony under the Secretary of State for the Colonies.

The decision to build Singapore naval base was taken in 1921, and the base was completed just in time to be captured by the Japanese in 1942. It was not recovered by Britain until September 1945. In 1946 the Straits Settlements was dissolved and Singapore became a sep-

arate Crown Colony, Penang and Malacca being incorporated in what is now the Federation of Malaya. In 1955 a new Constitution was introduced (providing for a thirty-two member legislative assembly), but this, of course, has been superseded by the present Constitution.

Decisive Victory

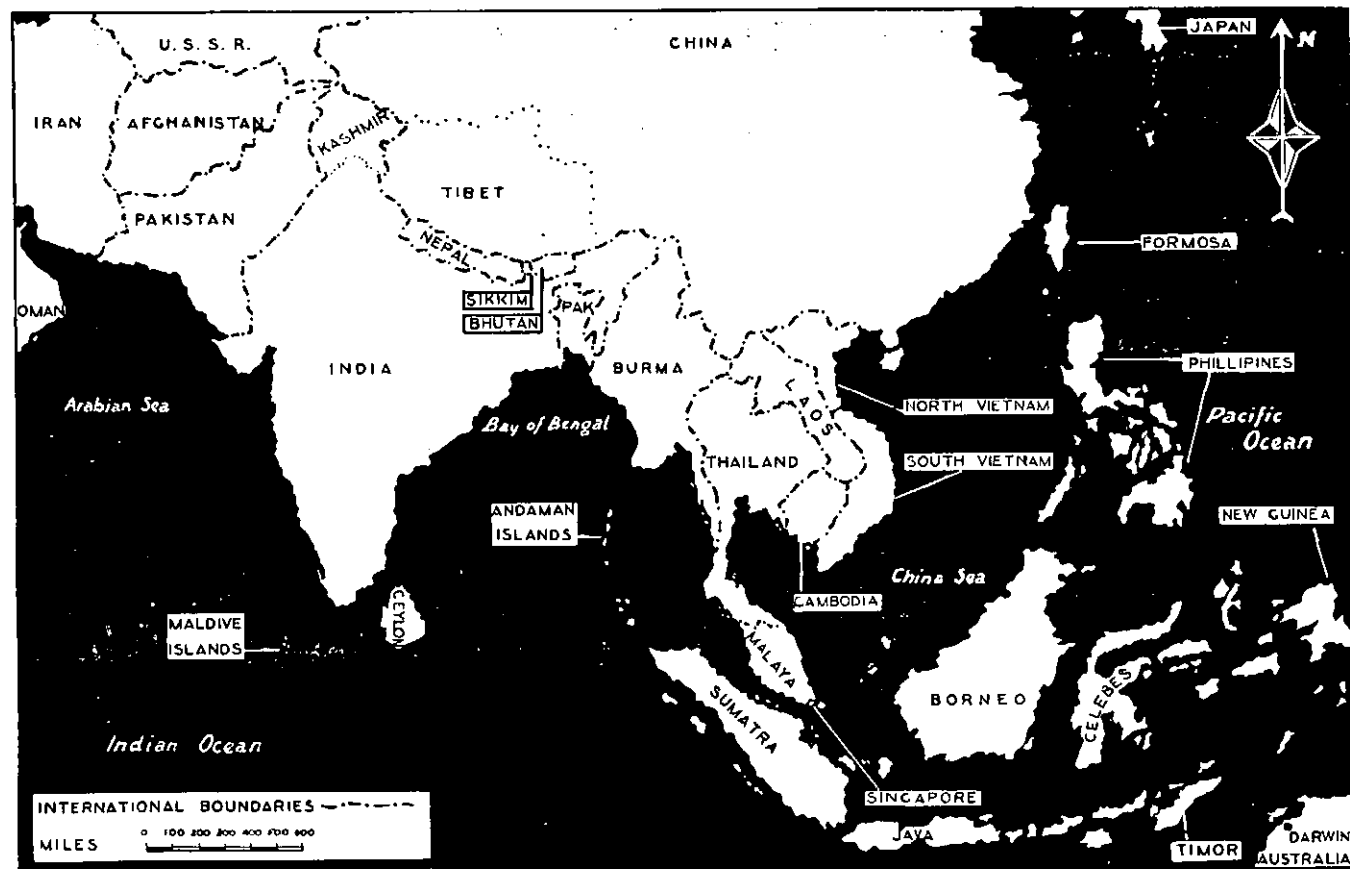
In the first general election under the new Constitution (which will be reviewed after four years) the People's Action Party (PAP), under Lee Kuan Yew, gained a decisive victory, winning forty-three of the fifty-one seats. PAP is a left-wing group and essentially a Chinese party, reflecting the nationality of the bulk of the electorate. While Lee Kuan Yew, the new Prime Minister, has disclaimed association with the Communist Party and has disavowed armed revolution, many of the PAP supporters are open admirers of China's rapid advance as a world power and of her industrial resurgence. It is significant, too, that in August 1957 the Chairman, Vice-Chairman and three members of the PAP executive were arrested and interned for alleged complicity in a Communist plot to take over the colony by violence.

Lee Kuan Yew, who was leader of the moderate wing of the party, resigned from the central executive on that occasion after a split between moderates and extremists. In addition, he has recently declared that he wants Britain to retain her military bases in Singapore for another ten to twenty years. At the same time he has released the internees, an action that has caused much misgiving not alone in Britain but also in the Federation of Malaya.

In fact, this Cambridge-educated Chinese lawyer is on the horns of a dilemma. If he fails to co-operate with the subversives he may well face a split in the party, and even his full co-operation may not prevent his eventual downfall. Since 1955 sporadic rioting has occurred on the island—touched off by labour unrest and anti-British feeling—and it is probable that Communism now views Singapore as a jumping-off ground for a further and more subtle attack on the Malayan Federation, which is the main objective in the effort to undermine the Manila Pact (SEATO). The junction of Malaya and Singapore would increase Communist infiltration into Malaya, and the fall of Malaya would seriously impair SEATO defences in that area.

Military Importance

Singapore is the main and irreplaceable supply base of the British Forces in Malaya for the Commonwealth Reserve—a joint Anglo-Australian-New Zealand force. It is the only major point of entry in the area for ground troops and the only suitable base for the Far East fleet and the Indian Ocean Task Force, which have a combined strength of two aircraft-carriers, two cruisers and various lesser units. It also has the sole dry-dock between Australia and Japan which can accommodate an aircraft-carrier—although modern, self-contained fleets tend to manage without too frequent recourse to dockyards. The island contains two major airfields and a flying-boat harbour, and during the past few years there has been extensive building of new barracks and other military projects. It has also been pro-



posed to establish a ground-to-air missile base there.

The island is the only place in the area where Britain has the right to store nuclear weapons, or from which she can send help to other SEATO members, since her treaty with Malaya debars the deployment of forces based on Malaya to help the SEATO allies (Thailand, the Philippines, Pakistan, Australia, New Zealand, France and the U.S.A.). It has a special strategic importance to Australia and New Zealand, for it is the key base for Commonwealth defence in Asia and the vital link between Australia, New Zealand and Britain; and its loss would result in Britain's inability to support a prolonged military operation in the Far East.

Consequently, on the availability of Singapore to Britain and its denial to Communist China depends the security of Malaya and Thailand not to mention the remainder of South-Eastern Asia. If Communist elements assumed control it would eventually have to be abandoned, with the result that the Manila Pact powers would be outflanked.

Communist Threat

Such concessions as have been made by the British Government were not made lightly. The extent and strength of the Communist threat in Singapore were known and considered, and the risk of even a limited constitutional freedom was weighed. By retaining control of Defence and External Affairs, Britain has obviated any overt move against her security in the island, and she has retained the right to suspend the Constitution whenever the situation in Singapore threatens

her ability to discharge her responsibilities under Defence and External Affairs.

In theory, therefore, the people of Singapore have been given full control over their internal affairs, but, in fact, Britain remains discreetly in the background with power to act should the security question warrant it.

The matter of internal security was the main point of contention in the negotiations on the new Constitution, and the agreed solution resulted in the establishment of the Internal Security Council, consisting of three British representatives, three Singapore representatives and one Malayan. A majority vote of this council would override the views (on internal security) of either the British or Singapore Governments so long as the Constitution has not been suspended.

But even with this ultimate constitutional weapon Britain's position is by no means invulnerable. Although to all intents and purposes the new Government is without real power, it has the ability to make Britain's position in Singapore at least as difficult and unpleasant as it was in Cyprus. Political safeguards are not easy to ensure, and in Singapore cosmopolitan commercialism is giving way to a growing nationalism which is difficult to resist. The peoples of South-East Asia cannot see themselves in relation to the world strategic and economic position; their attitude is parochial and more concerned with the struggle for existence. The threat of Communist domination is, therefore, not regarded by them as real danger; colonialism, of which they have experience, is seen as the enemy, and the presence of the Brit-

ish in Singapore will always be an irritant—a continual reminder of pre-war exploitation and the colour bar.

PAP is avowedly anti-colonial, and travel in, and student exchange with, China, and racial tension, have made the party a fertile ground for Communist propaganda. The new Government aims at ultimate independence as the third of three stages—the other two being the present position of internal self-government and then a merger with the Federation of Malaya.

"Asia" Emphasis

The process of zealous de-Westernization is already in progress; school instruction is to have a more "Asia" emphasis, and the suppression of the debasing aspects of Western culture that "outrage feeling in Asia" is causing uneasiness among Europeans in Singapore, who fear a subtle discrimination against their interests on the island. None the less, although the consciousness of new-found freedom and racial dignity are the predominant elements, it is agreed by all parties that foreign capital and *entrepreneurship* are necessary to the economic life of Singapore; a policy of nationalism might induce the flight of capital and result in over-population and under-employment.

Economic Progress

The year 1958 was characterized by continued economic progress. The thriving commercial life of the island comes from its position as a communications' centre which has brought to it all the facilities of modern commerce. In addition to the rubber and tin industry there has grown up a trade in oil. It now

ranks as one of the largest storing, blending and distribution centres in the world.

The new Government aims to develop industry to bring a change from a trading to a productive economy, to develop agriculture and fisheries and to train its people in technical skills, but ironically enough ten per cent. of the population of the island is dependent on British military spending. One-tenth of the island is taken over for military installations; the dockyard costs £1m. per annum to maintain. The army alone (with a strength of about 6000) pays £5m. per annum to Singapore civilians and spends another £10m. on local requirements. When cuts on the size and type of military establishment to be maintained were proposed in April 1957, there was a general alarm among civilian employees, and it is generally realized that an alternative equivalent income would not readily be forthcoming.

Conclusion

With the means of livelihood thus balanced in the scales against the unknown fruits of a new planted independence, Britain's calculated risk may not be so great a risk at all. In addition, Chinese action in Tibet may serve to cool the ardour of those who, paradoxically, see the emergence of independence in an alliance with Communism.

Perhaps the main danger to British interests and to those of SEATO lies in the efforts of a few dedicated Communists who are prepared to turn Singapore into a pawn in world politics regardless of the effect on the standard of livelihood or on the dignity of its people.

—R.G.E.

THE TWO TIGERS

Captain J. O. Furner, BA
Australian Intelligence Corps

IT is sometimes difficult for the observer interested in current trends in Communist China to keep up with his subject. Any definition of that country's stage of development is never unqualified, but seems to reflect a confused balance between obvious success and apparent failure. While political philosophers and economists continue to clarify the picture by putting the exaggerated Communist statistics into a correct perspective, the average observer is interested to determine the scope and nature of the military threat that the Chinese Communists can make at any time. This is also difficult to assess accurately, but a useful idea of the determinants of Chinese Communist military doctrine can be had by watching the Communists hunt the two tigers. It should be made clear at the outset that these two tigers are one and the same animal, but because the Chinese Communists insist that they understand "the dual character of things and the unity of opposites" they always see him as two.

Recently in a magazine article a Chinese Communist General wrote the following words: "In military training, we must consider the possible trend of a future war, and, what is more important, the conditions of our industry as they bear on the equipment of our army; we must not only absorb, with discrimination, the

experiences of foreign armies, but also, as the more important thing, make good use of the rich war experience of our own army." This, in itself, is a very useful summary, which if inspected more closely suggests all the significant aspects of Chinese Communist military thinking today. However, the General, being a good Communist and therefore fervently wishing to "struggle with himself" a little longer, did not stop here, but pressed on into Mao Tse-tung's philosophy of studying and directing war, and there he saw the tigers. Before meeting these tigers it may be useful to look more closely at the statement above and see the sort of thing it suggests.

Very broadly it indicates that Communist China having been made aware, initially through its Korea experience and now through sharing in the universal apprehension of the threat of nuclear war, realizes that there is much to be done in the country's military development if it is to be competitive in a global war. The "conditions of our industry" is something like the implied admission by a member of the junior league anxious to challenge the leaders on equal terms but yet unable to do so. Therefore there must be some reliance on other, stronger contestants for help and training, but with discrimination and not to the total exclusion of experience already gained and systems well-

proven. One contentious point that immediately arises here is of course how far will the Chinese People's Liberation Army (CPLA) move towards the conventional military thought of other stronger nations to the sacrifice of those principles of revolutionary and guerrilla warfare that brought it victory and stamped its identity? What will be the proportion of the blend? The obvious factors of influence will be the theatre of war, the scope of the war and the extent of Chinese Communist development at the time of the war. In order that these factors should be continually evaluated, to avoid military commitments which may go beyond their power of control and to build up the essential confidence of the CPLA, the Chinese Communists "belittle the enemy on the one hand and take a serious view of him on the other." It is this process of dual perception that creates the images of the two tigers.

The "beater" puts the animals up like this—"strategically our enemies are paper tigers, tactically they are real tigers." This is the Chinese Communist General's viewpoint through Mao's teaching—the acolyte interpreting the word of the high priest. The tiger is any potential enemy, and his dual character is but the reflection of two of his manifestations, that is, how the Chinese Communists see him strategically and tactically. The appreciation of what they see determines their own plan of action. During the prolonged Civil War in China the enemy "was strong while we were weak," and so the Communists were firmly pledged to the prosecution of a long, protracted war. They believed that if all the phases of such a war were correctly developed, through initial

withdrawal, gradual strengthening to achieve first parity with and later superiority to the enemy, up to well-timed and carefully planned offensive action, then success was inevitable. In other words, the strategic tiger had to be met with the strategy of "few against many," continual reduction of the enemy's potential while building one's own. This strategy could only be successful if the tactical tiger was met with the tactics of "many against few," decisive victory in every battle through the rapid concentration of force to strike at a selected weak point. During the revolutionary period both time and space were available for the successful application of this general theory. Now that the Chinese Communists have reached to and control the external boundaries of the mainland, they come face to face with bigger and better tigers, and in their new state of sophistication the essential viewpoint of the CPLA Generals has not changed very much.

In the international situation the enemies of Communist China are to be regarded as paper tigers, for ultimately, so the Communists believe, these enemies will be defeated. They believe that, given time, the consolidation of their rapidly expanding industry will overtake the rest of the world and parity, if not superiority, will be achieved. Be this as it may, the more immediate concern is that passive waiting is not in the Chinese Communist vocabulary, so everything possible must be done to create conditions favourable to them and unfavourable to the enemy. In searching for such conditions the Chinese Communists aim to keep their enemies worried and extended while at the same time em-

phasizing their own emergence and strength in order to influence world recognition.

The primary target must be Formosa, but however much they indulge in dialectical deception and argue away the strategic tiger they see there—generally on the grounds that he will wither away in time—the tactical tiger is very real indeed, sabre-toothed in fact, an animal whose strength cannot be fully known until he is engaged in battle. The aspect of the tiger there is sufficient to cause the Chinese Communists to wonder whether their own tactics of “many against few,” the concentration of vast manpower alone, would be sufficient to ensure victory. This doubt in the Chinese Communists’ minds may limit their present military activity in the area, but, for them, it is essential that it does not become an altogether prohibitive factor. Just as the breakdowns or checks which occur in the execution of major domestic policies are patched up with a new cohesive mixture before the people themselves (and the wishful thinkers of the world) can estimate the size of the cracks, so military activity must be maintained wherever possible, lest the growing giant begins to cast a diminutive shadow. The heavy bombardment of the offshore islands, whatever its worth purely as a military operation (and it should have been excellent training for gun numbers), was for the General “a shining example of the subordination of military operations to the political struggle.” This for the Chinese Communists was evidently the best method of “fighting the war with the equipment we have readily available and according to the strength of the enemy, the locality and time.”

Even though they cannot or are unwilling to go all out to remove the major thorn in their side, they continue to show strength in as many areas as possible. In Tibet the tigers were seen as “yetis,” abominable but not real, and so the hunt is up. This hunt will be pursued until an animal of more frightening aspect is encountered. In South Korea, as in Laos, the tigers are seen on the far side of intermediate states and can be harassed, ostensibly, by those intermediate states. Local wars will be actively supported and limited wars, if the area and time are considered opportune, written into the general plan. Any military contest that could lead only to the possible depletion of their manpower without bringing extensive damage to the incipient industrial revolution at home may be acceptable to the Chinese Communists. The nature of the challenge that they can make, unassisted, is tempered (but not necessarily limited, for accidents do happen) for the time being, not only by their own concern about the real, tactical tiger, but also by the necessity to convince the masses that the strategic paper tiger is only “the inflation of capitalist imperialism” and easily pricked. It is essential to convince the masses of this, for to regard the enemy as a real tiger strategically brings the danger of serious loss of confidence in ultimate victory and “sinking into right conservatism.”

The Chinese Communist leaders after their most recent conference, where basic policy issues must have been severely debated, again warned against a possible relapse into “right conservatism.” If the successful outcome of any war is, as they believe, largely dependent upon “the sup-

port of the masses," it is reasonable to assume that until internal affairs are correctly regulated no large-scale external adventures will be undertaken. This argument is often inverted and put in the following form—the threat of war can be used to facilitate the introduction of ruthless domestic policies. In this way the increase in tension in the Formosa Straits was seen as a cover for the introduction of the Commune system. Such an argument necessarily imposes a limit to the military threat it contains for the main preoccupation, the establishment of domestic reorganization, would have ended in chaos if the military threat had got out of hand. As it is, there appears to be a certain amount of chaos in the Commune system anyway, and this, together with the severe natural calamities that have recently caused the drastic reversion of some production targets, is a contradiction that must be solved, or at least satisfactorily explained, to ensure no loss of confidence by the people. In the same way an unsuccessful military adventure could have far-reaching effects on the morale of the CPLA, and it would be foolish to commit it anywhere except in an area where it would have decisive superiority or at least could be withdrawn unashamedly in alleged compliance with the request of, say, an international commission. In such a case the military threat could be kept alive in subsequent negotiation.

In 1936 Mao Tse-tung believed "the effect of international and domestic conditions will undoubtedly tend to accelerate future developments, because these conditions are already changing and will change more." There is no doubt that domestic conditions are chang-

ing quite quickly enough for the Chinese Communists. International conditions, on the other hand, are probably not changing quite as rapidly as the Communists would wish. They do attempt to change them, and the manner in which they will continue such attempts in the future is, after all, the basic problem for speculation. All the usual patterns of incessant propaganda, subversion and infiltration, dangling trade carrots, offers of aid to rebel causes, bullying tactics in Military Armistice Commissions, varying degrees of military action in selected areas around the periphery of China can be expected to continue and increase where circumstances permit. The Chinese Communists have never been ones "to pick up battle carelessly," and even though they strike sparks, Mao Tse-tung has always warned that "a single spark can start a prairie fire," and this would bring out tigers which the Chinese Communists are not yet ready to meet head on. For the time being it seems they are prepared to "go on winding paths in order to get on a straight road, launch flank movements for eventual frontal attacks, and exercise economy in abundant areas and prevent starvation in scanty and difficult areas." This, then, says the General, "is the application of the unity of opposites to strategy and tactics. It is dialectical materialism applied to military affairs." One may well ask what it all means, if anything. The General's closing remarks provide something of a clue, for he believes that such active study of military thought will "raise our consciousness, reduce blind aspirations, build our army, so that we will be able to fight our battle with better results."

THE ARMY DESIGN ESTABLISHMENT



Major J. T. Ashenhurst (RL)
Army Design Establishment

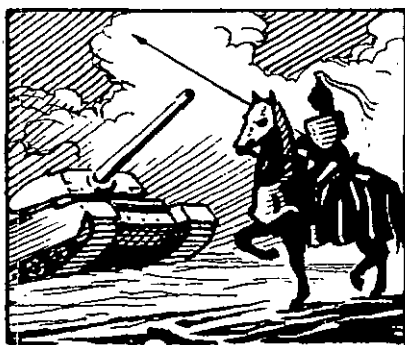
THE old adage "necessity is the mother of invention" epitomizes the progress of Man's development through the ages. In the beginning he was faced by many difficulties, many powerful enemies, and natural conditions that would daunt the hardest of present-day mortals. He has survived because of the conscious urge to improve his comfort and safeguard his future.

The highly technical standards of today are the results of centuries of inventive progress. Every country of the world, however humble, has contributed to this advancement, and Australia is no exception.

The Army Design Establishment has an important place in the national pattern of development. It is primarily responsible for the engineering aspects of the design of new equipment for the Army, and so provides a bridge between research and production.

A very wide field of design is covered, and includes armaments, engineering equipment, electronic

equipment, such as signal and radar equipment, mechanical vehicles, and certain general stores.



Mainly civilian in composition, ADE is an AHQ unit under the command of a Brigadier (now Brigadier W. F. E. Schrader, BE, MIEAust, psc, RAEME). Its present strength is 20 military ranks and over 300 civilians, including more than 50 design, test and workshop engineers. The establishment is organized on the lines shown in Figure 1.

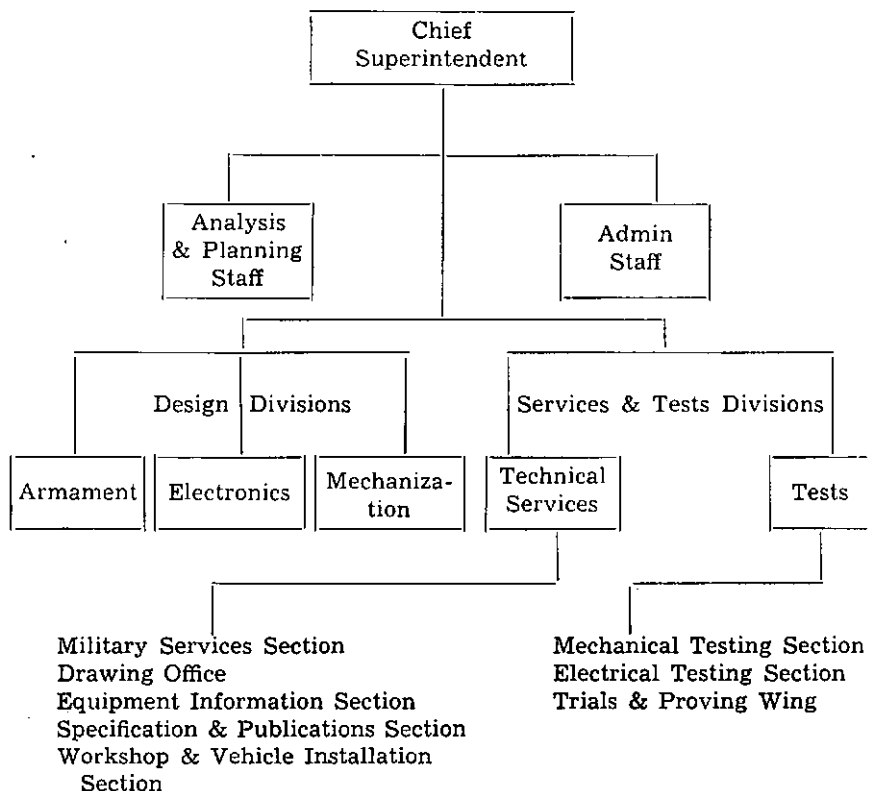


Figure 1

What is Design?

Design follows research in the evolution of new methods and equipments. It is essentially an engineering process, which deals with drawings, tolerances, mechanics, strength of materials, and chemistry. Manufacturing methods must be studied, and availability of materials considered. The final product, after utilizing the knowledge gained, is almost always original as a complete device in function or performance.

There are several stages in design; initial theoretical and experi-

mental studies, prototype design and engineering for production, testing and trials to prove the design. The first stage is perhaps the most important, for it is the basis for new equipment concepts.

The prototype emerges as the first fruits of the design engineer's efforts. It becomes the subject of thorough testing and proof procedures to iron out the "bugs," and to adjust compromise between theoretical possibility and economic reality.

Design and Testing Facilities

ADE is fully equipped to undertake all these responsibilities. The

HQ of the Establishment is situated in Maribyrnong, Victoria, within hailing distance of other important government establishments. Most of the construction work is carried out in the well-equipped workshops. Based in adjacent buildings, the design engineers may keep close watch on the progress of the projects under their care.

At Monegeeta, 30 miles north of Melbourne, is an important annexe of ADE, the Trials and Proving Wing, where design ideas are put to practical test. Most of the work at "TPW" is connected with vehicle design. Vehicles of all types have gone out from this busy centre to remote corners of the continent, for Australia is TPW's testing ground.

Trial sites are available to test equipments under all conditions obtaining in the South-East Asian theatre. Local resources are used for dust, sand, tidal mud, and swamp trials, and teams go farther afield for tropical, desert, and cold (Antarctic) conditions. The "Centurion" tank was tested for the British Ministry of Supply at Los Negros in the Admiralty Islands, two degrees south of the Equator. Later, a site near Innisfail in North Queensland was used to test a series of British vehicles under tropical ("hot-wet") conditions.

The "Dead Heart" too has been used for "hot-dry" trials and will be used again. Thanks to the co-operation of the Snowy Mountains Authority, it was possible to carry out snow trials of a new vehicle designed by ADE engineers.

Those who planned this new Design Establishment were influenced by the lessons of the last war. No adequate design organization existed at the outbreak of hostilities, and the

war was almost over before a re-constituted Army Design Division had commenced to function at full capacity. Care has been taken to avoid a repetition of this in the event of another upheaval—or should we say holocaust?



The range and efficiency of automotive testing equipment installed at Maribyrnong is probably unsurpassed anywhere in Australia, a country of vast, lonely distances, where the automobile is of paramount importance from both the civil and the military points of view. When the planned automotive testing facilities are complete, there will be few tasks beyond the scope of the Army Design Establishment.

A comprehensive range of climatic and durability test apparatus also exists for testing equipments by simulating natural or man-made conditions liable to be encountered anywhere in the world. Blizzard or driving rain, tropical heat or desert sandstorm, all these and more can be simulated in the ADE test-houses, while the most ham-fisted enthusiast could scarcely emulate the rough usage tests carried out in the durability section of the Tests Division.



A portion of the Electrical Laboratory at Maribyrnong.

Potential

The activities of the Army Design Establishment, which now provides technical and engineering services and advice to the Army, the Department of Supply, and Industry on matters concerning Army equipments, could readily be extended to broader fields, and to national advantage. Many of the facilities available are unique in Australia, and could profitably be employed by Federal and State authorities and industry in general. The enormous growth of industry since the war years emphasizes the value of such an organization which can bridge the developmental gap that has so long existed between research and production.

Typical Examples of ADE Work

Industrial and governmental organizations are becoming increasingly aware of the potential and value of the testing facilities available at the Army Design Establishment, as the following examples bear witness:—

The dynamic characteristics of certain electronic valves were determined for the Nicholas Institute, using the specialized equipment of the electronic laboratory.

A special rig was set up on the 300 h.p. electronic dynamometer to determine the power output of a foam pump for fire tenders of the Department of Civil Aviation and the RAAF.

ASD 240 and ASD 264 engines manufactured by the International Harvester Company of Australia were tested for power output, carburettor and ignition performance.

The climatic and/or durability test facilities were used to test certain items for the following:—

Pye Pty. Ltd. and AWA (Communication equipment).

Rola Co. (Aust) (dust-proof speakers).

Joseph Lucas (ignition coils).

Australian Paper Manufacturers (fibre containers).

Commonwealth Fertilizers and Chemicals Ltd. (sedimentation of sheep drench).

Weapons Research Establishment (cameras).

Fairey Aviation Company (sundry items for use in Jindivick and Meteor MTS equipment).

Current Army projects are numerous and will be undertaken by ADE in addition to many other projects of minor or "non-Army" nature. Among the more interesting of the major projects which may be mentioned are two important vehicle projects.

The first is a 2½-ton four-wheel-drive truck which, though not unique in concept, may prove to be a very popular vehicle, and the forerunner to others of its type. Rugged and versatile, at home in the metropolis or the bush, it will more than hold its own with any vehicle of its type in the world.



"Snow" from the foam pump test in the Mechanical Test House at Maribyrnong.

The basic chassis, which has been designed to meet a Joint Services specification, can be adapted to many different roles. The first prototype has a cargo body, and is intended primarily for Army use. Severe design and user trials by Army units in Northern, Eastern, and Southern Commands have proved the worth of this truck. The greatest possible Australian content and widest use of commercial components are the outstanding features of its design.

The other project is a transporter for the 50-ton Centurion tank. This has been designed in ADE to facilitate transport of tanks from Puckapunyal for base repair, thus saving time and substantial rail freight charges, an advantage John Citizen will readily appreciate in his role of taxpayer.

Relations with Industry

A pleasing and profitable feature of the growth of ADE is the co-operation and mutual esteem which now exists between ADE and Industry. The 2½-ton truck previously mentioned bears witness to the friendly relations between ADE and the International Harvester Company of Australia.

Australia's revolutionary "walkie-talkie," a portable High Frequency radio with comparatively long range, now in general use in Australia and other Commonwealth countries, was developed by ADE working in close co-operation with AWA. Its operational role is to provide a lightweight communication set for use by long range infantry patrols. It is especially suitable in terrain which normally presents difficulty to Very High Frequency sets.

One of the world's best continuously tunable communication receivers, the R5223, a high-grade equipment, extremely accurate in frequency calibration, and remarkable for its stability under a wide range of climatic conditions, was developed in conjunction with the Telecommunications Company of Australia.

There are many other such projects which may not be reported for security reasons, particularly in the field of armaments, where many promising commitments have been met to the ultimate benefit of Australia.

Standardization

The engineer works today with many of his detailed problems solved. They are problems which, because of their constant recurrence, have become "standard" and are given standard treatment. They are



the results of lessons learned through the ages and faithfully recorded. Constant additions are being made to this imposing record, which is now published in the form of Standard Specifications; "tools" to be used with confidence and profit. Close association with production and inspection authorities gives design engineers every opportunity to increase the scope of standardization on a world-wide scale. ADE is represented on the Standards Association of Australia working committees, and has a special section to deal with standardization problems.

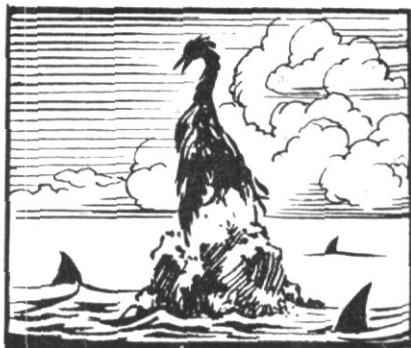
Films and Publications

New equipments are introduced to the men who will use and maintain them through the medium of publications and films, preparation which must, of necessity, keep pace with engineering projects.

Specifications governing (a) the development of equipments to the prototype stage and (b) bulk manufacture are also the responsibility of ADE.

Design for Peace and War

History clearly shows an essential Australian need for a competent design authority in support of research, production, and inspection



authorities, both in peace and war. This will be obvious to those who think back to the last great emergency when, left "like a shag on a rock," we were forced to rely, for the time being, on left-overs from the previous conflict, and our own slender production resources. This resulted inevitably in what our American friends call "crash developments," with serious design and production deficiencies, resulting in over-expensive components and materials, and costly production methods.

It must be clear to the discerning that the Army Design Establishment has a definite and vital place in the pattern of Australia's future, and a potential that far outweighs the cost of building and equipping the Establishment broadly described in these pages.

ON THE ISSUE OF ORDERS

Captain H. B. Chamberlain
Royal Australian Infantry

IT is a century ago. An action is about to take place on the Crimean Peninsula. A charge by Her Majesty's Scots Greys has routed the Russian cavalry. The sound of scattered shots and an occasional trumpet call break the silence. On rising ground facing Balaclava several lines of horsemen numbering some five or six hundred stand prepared. The creak of harness and champing of bits mingle with the shouting of an occasional order.

A staff officer rides at the gallop towards the commander of the horsemen. They talk briefly and the staff officer becomes impatient. He points toward a valley and utters words which sound like a challenge. On the word from the commander the horsemen wheel and trot forward. Sabres flash and the lines break into a gallop. Gay colours and the glint of metal make a brave sight with battle flags flying.

Cannon roar and the clatter of hooves becomes like thunder. The

staff officer rides forward, appearing anxious to gain the commander's attention and is killed by a splinter of steel. Minutes later the valley is strewn with the shattered bodies of men and horses. There is agony and confusion. Gunners die at their posts. Survivors among the horsemen ride back. There are angry shouts of disdain from men who normally do their duty without question. They have been betrayed.

The story will be told for centuries as one of valour. Their courage of course is not in question. It was merely an error in staff duties which caused the havoc. The staff officer pointed in the wrong direction. This is not an isolated case in the history of war. It has happened with such astonishing frequency that one marvels how men continue to bother with leaders. They should at least make firmer examples of them.

In the Somme winter of 1916 the ground was grey with the bodies of young Britons. A field marshal who believed in the invincibility of the

horse sent his armies to their doom. His chief of staff burst into tears whilst making a reconnaissance not before but after the battle. Such slaughter would make the gods weep.

The list is a long one. Gallipoli, Borodino, Gettysburg, Stalingrad, Kut el Amara, Arnhem, Plevna. A million lives flung into the cauldron here and there have not appreciably left their mark. Blunders continue to be made. Leaders give impossible orders based on sketchy appreciations. Men obey them and die miserably. Battles which are skilfully won receive great attention. Battles lost by muddling are forgotten. Hence the aura of glory which surrounds war.

It is not proposed here to discuss the moral aspect. It is proposed, however, to examine some features of the origin and issue of orders. Following this it is necessary to put forward some ideas on the correction of faults. A solution is impracticable. Whole colleges of scholars have failed over several thousand years to provide one.

The simplest order is heard on the parade ground. Its results can be observed over a period of several months as gangling recruits identify their left hand and right foot. Unison follows until after a period a single shout may cause a thousand men to carry out a complicated movement as one man. It is all so simple, or so it would appear. Perhaps the apparent ease with which this is effected may in some part be responsible for many failures on the battlefield. Deception is the master of mediocre minds.

As one progresses, the order becomes more complex. An NCO may address a soldier thus: "Report to the kitchen." This neglects certain

elements such as time, dress, whom to report to, and nature of duty. It may or may not suffice. On many occasions it would serve the purpose. Near enough is good enough, but this attitude has marked limitations.

In a minor tactical exercise the NCO is put through his paces. A member comes forward and haltingly addresses his "O" Group from sketchy notes. After this display the capture of One Tree Hill is in some doubt. Another member comes forward. His diction is good, his manner firm, staff duties impeccable. The instructor nods approval. The member's solution makes One Tree Hill untenable for the enemy.

A large tactical exercise with officers composed of the cream of the division drags on through the heat of a sub-tropical day. Rumour has filtered through that the DS solution is two battalions up and the township of Bottler's Flat is to be taken in a night attack from the left flank. A senior officer of excellent bearing and authoritative manner crushes the unfortunate Phantoms and sets upon the fleeing remnants with two squadrons of armour as dawn breaks. The exercise is successful.

It is some time before Bottler's Flat recovers. Both hotels have been denuded of supplies. All the officers have agreed that this was the best TEWT ever and look forward anxiously to the next one. This picture is not complete. There are in fact only a few of the officers who fully understood the exercise. The most unfortunate aspect is that the matter is serious, deadly serious. Many Bottler's Flats have been brewed up in a similar manner with only the same results. It is a fact

also that all these leaders mentioned above from the junior NCO to the experienced senior officer are preparing for war. They are preparing themselves to order men of their own age and time to make that fleet-ing dash into the inferno from which many do not return.

It is easy to criticize. It is hard to be constructive. The exercise of command is not generally taken lightly; in fact, most leaders are sincere in their purpose. It would appear, not only from this vantage point but scanning through the aisles of history, that sincerity is not enough. Much has been written about the qualities of the would-be leader both in the past and at the present. A current Staff College précis is almost lyrical in its attitude to the requirements. Each quality is noted and enlarged upon. One may assume, then, that the study of the art has been exhaustive. It is probable from the results of the past, however, that many of the men who led did not study exhaustively. Their teachers failed to reach out to them or the students did not apply themselves. The orders which would of necessity have to be so clear, precise and based on sound appreciation often issued from unpractised minds.

The results are shown to have been appalling. The reasons for lack of leadership qualities and background knowledge may be many. This officer was largely tied up with years of minor correspondence, correcting staff duties and assisting with regimental balls, fund raising and the like. Another officer was a bank clerk, his military function was possibly secondary to the study of his profession and the pursuit of golf or social work. There

is no new or startling disclosure in this. In the Australian Army it has been going on for possibly fifty years.

The pattern of the next war is not known. From our military reading, both in this journal and other current material, we must believe that action will occur rapidly. There will be no time for the mobilization of armies and a leisurely swinging into action. The leader will arrive with his command in an unfriendly place at an unexpected time. Issue of the first orders will be vital. Practice bungles which have characterized the beginning of so many wars are a luxury which will not be permitted.

Unwarranted destruction of the first wave has almost become the done thing. The more sophisticated student refers to it as "bleeding." The rapid expenditure of the lives of skilled and educated men went out with D-Day, the 6th of June. It was only then realized that troops were not just bodies. They were an accumulation of individual personalities which embodied the wisdom, skill, and careful nurture of twenty or more years of living. A society which is almost meticulous in the welfare of its citizens assigned them to its military leaders to perform the function of warriors.

The potential enemy is numerous. Skill and wisdom are not yet an essential requirement of its soldiers. In many cases the latter would be an undesirable trait. His ability to destroy our manpower product on a one-for-one basis has been amply demonstrated.

It is all the more necessary therefore that the orders which are issued by our leaders come from well-developed minds. These orders may

not originate from one which has for years been badgered with a host of non-military although often necessary duties. One agrees that a peace-time army cannot function without correspondence. Fund raising is good publicity for the Army.

The mind which gives over part of its time to soldierly pursuits, say on an average of 10 or so hours a week, has its value. It is probable that this value could be improved with further increments of time, but even then the limitations are considerable. This is despite the output of some excellent material on previous occasions. The time which has been allowed for the part-time soldier to limber up in previous wars will not be available.

Through the dimness of time we may strain our vision to see the staff officer gallop towards the horsemen at Balaclava. The screams of men sent to unnecessary death echo through the valley of our combined conscience. A wave of a hand and a garbled order become symbols of the military men. Catastrophes like the Somme dull our senses with their enormity. Ant hills of disjointed ideas become substitutes for clear thought.

A man who desires to give orders must study. If the military life is aspired to there is work ahead. Without undue emphasis on platitudes of altruism there is a need for dedicated men. There is one other re-

quirement which the text-books and précis at times ignore. That is the quality of balance, the quality which enables one to see oneself as others do.

If a country is unable to produce such men it will wallow in a crisis and time will see its eclipse. The wanton expenditure of the British Commonwealth's young men in World War I almost appeared to be a vast act of sedition, the result of a conglomeration of orders issued by a team of master saboteurs. The repetition of such a work of disaster would ensure our continued existence as museum pieces only, pathetic and amusing relics of a race nearing extinction.

War is a continuation of diplomacy by other means. Every student for first appointment knows this saw. While humble men look askance at their plates of food, the more enlightened intellects seek to dominate them. If one day a pair of diplomatic acrobats choose to continue their profession by the other means and cause their countrymen to follow, then the die is cast.

Military skill of today must be vital and effective. The orders which govern that skill are the instruments which employ men and material. On our side in particular neither can be expendable. The margin is so slim there could hardly be room for blunders.

THE STUDY OF MILITARY HISTORY

Lieutenant-Colonel E. G. Williams

Directorate of Military Training

MILITARY BOARD approval has recently been given to changes in syllabi and the method of setting written examinations in Current Affairs and Military History. It is proposed in this paper to examine briefly the aim of written Military History examinations and a suggested method of study for them.

The Aim

In the introduction to AAJ No. 56 of January 1954 on the Shenandoah Campaigns of 1861-62, the then Chief of the General Staff, Lieutenant-General Sir Sydney Rowell, wrote with regard to the study of Military History—"The American Civil War also, demonstrates the fallacy of the belief that all that is required to make a good commander is a strong character and common sense . . . common sense is necessary, but it is not enough. Nor is the mere ability to memorize the few and simple principles of strategy sufficient. It is the knowledge of how to apply those principles that counts. And this knowledge can best be acquired by studying the ways in which the principles have been applied by the great masters in the art of war. It is true that no two situations are ever exactly alike, but the technically competent officer who has conditioned his mind to the study of accumulated military experience will have little difficulty in adapting the means at his disposal to the solution of any problem which confronts him."

The Army Headquarters memorandum which promulgated the changed syllabi and method of setting the Military History and Current Affairs papers stated, inter alia, that: "It is considered that the modified examinations will ensure that officers presenting for these subjects—

- (a) Should have attained a broader knowledge.
- (b) Will have been permitted more incentive for intelligent research and constructive thinking.
- (c) Will have had an opportunity of expressing their opinions on the broad aspects set for annual study."

So there you have it: the aim of the study of Military History is to give the student that background to, and climate of, war, and the knowledge of how great soldiers have approached problems by application of the various principles of war so that he may, by accumulation of this theoretical knowledge, be better able to deal in the most effective way with the problems that may arise for him in the crisis of war.

Equally obviously, then, since the aim of all written examinations is to test the knowledge of the candidate ("Are You Sitting for Written Promotion Examinations," AAJ 121), the aim of written Military History examinations is to test the candidate's knowledge of events that have occurred in the campaigns under study, the factors influencing those

events, and the conclusions that may be drawn from those events and the factors.

The Modified Examination Paper

Three campaigns for ARA officers and two campaigns for CMF officers for study will be set at the beginning of each training year; from each of these campaigns three alternative questions will be set also early in the training year. At the examination ARA and CMF candidates will be required to write a paper on one question that they have selected from each relevant campaign.

It follows, therefore, that since ARA officers have to write papers on three questions only, and CMF officers on two questions only, that the questions set will be such that a reasonably full study of the campaign involved is necessary to produce adequate answers to the questions set.

The questions set for the Jun 60 and Jul 60 series of examinations have been published in Australian Army Orders for Oct 59, and it may be seen that their answers will involve some quite deep research and preparation.

The Approach to Detailed Study

It is felt that it will be necessary, before the candidate selects the particular question from each campaign, that he will answer in the examination, for him to have a reasonable picture of the whole of the campaign. Once having obtained this by, say, reading the text book through once slowly and intelligently, the candidate is better able to select the question he will answer in that campaign.

Following up this thought, the automatic question that follows is: "Is it a good idea to do the same thing with the other one (or two)

campaigns before getting down to detailed study?" For what it is worth, my own opinion is that this would be a bad approach to study for the complete examination, as in the reading of the other two text books, some loss of knowledge of the first campaign would follow, and the candidate would not have advanced very far on the way to completion of his study. Also, bearing in mind that possibly five other subjects have to be studied within the candidates' available time, too great a weighting would be placed on one particular subject.

In addition, as a glance at the questions promulgated will show, it will be necessary for considerable "side reading" to be done in addition to study of the set text books.

These factors, then, suggest that study for Military History be undertaken campaign by campaign, with good solid notes made on each campaign for pre-examination revision.

Detailed Study

Having decided upon the proportion of your study time that you will allot to Military History, and having read one of the campaigns and selected the question you will answer, you will be looking for some quasi-mechanical means of gaining the knowledge necessary to answer the question you have selected. It is not considered that there is any method of obtaining the requisite knowledge without study, but it is felt that there are means by which the study can be crystallized into apt and complete "revision briefs."

From a look at the questions set it will be seen that in most cases opinions of the candidates are required as well as knowledge of events. Since any opinion based on historical events collated by one

author may not present the whole picture, it is necessary that as many references as practicable be studied with a view to gaining diverse treatment of the particular matter.

It will be necessary to write down in detail any references to the question context from all references studied, to compare one against the other, and by reasoned argument to arrive at a considered opinion.

You will ensure, naturally, in this process, that where the question calls for facts to be quoted, as opposed to opinion, or to arrive at an opinion, you must be sure to get the facts written down, too, and to make sure that your facts are right.

This will take some time and a good deal of writing, but as for an appreciation, it will be necessary to study the factors (reportings of the events by different authors), the courses (why it happened, what could have happened if . . .) to arrive finally at your plan (opinion, possible solution to the historical problem, etc.).

It must be emphasised that this is not study that you can afford to do "on the cheap." No amount of coaching can make details stick in your mind as completely as details and opinions you have worked out yourself.

Having prepared your appreciation of the question set, reduce it to a summary containing "all the meat," which summary will become your "revision brief," and with its study just before the examination, you should be able to write adequate answers when you sit the actual examination.

Remember that the three questions (or two for CMF officers) carry equal values and, logically, each should be allotted the same time-

marks value. Naturally since one hour per question is allotted, one hour's value should be presented in actual writing (although this is not an open invitation to pad and waffle).

Since you will have had about nine months in which to select and study the actual questions you are going to answer in the examination, it is obvious that you are going to save some time in the examination room, in contrast to the old Military History papers, where you had to read the paper and select the questions you were going to answer before you could put pen to paper.

Study of the selected questions in the above manner will certainly ensure that you have studied the campaigns, and moreover should ensure that you pass this examination subject!

Coaching

Few of the questions are such that collective coaching will be effective to the degree that it was formerly, since most questions will require individually reasoned opinion, viz., "discuss," "comment," "compare," "give your opinion," etc. These questions require knowledge of the principle underlying the questions and its relation as a whole to the campaign.

Conclusion

These hints are offered in amplification of those shown in the Preface to AAJ 56, and are complementary to them. The main thing to be understood is that the subject of Military History is, and will remain, a requirement for promotion to the rank of major, and that the only way to pass any Military History examination is by adequate presentation of sound knowledge achieved by study.



THE LAST BLUE SEA, by David Forrest. (William Heinemann Ltd., 317 Collins Street, Melbourne.)

SEVENTEEN years have passed since Australian soldiers held the Japanese attack at Milne Bay and fought their way back to the north-eastern coast of New Guinea from the outskirts of Port Moresby across the Kokoda Trail, and over the razor-backed ridges from Wau to Salamaua. These campaigns mark a crucial turning point in our history, they mark the moment when our place in the world and our relationships with other nations underwent a fundamental change. Yet, apart from official histories, surprisingly little has been written about the tremendous experience through which the Australian Army passed in these terrible campaigns. Perhaps we are not an articulate people, but, all the same, one would have thought that the experience would have produced a literature which conveyed, or at least attempted to convey, something of the flavour of those unique campaigns.

If we have waited a long time for a writing that would do this, we have not waited in vain, for in **THE LAST BLUE SEA** David Forrest faithfully portrays the experiences of many thousands of Australian soldiers who fought and conquered the

savage environment and the savage enemy.

In every war, and more particularly in nuclear and jungle war, there comes a moment when the infantry officer is alone with his men and the enemy. That is the moment when all that has gone before, all the training and preparation, all the numberless things that contribute to the building up of confidence and cohesion, are put to the test. David Forrest has written an absorbing, and to the experienced soldier, an extraordinarily accurate, story around such a moment as this.

David Forrest was fifteen when war broke out in 1939. In the next three years he tried to enlist successively in the AIF, the Navy and the RAAF, and in each case he was told to come back when he had started to shave. At eighteen he was called up for militia service, accepted as an AIF volunteer, but compelled to remain with his militia battalion. In **THE LAST BLUE SEA** he tells the story of his battalion's part in the fighting between Wau and Salamaua. His departure from historical fact does not in the least detract from his portrayal of those early New Guinea campaigns as seen by the men who fought them.

This is the story of a militia battalion, ill-trained and suffering from the effects of a succession of in-

competent commanders, brought suddenly face to face with the enemy in the totally unexpected environment of the jungle. The reaction of the troops to the challenge, from their initial mistakes to their final mastery of the techniques of jungle warfare, are accurately and excitingly portrayed. Through crisis after crisis, the story builds up a tension which makes it very hard to put the book down, even if it is dinner time and the soup is getting cold.

David Forrest draws his characters skilfully, characters which the experienced soldier will readily recognize. There is the good, solid platoon sergeant, the sound section leader, the man who dodged battle whenever he could but who fought like a tiger when he was in it. There are the privates taking over the responsibilities of leadership as casualties occurred. And there is the magnificent CO, inheriting a battalion of unsound morale and defective training, doing the things he ought not to have had to do in the middle of a battle in order to weld his troops into an efficient, hard-fighting unit. In character delineation there is only one false note; Lieutenant O'Grady is a misfit in the story. As portrayed, O'Grady was a sound officer doing a good job even if he was not an attractive personality. It is not easy to see the troops jacking up on him in that sticky situation. Usually they select more appropriate times and places for doing that.

The dialogue is completely natural and laced with the sardonic humour of the Australian soldier. It is "soldier talk" couched in the salty slang of the times.

The literary merit of *THE LAST BLUE SEA* has been recognized by

the award of the first Dame Mary Gilmore prize for an Australian novel. Its military value lies in its accurate presentation of jungle warfare and the peculiar demands that type of conflict makes on the fighting man. And behind the story lies the clear implications of the evils of poor training and inadequate leadership.

This book ought to be read by all soldiers, particularly by young officers and NCOs who, if the precariously balanced international situation goes really bad, might easily find themselves in a very similar situation. It might be a good thing, too, if its lessons were taken to heart by ALL the people associated with national defence. They will at least learn what it feels like to be on the sharp end.

—E.G.K.

THE SECRET NAME, by Lin Yutang. William Heinemann Ltd., 317 Collins Street, Melbourne.

In his preface to this book the author says, "This book is an historical survey of the forty years of Soviet rule in Russia, and an examination of its change of character from extreme left to extreme right. It is not meant as a report of contemporary Russia, or its latest zig-zag developments, but is rather aimed at revealing the true character of the state and providing a background for the average reader who wishes to be informed of the main tendencies and developments of the past period."

The title of the book is taken from the words of Heinrich Heine, who in 1842 wrote with prophetic insight, "Communism is the secret name of the dread antagonist . . ."

Lin Yutang begins by pointing out, as Confucius did long ago, that

in order to obtain a true appreciation of any phenomenon it is necessary to call things by their right names. Having thus cleared the ground by defining the meaning of the words and expressions employed in Communist terminology, Dr. Lin proceeds to demonstrate the real nature of the contemporary Soviet state and society. There is nothing academic about his searching examination; it is couched in simple yet trenchant language laced with sparkling satire.

Lin Yutang examines the theory of Communism and concludes that it makes sense only when it avows its aims to be the betterment of the conditions of the working man, and proceeds unwaveringly towards that goal. He then proceeds step by step to examine what has actually happened in Russia since the Bolsheviks seized power in 1917. Relentlessly, quoting his authorities and giving his statistics, he traces the growth of the new bureaucracy of privilege which has replaced the old aristocracy of the Czar, and shows that in Russia today there exists the most ruthless, most terrible form of capitalism the world has ever seen. He portrays a society in which the conditions of labour are paralleled only by those of the slaves who built the Pyramids of Egypt and the Great Wall of China. He takes us behind the spectacular facade of material achievement to show us a social order in which a relatively small privileged class battens cruelly upon the toil and the degradation of the masses. The aims of the old Bolsheviks have long since disappeared, the dictatorship of the proletariat has been replaced by the dictatorship of a new class of tyrants which has hacked its way to power, and which

will stop at nothing to maintain its position.

Dr. Lin shows that this new dictatorship, this new hierarchy of privilege, is bent upon extending its sway by any means it judges to be expedient. At the moment it is pursuing its ambitions by means of the ideological war. Advocates of peaceful co-existence would do well to heed his exposition of the nature of the ideological warfare Russia has launched upon the world. In political warfare one can compromise or compose a difference, in military warfare there may be a stalemate. In ideological warfare one can do neither, it is a fight to a finish.

In combatting the doctrine of co-existence, Dr. Lin asks if we are to abandon forever our suffering brothers behind the Iron Curtain. That is the inescapable implication of co-existence, and those who are prepared to pay this price for peace have indeed abandoned the faith by which Western man has lived for two thousand years.

In a powerful closing chapter Dr. Lin appeals to the West to abandon its defensive posture, to take its faith and its courage in its hands, and to launch a sustained and relentless ideological offensive. He shows us how it can be done, how the bouncy Khrushchev can be beaten at his own game. He shows us clearly, unmistakably, what we ought to do, and asks have we the courage and the fortitude to do it.

This brilliant exposure of Communism in action is essential reading for everyone with even a passing interest in the great struggle which forms the backdrop to the stage of our world today.

—E.G.K.

AUSTRALIAN ARMY JOURNAL

INDEX

1959

No. 116 JANUARY, 1959 No. 127 DECEMBER, 1959

PART I

TITLE INDEX

	Title	Page	Issue
	About Planning a Conference	31	121 Jun
	Aggression in Laos—Strategic Review	33	125 Oct
	Airmobile Operations	5	123 Aug
X	Allied Intelligence Bureau, SWPA—Book Review	43	122 Jul
	AMF & AACS Prize Essay—Subject 1959	30	123 Aug
	Are You Sitting for Written Promotion Examinations?	5	121 Jun
	Army Design Establishment	22	127 Dec
	Army Inspection Service	32	123 Aug
	Atomic Punch for the Ground Gainers	5	119 Apr
	Australia and Nuclear Defence	33	124 Sep
	Australian Tariff Policy	45	120 May
	Background to Current Affairs—Book Review	51	117 Feb
	Bacterial Food Poisoning	24	121 Jun
	Battle Preliminaries	20	123 Aug
	Beds in the East—Book Review	46	123 Aug
	Birth of a State—Strategic Review	13	127 Dec
	Brief History of Army Small Ships	40	118 Mar
	Causes of World War 3—Book Review	48	120 May
	Chain of Defence—Strategic Review	30	118 Mar
	China Opens a New Chapter—Strategic Review	20	124 Sep
	Chinese Secret Societies	41	125 Oct
	Communist POW Treatment in Indo-China	5	125 Oct
	Convulsions in South-East Asia	37	120 May
	Crisis in Kerala—Strategic Review	13	123 Aug
	Dark Dancer—Book Review	47	123 Aug
	Defeating Tanks in the Jungle	5	122 Jul
	Digger	12	119 Apr
X	Disarmament—Strategic Review	37	126 Nov
	Exercise GRAND SLAM	23	125 Oct
	Failure of Atomic Strategy—Book Review	45	123 Aug
	Fallout and the Company Commander	25	120 May
	Finance and CMF Training	36	124 Sep
	Fit to Fight	36	119 Apr
	Focus on Formosa	44	118 Mar
	Formation and Development of Communes in Communist China—Strategic Review	30	122 Jul

Title	Page	Issue
From Our Own Point of View	18 124	Sep
From the Enemy's Point of View	40 117	Feb
Fuels for Guided Missiles and Space Vehicles	19 121	Jun
Futilitarianism	47 124	Sep
Goers, Cranes and Crates	24 118	Mar
Greatest Raid of All — Book Review	42 118	Mar
Guided Missile Development in Australia	15 125	Oct
History of Grenades	21 121	Jun
Importance of Military Geography	32 119	Apr
Improved Reading	18 122	Jul
Industrial and Trade Developments in Communist China	31 116	Jan
Into the Breach	5 120	May
Is Defence the Solution?	38 118	Mar
Israel from the Military Point of View	36 117	Feb
Japan Today — Strategic Review	30 120	May
Last Blue Sea — Book Review	36 127	Dec
Long Pig — Book Review	49 125	Oct
Limited War	40 119	Apr
Marches of Peace	5 118	Mar
Maxim Machine Gun	27 124	Sep
Men Fighting — Book Review	43 118	Mar
Military Autarky	5 126	Nov
Military History in the Years Between	25 123	Aug
Nature of the Threat	24 122	Jul
New Dress for the Army	24 116	Jan
Officer Appointments	21 118	Mar
On the Issue of Orders	29 127	Dec
On War — Book Review	51 117	Feb
Operations in Malaya	25 119	Apr
Pattern of War in South-East Asia	5 124	Sep
Penetrable Shield — Strategic Review	23 124	Sep
Philosophy of Leadership	41 116	Jan
Point Nepean	37 121	Jun
Population and Our Defence	5 116	Jan
Population Problems of China — Strategic Review	11 121	Jun
Problems of Future War	17 126	Nov
Public Speaking and Chairmanship	44 126	Nov
Railway Transportation and the Principles of War	11 117	Feb
Recommended Reading List No. 1	17 123	Aug

Title	Page	Issue
Sauce for the Gander	35	120 May
SEATO from the Philippines Point of View	41	120 May
Secret Name — Book Review	36	127 Dec
Service Memoirs of a Veteran — One Point Dispersion	50	117 Feb
Some Problems of Industrial Mobilization	35	122 Jul
Some Thoughts on the Tasks of Field Engineers in Nuclear Warfare	48	116 Jan
Some Thoughts on the Local Counter-Attack	14	120 May
Spearhead in Malaya — Book Review	49	125 Oct
Stalemate on the 38th Parallel — Strategic Review	22	119 Apr
Study of Commonwealth-State Co-operation	44	117 Feb
Study of Military History	33	127 Dec
SWPA — The First Year, Kokoda to Wau — Book Review	20	122 Jul
Tactics As She Is Spoke	19	117 Feb
Thoughts on Nuclear War	5	117 Feb
Thoughts on the Build Up of the German Army	12	122 Jul
Thousand Cranes — Book Review	49	125 Oct
1000 Men at War — Book Review	42	122 Jul
Through a Glass Darkly	36	116 Jan
Tin of Sweet Potatoes	21	116 Jan
Two Tigers	18	127 Dec
Unconditional Surrender	36	118 Mar
Under the Sea in Ships	37	125 Oct
US Army Pentomic Division	5	127 Dec
United States Counter-Aggression Force	41	124 Sep
US Dilemma — Strategic Review	32	117 Feb
Wanted — A Military Coaching Academy for the CMF	40	126 Nov
Weapons and Tactics	20	122 Jul
We Do Not Live in Europe	47	118 Mar
Why Don't They?	51	125 Oct
Working Parties	13	126 Nov

PART II

SUBJECT INDEX

Subject	Page	Issue
Administration		
Finance and CMF Training	36 124	Sep
From the Enemy's Point of View	40 117	Feb
Marches of Peace	5 118	Mar
Officer Appointments	21 118	Mar
Public Speaking and Chairmanship	44 126	Nov
Airborne Operations		
Airmobile Operations	5 123	Aug
Amphibious Operations		
Greatest Raid of All—Book Review	42 118	Mar
Armies, Foreign		
Atomic Punch for the Ground Gainers (USA)	5 119	Apr
Thoughts on the Build Up of the German Army	12 122	Jul
US Army Pentomic Division	5 127	Dec
Armour		
Defeating Tanks in the Jungle	5 122	Jul
Australia		
Australia and Nuclear Defence	33 124	Sep
Australian Tariff Policy	45 120	May
Guided Missile Development in Australia	15 125	Oct
Population and Our Defence	5 116	Jan
Study of Commonwealth-State Co-operation	44 117	Feb
We Do Not Live in Europe	47 118	Mar
Australian Army		
AMF and AACS Prize Essay — Subject 1959	30 123	Aug
Army Design Establishment	22 127	Dec
Army Inspection Service	32 123	Aug
Brief History of Army Small Ships	40 118	Mar
Digger	12 119	Apr
From Our Own Point of View	18 124	Sep
Last Blue Sea — Book Review	36 127	Dec
Maxim Machine Gun	27 124	Sep
Military History in the Years Between	25 123	Aug
New Dress for the Army	24 116	Jan
Officer Appointments	21 118	Mar
Point Nepean	37 121	Jun
1000 Men at War — Book Review	42 122	Jul
Working Parties	13 126	Nov

Subject	Page	Issue
Book Reviews		
Allied Intelligence Bureau, SWPA	43 122	Jul
Australia in the War of 1939-45 (Official History), SWPA, the First Year—Kokoda to Wau	40 122	Jul
Background to Current Affairs	51 117	Feb
Beds in the East	46 123	Aug
Causes of World War 3	48 120	May
Dark Dancer	47 123	Aug
Failure of Atomic Strategy	45 123	Aug
Greatest Raid of All	42 118	Mar
Last Blue Sea	36 127	Dec
Long Pig	49 125	Oct
Men Fighting	43 118	Mar
On War	51 117	Feb
Secret Name	36 127	Dec
Thousand Cranes	49 125	Oct
1000 Men at War	42 122	Jul
Spearhead in Malaya	49 125	Oct
Steel Cocoon	41 122	Jul
Campaigns		
Australia in the War of 1939-45 (Official History), SWPA, the First Year, Kokoda to Wau—Book Review	40 122	Jul
Last Blue Sea (New Guinea)—Book Review	36 127	Dec
China		
China Opens a New Chapter—Strategic Review	20 124	Sep
Chinese Secret Societies	41 125	Oct
Formation and Development of Communes in Com- munist China—Strategic Review	31 116	Jan
Industrial and Trade Developments in Communist China—Strategic Review	30 122	Jul
Population Problems of China—Strategic Review	20 124	Sep
Two Tigers	18 127	Dec
Civil Defence		
Australia and Nuclear Defence	33 124	Sep
Communism		
Crisis in Kerala—Strategic Review	13 123	Aug
Nature of the Threat	24 122	Jul
Secret Name—Book Review	36 127	Dec
Current Affairs		
Background to Current Affairs—Book Review	51 117	Feb
Causes of World War 3—Book Review	48 120	May

Subject	Page	Issue
Direction of War		
Causes of World War 3—Book Review	48 120	May
Failure of Atomic Strategy—Book Review	45 123	Aug
Sauce for the Gander	35 120	May
Discipline		
Marches of Peace	5 118	Mar
Engineers		
Some Thoughts on the Tasks of Field Engineers in Nuclear Warfare	48 116	Jan
Equipment		
Army Design Establishment	22 127	Dec
Europe		
Penetrable Shield—Strategic Review	23 124	Sep
Formosa		
Focus on Formosa	44 118	Mar
US Dilemma—Strategic Review	32 117	Feb
Guerrilla Warfare		
Operations in Malaya	25 119	Apr
Spearhead in Malaya—Book Review	49 125	Oct
Tin of Sweet Potatoes	21 116	Jan
Guided Missiles		
Atomic Punch for the Ground Gainers	5 119	Apr
Fuels for Guided Missiles and Space Vehicles	19 121	Jun
Guided Missile Development in Australia	15 125	Oct
India		
Crisis in Kerala—Strategic Review	13 123	Aug
Indo-China		
Communist POW Treatment in Indo-China	5 125	Oct
Industry		
Some Thoughts on Industrial Mobilization	35 122	Jul
Israel		
Israel from the Military Point of View	36 117	Feb
Intelligence		
Allied Intelligence Bureau, SWPA—Book Review	43 122	Jul
Japan		
Japan Today—Strategic Review	30 120	May
Thousand Cranes—Book Review	49 125	Oct
Korea		
Stalemate on the 38th Parallel—Strategic Review	22 119	Apr
Laos		
Aggression in Laos—Strategic Review	33 125	Oct

Subject	Page	Issue
Leadership		
Philosophy of Leadership	41 116	Jan
Logistics		
Military Autarky	5 126	Nov
Some Thoughts on Industrial Mobilization	35 122	Jul
Through a Glass Darkly	36 116	Jan
Malaya		
Chinese Secret Societies	41 125	Oct
Operations in Malaya	25 119	Apr
Spearhead in Malaya—Book Review	49 125	Oct
Tin of Sweet Potatoes	21 116	Jan
Middle East		
Israel from a Military Point of View	36 117	Feb
Military Geography		
Importance of Military Geography	32 119	Apr
Military History		
Into the Breach	5 120	May
Australia in the War of 1939-45 (Official History), SWPA, the First Year—Kokoda to Wau—Book Review	40 122	Jul
Last Blue Sea (New Guinea)—Book Review	36 127	Dec
Study of Military History	33 127	Dec
Nuclear Warfare		
Atomic Punch for the Ground Gainers	5 119	Apr
Fallout and the Company Commander	25 120	May
Into the Breach	5 120	May
Limited War	40 119	Apr
Military Autarky	5 126	Nov
Problems of Future War	17 126	Nov
Some Thoughts on the Tasks of Field Engineers in Nuclear Warfare	48 116	Jan
Thoughts on Nuclear War	5 117	Feb
Orders		
On the Issue of Orders	29 127	Dec
Ordnance		
Army Inspection Service	32 123	Aug
Organization		
Military Autarky	5 126	Nov
US Army Pentomic Division	5 127	Dec
Philippines		
SEATO from the Philippines Point of View	41 120	May
Railways		
Railway Transportation and the Principles of War	11 117	Feb

Subject	Page	Issue
Recommended Reading		
List No. 1—July 1959	17	123 Aug
Security		
From the Enemy's Point of View	40	117 Feb
Singapore		
Birth of a State — Strategic Review	13	127 Dec
South-East Asia		
Aggression in Laos — Strategic Review	33	125 Oct
Birth of a State — Strategic Review	13	127 Dec
China Opens a New Chapter — Strategic Review	20	124 Sep
Chinese Secret Societies	41	125 Oct
Communist POW Treatment in Indo-China	5	125 Oct
Convulsions in South-East Asia	37	123 Aug
Crisis in Kerala — Strategic Review	13	123 Aug
Focus on Formosa	44	118 Mar
Formation and Development of Communes in Communist China — Strategic Review	30	122 Jul
Industrial and Trade Development in Communist China — Strategic Review	31	116 Jan
Japan Today — Strategic Review	30	120 May
Pattern of War in South-East Asia	5	124 Sep
SEATO from the Philippines Point of View	41	120 May
Stalemate on the 38th Parallel — Strategic Review	22	119 Apr
Strategy		
Limited War	40	119 Apr
On War — Book Review	51	117 Feb
Pattern of War in South-East Asia	5	124 Sep
Unconditional Surrender	36	118 Mar
United States Counter-Aggression Force	41	124 Sep
Strategic Review		
Aggression in Laos	33	125 Oct
Birth of a State	13	127 Dec
Chain of Defence	30	118 Mar
China Opens a New Chapter	20	124 Sep
Crisis in Kerala	13	123 Aug
Disarmament	37	126 Nov
Formation and Development of Communes in Communist China	30	122 Jul
Japan Today	30	120 May
Penetrable Shield	23	124 Sep
Population Problems of China	11	121 Jun
Stalemate on the 38th Parallel	22	119 Apr
US Dilemma	32	117 Feb

Subject	Page	Issue
Tactics		
Battle Preliminaries	20 123	Aug
Defeating Tanks in the Jungle	5 122	Jul
Fallout and the Company Commander	25 120	May
Is Defence the Solution?	38 118	Mar
Some Thoughts on the Local Counter-Attack	14 120	May
Tactics as She Is Spoke	11 117	Feb
Weapons and Tactics	20 122	Jul
Training		
About Planning a Conference	31 121	Jun
Are You Sitting for Written Promotion Examinations?	5 121	Jun
Exercise GRAND SLAM	23 125	Oct
Finance and CMF Training	36 124	Sep
Fit to Fight	36 119	Apr
Improved Reading	18 122	Jul
Public Speaking and Chairmanship	44 126	Nov
Study of Military History	33 127	Dec
Transportation		
Goers, Cranes and Crates	24 118	Mar
Railway Transportation and the Principles of War	11 117	Feb
Tropical Warfare		
Bacterial Food Poisoning	24 121	Jun
Communist POW Treatment in Indo-China	5 125	Oct
Defeating Tanks in the Jungle	5 122	Jul
Pattern of War in South-East Asia	5 124	Sep
Uniforms		
New Dress for the Army	24 116	Jan
United States		
US Army Pentomic Division	5 127	Dec
US Counter-Aggression Force	41 124	Sep
US Dilemma — Strategic Review	32 117	Feb
Weapons		
History of Grenades	27 121	Jun
Maxim Machine Gun	27 124	Sep